Near Threatened Amphibian Species

ANURA

ARTHROLEPTIDAE

Arthroleptis pyrrhoscelis Laurent, 1952

This species occurs in the Itombwe and Kabobo Highlands in southern Kivu Province, eastern Democratic Republic of Congo. The type locality is at 1,900-2,000m asl. It is said to be common. It is a species of montane grasslands that presumably breeds by direct development. There is no direct information on threats to the species, but it is not likely to be seriously threatened. It is not known from any protected areas.

Taxonomy: We follow Poynton (2003c) in retaining the genus Schoutedenella only for Schoutedenella xenochirus, and we therefore assign this species to its original genus, Arthroleptis. There are major taxonomic problems with the genera Arthroleptis and Schoutedenella through much of Africa. In many cases, the available names can be referred only to museum specimens, not to animals in the field. This is because the identification of these species frequently depends more on their vocalizations than their morphology.

Bibliography: Laurent, R.F. (1952), Laurent, R.F. (1954), Poynton, J.C. (2003c)

Data Providers: Robert Drewes

Arthroleptis reichei Nieden, 1911

This species occurs in eastern and southern Tanzania (the Uluguru and Udzungwa Mountains), and the southern highlands (Poroto Mountains and Mount Rungwe) and extreme northern Malawi (Misuku Hills). It is a montane species, occurring from 1,500 to at least 2,000m asl. There is very little information on its population status. It inhabits montane forest, perhaps ranging into montane grassland near forest. No information is available on its adaptability to secondary habitats. It lives in leaf-litter on the forest floor, in low shrubs, in grassy areas, and in wild bananas, and like other members of the genus presumably breeds by direct development and is not dependent upon water. Forest loss as a result of agricultural expansion, wood extraction, and human settlement are likely to be the key threats. It presumably occurs in Udzungwa National Park, but this has not yet been confirmed.

Bibliography: Channing, A. (2001), Howell, K.M. (1993), Poynton, J.C. (2003b), Poynton, J.C. and Broadley, D.G. (1985a)

Data Providers: Kim Howell, John Poynton

Cardioglossa nigromaculata Nieden, 1908

This species is known only from extreme southern Nigeria and south-western Cameroon at low altitudes. It is fairly common, though it is often absent from apparently suitable habitat. It lives in lowland moist forest and in degraded habitats near more mature forest and can be found in small groups along forest watercourses, often in undergrowth among dead leaves and in holes. It breeds in streams. This species is presumably affected by forest loss. It occurs in Korup National Park.

Bibliography: Amiet, J.-L. (1972a), Amiet, J.-L. (1972c), Amiet, J.-L. (1972d), Amiet, J.-L. (1973c), Amiet, J.-L. (1987), Herrmann, H.-W. *et al.* (2005), Lawson, D.P. (1993)

Data Providers: Jean-Louis Amiet, Arne Schiøtz

ASTYLOSTERNIDAE

Astylosternus montanus Amiet, 1978 "1977"

This species has been recorded from several localities in the western Cameroon mountains from the Bamenda Highlands north-east to the Adamawa Plateau, with some outlying populations at lower altitudes to the south of this range on Mount Ngorro and the Yoko (Djan) Mountains. It has also been recorded from the Obudu Plateau in eastern Nigeria. It occurs in the submontane zone from 900-1,700m asl. The distribution is discontinuous, perhaps due to forest clearance in the 17th century. It is reported to be common within its range. It lives in or near flowing water in lower montane and submontane forest or herbaceous vegetation and gallery forests. At night it can be found in relatively dry areas along forest tracks and in agricultural areas. It can survive in deforested areas in temporary, eutrophic, silted streams that are low in oxygen. Breeding takes place in flowing water, with the males calling from rock cavities or from in the water. Although this species is probably suffering from habitat loss, it appears able to adapt to some non-forest habitats. It is not known to occur in any protected areas.

Bibliography: Amiet, J.-L. (1977), Amiet, J.-L. (1983a), Gartshore, M.E. (1986), Herrmann, H.-W. *et al.* (2005)

Data Providers: Jean-Louis Amiet

Leptodactylodon ovatus Andersson, 1903

This species occurs in extreme eastern Nigeria and western Cameroon, below 800m asl. Two subspecies are known: the nominate form occurs in the westernmost part of the range (including Nigeria); *L. o. orientalis* occurs in the east. The ranges of the two subspecies are probably separated around Mount Kupe. This is a common species. It lives in lowland forest, requiring forest with a continuous canopy, and is not found in degraded forest. It breeds in slow-flowing streams and tiny watercourses in the forest. The males call from holes and cracks in rocks. It is presumably threatened by the loss of its lowland forest habitat. It is thought to occur in Korup National Park, though this has not been confirmed.

Bibliography: Amiet, J.-L. (1971a), Amiet, J.-L. (1980a), Amiet, J.-L. (1987), Amiet, J.-L. and Schiøtz, A. (1972), Herrmann, H.-W. *et al.* (2005), Ohler, A. (1999)

Data Providers: Jean-Louis Amiet

BUFONIDAE

Ansonia albomaculata Inger, 1960

This species is endemic to Borneo where it is known from several widely scattered localities across the northern part of the island, in relatively steep terrain, at altitudes of 150-350m asl. It appears to be abundant in a few places, although in general the population is decreasing in direct proportion to rates of deforestation. The adults of this species are mostly terrestrial and disperse widely over the rainforest floor. Breeding takes place in small, clear, rocky-bottomed streams. The larvae live in torrents, clinging to rocks and feeding on lithophytes. This species appears to be unable to adapt to modified habitats. The major threat is forest loss and fragmentation, due to the conversion of forests to rubber and oil palm plantations, as well as the resulting eutrophication of streams by chemical fertilisers and stream siltation (thereby depriving larvae of feeding sites). It is present in several protected areas, and the continued protection of large areas of hilly rainforests is essential.

Bibliography: Das, I. (1995b), Inger, R.F. (1960a), Inger, R.F. (1966), Inger, R.F. and Stuebing, R.B. (1997)

Data Providers: Robert Inger, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun

Ansonia hanitschi Inger, 1960

This Bornean endemic occurs at a number of sites within Kinabalu National Park, and the Crocker Range south of Kinabalu in Sabah, in Gunung Mulu Park in Sarawak, and also in the montane forests of Kalimantan. It probably occurs more widely than current records suggest. Its altitudinal range is from 750-1,600m asl. It is abundant at most locations where it has been recorded. Adults are found on the floor of submontane and montane forests. Breeding takes place in clear, rocky mountain streams. The larvae cling to rocks in the torrents of these streams. It appears to be unable to adapt to modified habitats. The main threat to the species is siltation of streams needed for larval development, as a result of logging in the submontane and montane forests, and the clearance of forests for cultivation. This species is known to be present in Kinabalu and Gunung Mulu National Parks. However, there is no well-protected reserve in Kalimantan at the appropriate atltitude protecting the habitat of this species.

Bibliography: Herrmann, H.J. and Ulber, T. (1992), Inger, R.F. (1960a), Inger, R.F. (1966), Inger, R.F. and Stuebing, R.B. (1997), Malkmus, R. (1994), Malkmus, R. (1995), Malkmus, R. (1996a), Malkmus, R. *et al.* (2002)

Data Providers: Robert Inger, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun

Ansonia leptopus (Günther, 1872)

This species is known from a number of localities on Borneo. It is also present at two localities in Peninsular Malaysia, and at a single site in Sumatra (Indonesia). It has been recorded from lowland altitudes of 50-700m asl. It is abundant at a number of sites. Adults disperse widely over the floor and herb stratum of primary rainforest. It breeds explosively in small, clear, rocky-bottomed streams, and larvae are most common in shallow side pools and in submerged masses of dead leaves. It is unable to adapt to modified habitats. The major threat to the species is deforestation and the resultant siltation of larval habitats. This species is present in several protected areas, and the continued preservation of large areas of rainforest is needed.

Taxonomy: A taxonomic review of this species is urgently required, since it almost certainly comprises more than one species.

Bibliography: Dring, J.C.M. (1979), Grandison, A.C.G. (1972a), Inger, R.F. (1985), Inger, R.F. and Dring, J.C.M. (1988), Inger, R.F. and Stuebing, R.B. (1997)

Data Providers: Robert Inger, Peter Paul van Dijk, Robert Stuebing

Ansonia longidigita Inger, 1960

This widespread Bornean endemic is present in relatively steep terrain from 150-1,500m asl. It is known to be abundant at several localities. Adults can be found on the floor and herb stratum of rainforests. It requires small, clear, rocky-bottomed streams to breed in, an environment that persists only where forest cover is intact. Larvae live in torrents, clinging to rocks and feeding on lithophytes. This species is unable to adapt to modified habitats. The main threat is rampant habitat loss due to the rapid clearing of forest in Borneo, and the subsequent siltation of streams. This species is known to occur in several protected areas, including in Sabah and Sarawak. However, in Kalimantan, the existing forest preserves and parks are not well protected.

Bibliography: Inger, R.F. (1960a), Inger, R.F. (1966), Inger, R.F. (1992), Inger, R.F. and Stuebing, R.B. (1997), Malkmus, R. *et al.* (2002)

Data Providers: Robert Inger, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun

Ansonia minuta Inger, 1960

This Bornean endemic is known only from a few localities in western and central Sarawak (Malaysia) and scattered areas of Kalimantan (Indonesia), although it probably occurs more widely than current records suggest. All known localities lie between 200 and 1,000m asl. There is no information on its population status. This is a terrestrial species of lowland moist tropical forest, which breeds in small, clear, rocky streams where the larvae also develop. It has not been found in modified habitats. The main threat to this species is habitat loss and fragmentation largely due to the effects of extensive logging on lowland Borneo. This species is known from the Kayan Mentarang protected area and continued protection of large areas of hilly rainforest is needed.

Bibliography: Inger, R.F. (1960a), Inger, R.F. (1966), Inger, R.F. and Stuebing, R.B. (1997)

Data Providers: Robert Inger, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun

Ansonia spinulifer (Mocquard, 1890)

This Bornean endemic is widely distributed in relatively steep terrain in Malaysia and Indonesia, from 150-750m asl. It appears to be abundant at scattered lowland localities. Adults disperse widely over the floor and herb stratum of rainforest. It requires small, clear, rocky-bottomed streams to breed in, and larvae live in torrents, clinging to rocks and feeding on lithophytes. It appears to be unable to adapt to modified habitats. The main threat to the species is deforestation of large portions of the habitat, with the resultant loss of adult and juvenile (through the siltation of streams) feeding microhabitats. Conversion of forest to oil palm plantations is also a threat and it is possible that a broad portion of its range might soon be converted to *Acacia* plantations. The species is known from several protected areas, including Kinabalu National Park, which is in Sabah, where good, large areas of forest are now protected, as are some sites in Sarawak. The species might well occur in Kalimantan but existing forest preserves and parks are not well protected. Further protection of large areas of rainforest is needed.

Bibliography: Inger, R.F. (1960a), Inger, R.F. (1992), Inger, R.F. and Stuebing, R.B. (1997), Malkmus, R. *et al.* (2002)

Data Providers: Robert Inger, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun

Bufo achalensis Cei, 1972

This species is restricted to the high plateau (Sierra Grande) of Córdoba and San Luis Provinces, Argentina, at 1,600-2,200m asl. It is common within its limited range. The population was apparently stable through 2002. It occurs in rocky outcrops in montane grasslands and reproduces in mountain streams during the final snowfalls of late August. Free-living larvae develop in these streams, and can occur below ice. Some habitat disturbance is tolerated. The threats to this species are habitat loss due to extensive cattle ranching and the pollution of water sources by cattle.

Some populations might also be declining due to fires. However, these threats appear to be relatively minor at present. It occurs in Parque Nacional Condorito and the Reserva Hídrica Provincial de Pampa de Achala.
Bibliography: Acosta, L.E., Pereyra, F.E. and Pizzi, R.A. (1995), Avila, L.J. and Priotto, J.W. (1995), Di Tada, I.E. *et al.* (1980), Di Tada, I.E. *et al.* (1996), Di Tada, I.E., Martino, A. and Sinsch, U. (2001), Jofre, G.M. (2003), Lavilla, E.O. *et al.* (2000), Lavilla, E.O. and Cei, J.M. (2001), Rahn, I.M. (1982), Sinsch, U., di Tada, I.E. and Martino, A.L. (2001)
Data Providers: Esteban Lavilla, Ismael di Tada

Bufo blombergi Myers and Funkhouser, 1951

This species occurs in northern Ecuador (in Esmeraldas and Carchi Provinces), and in Colombia on the western flank of the Cordillera Occidental in Nariño, Cauca, Valle del Cauca and Choco Departments, between 200 and 550m asl. It is locally common. It lives in closed lowland tropical rainforest, coming close to human habitation in some areas. Breeding takes place in temporary and permanent pools, sometimes close to rivers (where young animals in particular are often found). The major threats it faces are deforestation for agricultural development and cultivation of illegal crops, logging, mining, the introduction of exotic species, human settlement, and pollution resulting from the spraying of illegal crops. In Ecuador, there is commercial export of animals for pharmacological research and the pet trade. In Ecuador, its range overlaps with the Reserva Ecológica Cotacachi-Cayapas, and it also occurs in protected areas in Colombia. Legislation is needed to regulate the international trade and the harvesting of this species.
Bibliography: Acosta-Galvis, A.R. (2000), Bringsoe, H. (1990), Hoogmoed, M.S. (1989), Howard, C.J. (1981), Morales, M. *et al.* (2002), Myers, G.S. and Funkhouser, J.W. (1951), Obst, F.J. (1979), Pawley, R. (1988), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996), Seidel, B. (1979)
Data Providers: Wilmar Bolívar, Luis A. Coloma, Santiago Ron, Diego Cisneros-Heredia

Bufo boreas Baird and Girard, 1852 WESTERN TOAD

This species occurs along the Pacific Coast of North America from southern Alaska (Wiedmer and Hodge 1996) to Baja California, and ranges eastward to the Rocky Mountains in west-central Alberta, Montana, Wyoming, Utah (Ross *et al.* 1995), Colorado (Hammerson 1999), and (formerly) northern New Mexico (Degenhardt, Painter and Price 1996). It is absent from most of the desert south-west (Stebbins 1985b). Its altitudinal range extends from sea level to at least 3,640m asl. The total adult population size of the species is unknown but is likely to exceed 100,000. It is still common in much of its range. The Rocky Mountain populations in Colorado and Wyoming have undergone a drastic decline since the 1970s (Corn, Stolzenburg and Bury 1989; Hammerson 1989, 1992, 1999; Carey 1993; Muths *et al.* 2003). It has also declined greatly in the Yosemite area of the Sierra Nevada, California (Drost and Fellers 1996). It is apparently undergoing localized declines in Yellowstone National Park (Peterson, Koch and Corn 1992), Montana (Reichel and Flath 1995), and elsewhere (Olson 1989). This species is found in a wide variety of habitats including desert springs and streams, meadows and woodlands and mountain wetlands. It is also known from around ponds, lakes, reservoirs, and slow-moving rivers and streams. It digs its own burrow in loose soil or uses those of small mammals, or shelters under logs or rocks. The eggs and larvae develop in shallow areas of ponds, lakes, or reservoirs, or in pools of slow-moving streams. The extent of threat across the species' range is not known with certainty. The decline in the Southern Rocky Mountains is not due to acidification of breeding habitats (Corn and Vertucci 1992). Carey (1993) hypothesized that some environmental factor or synergistic effects of more than one factor might stress the toads, causing suppression of the immune system or indirectly causing immunosuppression by causing elevated secretion of adrenal cortical hormones; immunosuppression, coupled with the apparent effect of cold body temperatures on the ability of the immune system to fight disease, might lead to infection by *Aeromonas hydrophila* bacteria (which causes "red-leg") or other infectious agents and subsequently to death of individuals and the extirpation of populations. Die-offs in the southern Rockies have been associated with chytrid fungus infections (Muths *et al.* 2003). Eggs are highly susceptible to the pathogenic fungus *Saprolegnia ferax*, which might be introduced during fish stocking (Kiesecker and Blaustein 1997). Another possibility is that declines are related to the sensitivity of eggs to increased levels of ultraviolet radiation (Blaustein *et al.* 1994), but see Corn and Muths (2002) for an alternative viewpoint. In the Cascade Range of Oregon, persistent predation of adults by ravens during the toad breeding season appears to have contributed significantly to some population declines (Olson 1992). Possibly significant predation by birds has also been observed in Colorado and Idaho. The decline might be related, at least in part, to habitat destruction and degradation, water retention projects, predation by, and competition with, native and non-native species, fishery management activities, or other factors, but these factors have not been adequately assessed. This species occurs in many national parks, wildlife refuges, and wilderness areas in the US where habitat destruction is not a major threat. In Mexico, it is found within Parque Nacional Sierra de San Pedro Martir. It is listed as an endangered species in the state of Colorado and is warranted but precluded from US federal endangered species status.
Bibliography: Behler, J.L. and King, F.W. (1979), Blackburn, L., Nanjappa, P. and Lannoo, M.J. (2001), Blaustein, A.R. *et al.* (1994), Campbell, J.B. and Degenhardt, W.G. (1971), Carey, C. (1993), Corn, P.S. and Muths, E. (2002), Corn, P.S. and Vertucci, F.A. (1992), Corn, P.S., Stolzenburg, W. and Bury, R.B. (1989), Drost, C.A. and Fellers, G.M. (1996), Frost, D.R. (1985), Green, D.M. (1997), Hailman, J.P. (1984), Hammerson, G.A. (1982), Hammerson, G.A. (1989), Hammerson, G.A. (1992), Hammerson, G.A. (1999), Herreid, II, C.F. (1963), Hodge, R.P. (1976), Johnson, P.T.J. *et al.* (2001), Kiesecker, J.M. and Blaustein, A.R. (1997), Kiesecker, J.M., Blaustein, A.R. and Miller, C.L. (2001b), Livo, L.J. and Yeakley, D. (1997), Muths, E. *et al.* (2003), Muths, E. and Nanjappa, P. (2005), NNHP (1999), Nussbaum, R.A., Brodie, Jr., E.D. and Storm, R.M. (1983), Oliver, G.A. (1997), Olson, D.H. (1989), Olson, D.H. (1992), Peterson, C.R., Koch, E.D. and Corn, P.S. (1992), Reichel, J.D. and Flath, D. (1995), Ross, D.A. *et al.* (1995), Samallow, P.B. (1980), Smits, A.W. (1984), Stebbins, R.C. (1985b), Welsh Jr, H.H., Hodgson, G.R. and Lind, A.J. (2005), Wiedmer, M. and Hodge, R.P. (1996)
Data Providers: Geoffrey Hammerson, Georgina Santos-Barrera, Erin Muths

Bufo brongersmai Hoogmoed, 1972 BRONGERSMA'S TOAD

This species is restricted to western, southern and eastern Morocco, ranging into northern Western Sahara and north-western Algeria, from sea level to 1,600m asl. It can be abundant in suitable habitat, but is in decline as its habitats are being lost. It is present in semi-arid, hilly areas with *Argania spinosa*, *Euphorbia*, and graminaceous vegetation. It may be found in ploughed fields (Schleich, Kästle and Kabisch 1996), and hides beneath stones during the day. The temporary ponds that it breeds in are mostly located in rocky areas, and it has been observed in artificial waterbodies (such as dammed temporary rivers). It is threatened through much of its range by increased aridity, pollution and drainage of its breeding habitats. This species is present in Parc National de Souss-Massa but is not protected by national legislation. It can be bred successfully in captivity.
Bibliography: Bogaerts, S. (2001), Bons, J. and Geniez, P. (1996), Gallix, T. (2002), Geniez, P. *et al.* (2004), Geniez, P., Mateo, J.A. and Bons, J. (2000), Grillitsch, B., Grillitsch, H. and Splechtna, H. (1989), Guillaume, C.P. and Bons, J. (1982), Hoogmoed, M.S. (1972), Mateo, J.A. *et al.* (2003), Salvador, A. (1996), Schleich, H.H., Kästle, W. and Kabisch, K. (1996), Schouten, J.R. and Thevenot, M. (1988)
Data Providers: Alfredo Salvador, David Donaire-Barroso, El Hassan El Mouden, Tahar Slimani, Philippe Geniez, José Mateo

Bufo campbelli Mendelson, 1994

This species is found at low and moderate altitudes in northern and eastern Guatemala, southern Belize, and extreme western Honduras, from 100-1,080m asl. It probably occurs more widely. It is still found in good numbers in appropriate habitats in Belize and Honduras, and is still common in the Sierra de Santa Cruz. It lives in and near streams in pristine forest in mountainous regions (in Honduras, in lowland moist and premontane wet forest). It breeds primarily in streams but has also been found breeding in pools in Guatemala. In Honduras and Guatemala, it is threatened by habitat destruction, and in Belize, by hurricanes. Much of its range is protected in forest reserves of the Mayan Mountains, in Parque Nacional Laguna Lachuá and the Reserva de Manantiales Montañas del Mico, and Parque Nacional Cerro Azul in Honduras.
Bibliography: Attum, O. and Eason, P. (1999), Campbell, J.A. (1998), Campbell, J.A. (2001), Franklin, C.J. and Franklin, J. (1999), Lee, J.C. (1996), Lee, J.C. (2000), Mendelson III, J.R. (1994), Mendelson III, J.R. (1997b)
Data Providers: Julian Lee, Manuel Acevedo, Larry David Wilson, Paul Walker

Bufo cryptotympanicus Liu and Hu, 1962

This species is known from southern China in Guangxi and Guangdong Provinces, from 450-1,870m asl, and from only two specimens in northern Viet Nam. One of these was collected on Mount Fan Si Pan near Sa Pa, Lao Cai Province (Liu et. al. 2000), and the other was collected at 1,900m asl in O Quy Ho, Sa Pa District, which is very close to, but on the other side of, Mount Fan Si Pan. It is likely to occur more widely than currently recorded. It is uncommon. This species inhabits forest, and has not been found in open areas. Its breeding habits are not known, but it presumably breeds in water by larval development. The threats that it faces are relatively unknown although presumably habitat destruction and degradation are important. All known localities of this species are within protected areas. In Viet Nam these are within Hoang Lien Son National Park. Further documentation of the species' extent of occurrence, population status and ecological requirements in Viet Nam is needed.
Bibliography: Fei, L. *et al.* (1999), Le Nguyen Ngat, Nguyen Van Sang, and Ho Thu Cuc (2001), Liu, C.-C. and Hu, S.-Q. (1962), Liu, W. *et al.* (2000), MacKinnon, J. *et al.* (1996)
Data Providers: Raoul Bain, Annemarie Ohler, Michael Wai Neng Lau, Yuan Zhigang

Bufo hypomelas Boulenger, 1913

This species is known from the Pacific lowlands of Colombia in Choco Department, and from two localities in north-western Ecuador (in Esmeraldas Province), and is presumed to exist in between these two areas. It occurs between 10 and 500m asl. It is a rare species, and there have been no records of this species in Ecuador since 1984. It lives on the ground in leaf-litter close to water sources, in lowland tropical moist forest. All records of this species come from mature forest. There is no information on its breeding biology, although reproduction is presumably by larval development in water. The major threats are deforestation for agricultural development (including the cultivation of illegal crops), logging, and human settlement, and pollution resulting from the spraying of illegal crops. It has been found in a few protected areas in Colombia.
Bibliography: Acosta-Galvis, A.R. (2000), Boulenger, G.A. (1913), Cochran, D.M. and Goin, C.J. (1970), Duellman, W.E. and Schülte, R. (1992), Hoogmoed, M.S. (1989), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)
Data Providers: Wilmar Bolívar, Luis A. Coloma, Santiago Ron, Diego Cisneros-Heredia

Bufo lonnbergi Andersson, 1911

This species appears to be endemic to the Kenyan Highlands above 1,800m asl, where it occurs on both sides of the Rift Valley, and on Mount Kenya and in the vicinity of Limuru. Records from Nairobi require confirmation. A related species has been found in the Udzungwa Mountains of southern Tanzania, but this has not so far been named. It is a reasonably common species. There is some evidence of a decline at one site, but there is no information as to whether or not such a decline might have been more widespread (M. Tandy pers. comm.). It is a species of montane grassland, moorland and forest patches, and it survives in agricultural land. It breeds in small, shallow permanent and semi-permanent pools in open areas. There is little information on its threats, but although it is somewhat adaptable, it is possibly affected by the intensification of agriculture, overgrazing by livestock, and expanding human settlements. It occurs in Aberdares and Mount Kenya National Parks.
Taxonomy: We follow Poynton (1997) in considering Bufo mocquardi and B. nairobiensis as distinct from this species. However, M. Tandy (pers. comm.) considers both B. mocquardi and B. nairobiensis to be synonyms of B. lonnbergi.
Bibliography: Grandison, A.G.C. (1972b), Lötters, S. *et al.* (2004), Poynton, J.C. (1997), Poynton, J.C. (2003b), Tandy, M. and Keith, R. (1972)
Data Providers: Mills Tandy, Stefan Lötters, John Poynton, Kim Howell

Bufo mexicanus Brocchi, 1879 SOUTHWESTERN TOAD

This species occurs in extreme central-eastern Sonora and western Chihuahua along the Sierra Madre Occidental, south to western Durango and extreme north-eastern Sinaloa, Mexico. This is a rare species. It inhabits pristine conifer forests where it can be commonly found along low rivers and streams, where it breeds. It is not present in altered habitats. Disturbance, and any kind of alteration of forested areas that might cause the desiccation of streams and soils, are threats to this species. This species occurs in at least two protected areas. Urgent protection of the forested areas along the Sierra Tarahumara area is recommended.
Bibliography: Gergus, E.W.A. (1998), Price, A.H. and Sullivan, B.K. (1988)
Data Providers: Georgina Santos-Barrera, Luis Canseco-Márquez

Bufo pageoti Bourret, 1937

This species is known from north-east and western Myanmar, extreme northern Viet Nam and Gaoligongshan in Yunnan (Tengchong, Baoshan and Lushui Counties), China, from 1,900-2,500m asl. It probably occurs more widely than current records suggest. This species is rare and is seldom found. It inhabits forested mountain areas, and probably also occurs in the surrounding farmland. It is a stream-breeding amphibian. Forest loss due to agricultural expansion is an ongoing threat. The range of the species includes some protected areas: in China it is known from Gaoligongshan National Nature Reserve, and both of the populations in Myanmar are within protected areas.
Taxonomy: Bufo burmanus was synonymized with B. pageoti by Dubois and Ohler (1999). The genus Torrentophryne (Yang, Liu and Rao 1996) was synonymized with Bufo by Liu et al. (2000).
Bibliography: Bourret, R. (1942), Dubois, A. and Ohler, A. (1999), Liu, W. *et al.* (2000), MacKinnon, J. *et al.* (1996), The Comprehensive Scientific Expedition to the Qinghai-Xizang Plateau (1997), Yang, D.-T., Liu, W. and Rao, D. (1996)
Data Providers: Peter Paul van Dijk, Guinevere Wogan, Annemarie Ohler, Lu Shunqing, Yang Datong

Bufo parietalis Boulenger, 1882

This species is relatively widespread in the Western Ghats, India, from 400-900m asl. Dutta (1997) lists uncertain records from the Eastern Ghats, which require further verification. It is a locally common species. It is a terrestrial toad associated with leaf-litter, rocks and other ground cover of moist tropical evergreen and semi-evergreen forest. It is not known if it can occur in degraded habitat. Breeding takes place in slow-moving stretches of streams. The main threat to this species is deforestation caused by both regional infrastructure development (roads, dams, and urbanization) and the collection of wood and timber for subsistence use by local people. It has been recorded from Indira Gandhi National Park (in Tamil Nadu), Agasthyamala Hills of the Neyar Wildlife Sanctuary, Silent Valley National Park (both in Kerala), and might also occur within other protected areas in the region.
Bibliography: Biju, S.D. (2001), Chanda, S.K. (2002), Dubois, A. and Ohler, A. (1999), Dutta, S.K. (1997), Inger, R.F. *et al.* (1984)
Data Providers: S.D. Biju, Sushil Dutta, Karthikeyan Vasudevan, S.P. Vijayakumar, Chelmala Srinivasulu, Gajanan Dasaramji Bhuddhe

Bufo sternosignatus Gunther, 1859 ("1858")

This species is known from the Venezuelan states of Aragua, Carabobo, Cojedes, Falcón, Lara, Miranda, Portuguesa, Yaracuy, and the Andean piedmont of Barinas State. It has also recently been reported from Colombia on the Cordillera Central and Cordillera Oriental. It is a mid-altitude species, occurring up to 1,800m asl. It is a common species. This is a nocturnal and crepuscular frog living on the floor of semi-deciduous (seasonal) forest in mountain regions of the Venezuelan coastal mountain range and the northernmost portion of the Venezuelan Andes. It is often associated with slow-flowing stream pools where it congregates in large numbers in the breeding season. Habitat degradation is a major threat since most of the species' habitat is being converted for coffee and cacao plantations. Some populations are within national parks in the Venezuelan Coastal range, and the Sierra de Portuguesa (Portuguesa and Lara States). Lower montane forests in the Venezuelan Andes are in need of protection, especially the semi-deciduous forests that have been used for coffee and cacao plantations for centuries.

Bibliography: Barrio Amorós, C.L. (2004), Cordero, G. (1987), Duellman, W.E. and Schülte, R. (1992), Frost, D.R. (1985), Gines, H. (1959), La Marca, E. (1992), La Marca, E. and Manzanilla, J. (1997), La Marca, E. and Mijares, A. (1996), Lutz, A. (1927), Rivas, G. and Manzanilla, J. (1999), Rivero, J.A. (1961), Yustiz, E. (1996)

Data Providers: Enrique La Marca, Jesús Manzanilla, Abraham Mijares, César Luis Barrio Amorós

Bufo togoensis Ahl, 1924

This species ranges from eastern Sierra Leone through Liberia, southern Guinea, southern Côte d'Ivoire and southern Ghana to western Togo. Records from central Africa refer to *Bufo latifrons*. It is usually uncommon, but can be extremely abundant locally. It lives only in primary forest, usually in close association with the streams in which it breeds, and is usually found on stones in shallow water, or among vegetation next to the streams. It breeds in the slow-flowing sections of the streams and the eggs are glued underwater with mud. This species is affected by ongoing deforestation throughout its range, due to logging, agricultural expansion, and human settlements. It is more threatened in the east of its range, where recent information on its status is very limited. It occurs in several protected areas.

Bibliography: Joger, U. (1981), Rödel, M.-O. (2000b), Rödel, M.-O. and Agyei, A.C. (2003), Rödel, M.-O. and Bangoura, M.A. (2004), Rödel, M.-O. and Branch, W.R. (2002), Tandy, M. and Keith, R. (1972)

Data Providers: Mark-Oliver Rödel, Mills Tandy

Bufo tuberculatus Zarevsky, 1926

This species is restricted to Sichuan (Batang, Xiangcheng), Yunnan (Deqin), and the eastern tip of Xizang Autonomous Region, in China, from 2,600-2,700m asl. It probably occurs a little more widely than current records suggest. It is quite common in parts of its range. It inhabits pools, marshes and the surrounding habitats in valleys, and breeds in pools and ponds. Records have also come from agricultural areas. The major threat to this species is habitat loss and degradation due to agriculture. Its range includes Mangkangjingshihou, Zulongba and Baimaxueshan Nature Reserves.

Bibliography: Fei, L. *et al.* (1999), MacKinnon, J. *et al.* (1996)

Data Providers: Fei Liang, Ye Changyuan

Melanophryniscus cupreuscapularis Cespedez and Alvarez, 2000 (1999)

This species is known only from north-western Corrientes Province, Argentina, between 50 and 70m asl. It is known from only a few localities but it is common and its population is stable in suitable habitats. It occurs in seasonally inundated grasslands where it also reproduces. When breeding areas dry up it usually occurs underground. Its tolerance to habitat disturbance is unknown. Loss of habitat due to the expansion of human settlements is a threat to this species, most notably the growth of the city of Corrientes. It is not known to occur in any protected areas.

Bibliography: Alvarez, B.B. *et al.* (2003), Céspedez, J.A. and Alvarez, B.B. (1999)

Data Providers: Jorge Céspedez, Jose Langone

Melanophryniscus moreirae (Miranda-Ribeiro, 1920)

This species is known from Parque Nacional do Itatiaia in Serra da Mantiqueira on the border of Rio de Janeiro and Minas Gerais States, in southern Brazil, from 1,800-2,400m asl, and possibly also from Castanhal Grande, Óbidos, Pará State, Brazil. This is a very common species within its small range, but it appears to have declined recently (Eterovick *et al.* 2005). This diurnal species occurs in swamp areas along rivers with limpid and cold waters. It deposits its eggs in temporary puddles formed by the rain. It is not known whether or not it is able to adapt to habitat disturbance. Threats to this species include tourism and recreation. The known range of the species is restricted to Parque Nacional do Itatiaia. More research is needed to confirm its extent of occurrence and whether or not it is a restricted range species. Conservation and maintenance of its habitat is also required, and population monitoring is needed to investigate an apparent decline.

Taxonomy: A strangely disjunct population from Óbidos, Pará State, Brazil, was described as a subspecies by Cochran (1948). Bokermann (1967) doubted the correctness of this locality and assumed that the specimens came from Itatiaia.

Bibliography: Bernardes, A.T. (1998), Bokermann, W.C.A. (1967), Cochran, D.M. (1955), Eterovick, P.C. *et al.* (2005), Guix, J.C. *et al.* (1998)

Data Providers: Débora Silvano, Ulisses Caramaschi, Miguel Trefaut Rodrigues

Melanophryniscus sanmartini Klappenbach, 1968

This species has a fragmented distribution, and is found in Lavalleja, Maldonado, Rocha, Florida and Ribera Departments in Uruguay. It occurs below 500m asl, but its exact altitudinal range is unknown. It is commonly found during reproductive bouts and has a population that appears to be stable at present. It lives in grasslands and rocky outcrops and reproduces in small streams. It probably does not tolerate much habitat disturbance. Exotic tree plantations are a threat to this species. It does not occur in any protected areas.

Bibliography: Langone, J.A. (1994), Langone, J.A. (2003), Maneyro, R. and Langone, J.A. (2001)

Data Providers: Esteban Lavilla, Jose Langone

Osornophryne bufoniformis (Peracca, 1904)

This species ranges from Ecuador (Parque Nacional Llanganates in Tungurahua Province), north to southern Valle del Cauca Department on the eastern and western flanks of the Cordillera Central in Colombia, between 2,800 and 4,700m asl. It might occur a little more widely. It is rare, localized, and uncommon where found. It lives on fallen leaves and on the ground in montane forest, bush land and páramo. Some populations live in terrestrial bromeliads, leaf-litter, and on vegetation up to 50cm above the ground. Other populations are fossorial. It breeds by direct development and has only been found in undisturbed habitats. The major threats are deforestation, due to agricultural development, cultivation of illegal crops, fire, logging, and human settlement, and pollution resulting from the spraying of illegal crops. It occurs in several protected areas.

Taxonomy: Although this appears to be a relatively widespread species, it appears to be composed of multiple species with restricted distributions, with considerable variation in ecological requirements (T. Grant and D. Cisneros-Heredia pers. comm.).

Bibliography: Ortiz, A. and Morales, M. (2000), Peracca, M.G. (1904), Peters, J.A. (1973), Ruiz-Carranza, P.M. and Hernández-Camacho, J.A. (1976b), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)

Data Providers: Wilmar Bolívar, Luis A. Coloma, Santiago Ron, Diego Cisneros-Heredia, Taran Grant

Pedostibes rugosus Inger, 1958

This species is known only from the forests of northern Borneo in Sabah and Sarawak (Malaysia), Kalimantan (Indonesia) and Brunei Darussalam. It is likely to occur more widely than currently recorded. It is generally a lowland species occurring between 150 and 1,050m asl. The population status of this species is unknown. It has been recorded from hilly lowland, and submontane, tropical primary moist forest. It is an arboreal species that breeds in small, clear, rocky streams. It might possibly occur in areas that have previously been used for shifting cultivation, but it cannot adapt to significantly modified habitats. The major threat to this species is habitat loss and fragmentation due to deforestation. It is present in a number of protected areas including Batu Apoi (Brunei), and Lanjak Anteroi and the Crocker Range (both in Sabah). The protection of lowland forests in Sabah and parts of Sarawak now provide stable habitat for this species, but expansion of this protection to hilly lowland forests in Kalimantan is needed.

Bibliography: Inger, R.F. and Stuebing, R.B. (1997)

Data Providers: Robert Inger, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun

Pelophryne signata (Boulenger, 1894)

This species occurs in Borneo (Brunei and Sarawak) below 1,000m asl. It is assumed to occur across the border into Kalimantan although there are no records from there yet. Its population status is unknown. It has been recorded only from lowland tropical moist forest. Breeding is presumed to take place in small forest pools. The major threat to this species is habitat loss and fragmentation due to deforestation. The presence of this species in protected areas requires further investigation. Some areas of habitat are protected in Sarawak.

Taxonomy: Specimens from the Malay Peninsula and the Natura Islands previously included in Pelophryne signata are now assigned to P. brevipes.

Bibliography: Inger, R.F. and Stuebing, R.B. (1997)

Data Providers: Robert Inger, Peter Paul van Dijk, Robert Stuebing, Indraneil Das

Rhamphophryne festae (Peracca, 1904)

This species occurs at moderate and low altitudes (from 200-1,700m asl) on the eastern Andean slopes and in the upper Amazon Basin of Ecuador, and in the Cordillera de Cutucú and Cordillera del Condór, in Ecuador and Peru. It is uncommon where it occurs. It is usually found in leaf-litter, and sometimes on low vegetation, in tropical rainforest, and premontane humid forest. There is no information known about breeding habits, although it presumably breeds by direct development like other species in the genus. It does not adapt well to anthropogenic disturbance, and is not known from secondary forest. The major threats to the species' habitat are agricultural development, involving both cultivation of crops and livestock grazing, and logging. Its range includes a few protected areas. Taxonomic research is needed to resolve the status of highland populations that might represent a different species.

Taxonomy: Juveniles of this species can be confused with juveniles of the Bufo margaritifer complex, and hence its distribution is poorly known. This might be a species complex (D. Cisneros-Heredia pers. comm.).

Bibliography: Almendariz, A. (1991), Cisneros-Heredia, D.F. (2003), Peracca, M.G. (1904), Trueb, L. (1971)

Data Providers: Ana Almandáriz, Diego Cisneros-Heredia, Karl-Heinz Jungfer, Luis A. Coloma, Santiago Ron

CENTROLENIDAE

Centrolene antioquiense (Noble, 1920)

This species is known from Antioquia and Caldas Departments, on the western flank of the central Andes in Colombia from 1,850-2,450m asl, and might occur a little more widely. It is a common species. Its habitat is vegetation alongside streams in sub-Andean forests. Eggs are laid on leaves overhanging the water and when hatched the larvae drop into the water below where they develop further. The species requires gallery forest cover over the streams to allow it to reproduce. Water pollution from agriculture is a major threat. Deforestation is only a localized threat at present, although desiccation and loss of overhanging leaves for breeding are potential problems in the future. The range of the species is not within any protected areas.

Bibliography: Noble, G.K. (1920), Ruiz-Carranza, P.M. and Lynch, J.D. (1991c), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)

Data Providers: Wilmar Bolívar, John Lynch

Centrolene buckleyi (Boulenger, 1882)

This species occurs in the Andes, including in the inter-Andean valleys from Colombia through to Ecuador, to Huacambamba in Piura Department in northern Peru, from 2,100-3,100m asl. All records of this species from Venezuela are now assigned to *Centrolene venezuelense*. In many places this species is generally uncommon, but it is still easily found in Colombia. In Ecuador it was previously abundant in many localities, but has declined catastrophically, though there are recent records, including from 2003, but it is currently known only from two localities in this country. In Peru it is known only from two recent specimens. It lives in montane forests, in páramo bushland and grassland, and in terrestrial bromeliads in inter-Andean valleys. It is sometimes arboreal, and lays its eggs on leaves, larvae then developing in streams. It appears not to be affected by habitat loss, surviving in areas with heavy human impact. The serious decline in Ecuador is probably due to chytrid fungus. There are many protected areas where it occurs although in view of the severe risk posed by chytridiomycosis, an *ex situ* population should be established.

Taxonomy: This species might be a complex of species, hence its apparently varying conservation status in the different countries in its range (J.V. Rueda pers. comm.).

Bibliography: Bolívar-G, W., Grant, T. and Osorio, L.A. (1999), Boulenger, G.A. (1882c), Duellman, W.E. and Wild, E.R. (1993), Goin, C.J. (1961), La Marca, E. (1996a), Lynch, J.D. (2001), Lynch, J.D. and Duellman, W.E. (1973), Rodríguez, L.O., Cordova, J.H. and Icochea, J. (1993), Ruiz-Carranza, P.M. and Lynch, J.D. (1991a), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)

Data Providers: Luis A. Coloma, Santiago Ron, Lily Rodríguez, Jorge Luis Martinez, Martha Patricia Ramírez Pinilla, María Cristina Ardila-Robayo, Adolfo Amézquita, Jose Vicente Rueda, Juan Elías García-Pérez

Cochranella ignota (Lynch, 1990)

This species is known from Choco, Antioquia, Valle de Cauca and Risaralda Departments, on the western flank of the western Andes, Colombia. Its altitudinal range is currently recorded as 1,900-1,960m asl but is presumably broader than this. It is very common. It occurs on vegetation next to streams in primary sub-Andean forests. Eggs are laid on the upper surface of leaves and when hatched the larvae fall into the water below where they then develop further. There are few threats at present to this very common species, because most of its range is in protected areas. Populations of this species occur in Parque Nacional Natural Farallones de Cali, Parque Nacional Natural Tatamá, and Parque Nacional de Las Orquídeas.

Bibliography: Acosta-Galvis, A.R. (2000), Lynch, J.D. (1990b), Restrepo, J.H. and Naranjo, L.G. (1999), Ruiz-Carranza, P.M. and Lynch, J.D. (1991a), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)

Data Providers: Fernando Castro, John Lynch, Erik Wild

Cochranella megistra (Rivero, 1985)

This species is known from Antioquia, Risaralda, Valle del Cauca and Choco Departments, on the western flank of the western Andes in Colombia between 1,700 and 2,000m asl. It is a rare species. It occurs on vegetation away from streams in sub-Andean forests. Its breeding habits have not been observed, although it presumably breeds in streams. There are no major threats to this species at present. Its range includes Parque Nacional de Las Orquídeas and Parque Nacional Natural Tatamá.

Bibliography: Rivero, J.A. (1985), Ruiz-Carranza, P.M. and Lynch, J.D. (1991a), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)

Data Providers: Erik Wild, John Lynch

Cochranella nola Harvey, 1996

This species is known only from Santa Cruz Department, at the foot of the slopes of the Bolivian Andes. Records are from El Fuerte, Florida Province, at 1,600m asl, and La Hoyada and Mataracu, Ichilo Province, from 500-1,750m asl (Köhler 2000a; Lötters and Köhler 2000). It almost certainly occurs more widely. Köhler (2000a) points out that if the environmental conditions are suitable it is easy to observe and is abundant. It can be found in wet montane forest and in peri-Andean forests, specifically in Amazonian forests, in semi-humid montane forest, and in Yungas forest (De la Riva *et al.* 2000). It is an arboreal species that can be observed perching on wet sites next to streams (Köhler 2000a; Lötters and Köhler 2000). Egg clutches are deposited on rocks in streams. Water pollution from agriculture is a major threat. Its range includes Parque Nacional Amboró.

Taxonomy: This species is sympatric with Hyalinobatrachium bergeri (Lötters and Köhler 2000).

Bibliography: De la Riva, I. *et al.* (2000), Harvey, M. (1996), Köhler, J. (2000a), Lötters, S. and Köhler, J. (2000)

Data Providers: Claudia Cortez, Steffen Reichle, Ignacio De la Riva, Jörn Köhler

Cochranella ocellata (Boulenger, 1918)

In central Peru this species is known along the Cordillera Oriental in Huancabamba (1,700m asl) and Valle del Perene (1,200m asl), in Pasco Department. In southern Peru it is known from Huanhuachayocc (1,630m asl), Ayacucho Department, and Cosñipata (1,700m asl), Cuzco Department. It is likely that it occurs more widely. Its population status is unknown. In southern Peru, localities are in cloud forest at the start of the Andes. In central Peru, recorded localities are valleys (vegetation type not known) of the Amazonian drainage. Individuals have been recorded perched on herbaceous vegetation in cloud forest at night. It is not known if the species occurs in modified habitats. Eggs are deposited on leaves, and larvae develop in streams. In southern Peru it is threatened by loss and degradation of its habitat for human settlement and smallholder agriculture. This species occurs in the well-protected Parque Nacional Manu. The potential impacts of localized climate change and possible infection with the chytrid fungus require further investigation.

Bibliography: Cannatella, D.C. and Duellman, W.E. (1982), Duellman, W.E. (1976), Instituto Geografico Nacional (1989), Rodríguez, L.O., Cordova, J.H. and Icochea, J. (1993), Ruiz-Carranza, P.M. and Lynch, J.D. (1991a)

Data Providers: Lily Rodríguez, Jorge Luis Martinez, Ulrich Sinsch

Cochranella spiculata (Duellman, 1976)

This species is known from two localities in Peru: Cosñipata (Cuzco Department, at 1,700m asl) in the southern montane forest and Perene Valley (Pasco Department, at 1,200m asl) in the central montane forest. It is believed to occur in suitable intervening habitat. It is an uncommon species. Its habitat is montane primary and secondary tropical forest, close to streams. Individuals have been recorded calling at night from the upper sides of leaves of herbaceous plants adjacent to a small stream. It is not present in degraded areas. Eggs are deposited on leaves, and larvae develop in streams. In the Perene Valley it is threatened by agriculture (coffee, tea and coca cultivation) and human settlement. It is present in Parque Nacional Manu. Further research into the distribution of this species is required as well as into the potential impacts of localized climate change and possible infection with the chytrid fungus.

Bibliography: Cannatella, D.C. and Duellman, W.E. (1982), Duellman, W.E. (1976), Instituto Geografico Nacional (1989), Rodríguez, L.O., Cordova, J.H. and Icochea, J. (1993), Ruiz-Carranza, P.M. and Lynch, J.D. (1991a)

Data Providers: Lily Rodríguez, Jorge Luis Martinez, Wilfredo Arizabal

Hyalinobatrachium aureoguttatum (Barrera-Rodrigues and Ruíz-Carranza, 1989)

This species is known from the departments of Valle del Cauca, Risaralda, Choco and Antioquia on the western flank of the western Andes, in Colombia, between 45 and 1,570m asl and from the eastern cordilleras in the south-west of Darién Province in Panama. It is a very common species. It occurs in lowland primary and secondary rainforests, and sub-Andean forests, on vegetation next to streams. It lays its eggs on the lower surface of leaves and when hatched the larvae fall into the stream below. Localized threats to this species are habitat fragmentation and loss due to the expansion of agriculture, including the cultivation of illegal crops, and water pollution. Its range includes Parque Nacional de Las Orquídeas and Parque Nacional Natural Farallones de Cali in Colombia, and Parque Nacional Darién in Panama.

Bibliography: Barrera-Rodrigues, M. and Ruiz-Carranza, P.M. (1989), Barrera-Rodriguez, M. (2000), Ibáñez, R. *et al.* (2000), Ibáñez, R., Jaramillo, F. and Jaramillo, C. (1999), Ruiz-Carranza, P.M. and Lynch, J.D. (1991a), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)

Data Providers: Frank Solís, Roberto Ibáñez, César Jaramillo, Querube Fuenmayor, Fernando Castro, Taran Grant

Hyalinobatrachium chirripoi (Taylor, 1958)

This species is known from the lowlands of south-eastern Costa Rica, and central and eastern Panama from 60-100m asl, and also from two localities in western Colombia (Jarado and Bahiasolano), both in Choco Department, from 0-200m asl. It probably occurs much more widely within its general range. It was recently rediscovered in Costa Rica, having not been reported in the country since the 1950s, although there is also a specimen that was collected in 1990 that was previously misidentified. There is often some confusion when identifying this species. It is common at some sites in Panama but is considered a rare species in Colombia. It inhabits humid lowland and montane forest and pastures. Adults may be observed in bushes and trees along forest streams. Eggs are placed on the underside of smooth leaves overhanging streams, and when hatched the larvae drop into the water below where they complete their development. Certain populations of this species are threatened by habitat loss, due to increasing agricultural cultivation and logging. The species' range includes a number of protected areas in Costa Rica and Panama. The Bahiasolano locality in Colombia is within Parque Nacional Natural Utría.

Bibliography: Ibáñez, R. *et al.* (2000), Ibanez, R. and Jaramillo, C.A. (1997), Kubicki, B. (2004), Ruiz-Carranza, P.M. and Lynch, J.D. (1991a), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996), Savage, J.M. (2002), Young, B. *et al.* (1999)

Data Providers: Frank Solís, Roberto Ibáñez, Gerardo Chaves, Jay Savage, César Jaramillo, Querube Fuenmayor, Fernando Castro, Taran Grant, Erik Wild

Hyalinobatrachium vireovittatum (Starrett and Savage, 1973)

This species is known from scattered localities on the slopes of Volcán Tenorio, Guanacaste Province, to near Barú, Puntarenas Province, in the Cordillera Central and Cordillera de Talamanca in south-western Costa Rica, and from west-central Panama, from 800-1,100m asl (Savage 2002). It presumably occurs more widely. While this is generally considered to be a common species, it is difficult to distinguish in the field, and there are few reliable population data from Costa Rica. It inhabits humid montane forest, and is seen in bushes and trees along forest streams, where larvae develop. Populations outside national parks are threatened by habitat loss (due to general deforestation). The species has been recorded from three protected areas in Panama and a single protected area in Costa Rica.

Bibliography: Ibáñez, R. *et al.* (2000), Ibáñez, R., Jaramillo, F. and Jaramillo, C. (1999), Pounds, J.A. *et al.* (1997), Ruiz-Carranza, P.M. and Lynch, J.D. (1991a), Savage, J.M. (2002), Young, B. *et al.* (1999)

Data Providers: Frank Solís, Roberto Ibáñez, Gerardo Chaves, Jay Savage, César Jaramillo, Querube Fuenmayor

DENDROBATIDAE

Colostethus agilis Lynch and Ruíz-Carranza, 1985

This species is known from Parque Nacional Natural Munchique in Cauca Department, northwards to La Serrania de los Paraguas in Valle del Cauca Department, on the western slope of the western Andes in Colombia, from 2,190-2,600m asl. It can be a locally abundant species. It occurs along streams in sub-Andean and Andean primary or good secondary forest, and has not been recorded outside forest habitat. Its breeding habits are not known, though it is likely to take place in streams. Localized threats to this species include habitat loss and fragmentation due to the expansion of cattle raising, timber extraction, and cultivation of illegal crops, and water pollution. The range of the species includes Parque Nacional Natural Munchique and Parque Nacional Natural Farallones de Cali.

Bibliography: Grant, T., Humphrey, E.C. and Myers, C.W. (1997), Lynch, J.D. and Ruiz-Carranza, P.M. (1985b), Rivero, J.A. (1988)

Data Providers: Taran Grant, Fernando Castro

Colostethus fascianiger Grant and Castro, 1998

This species is known from the Municipality of El Tambo in Cauca Department, northwards to the municipality of El Cairo in Valle del Cauca Department, in Colombia, between 1,470 and 1,960m asl. It is a relatively common species. It occurs in leaf-litter on the ground near streams in primary or good secondary cloud forests, and has not been recorded outside forest habitat. The female lays terrestrial eggs; when they have hatched the male carries the larvae on his back to streams where they then develop further. Localized threats to this species are habitat fragmentation caused by the expansion of agriculture and cattle ranching, as well as water pollution from pesticides and the fumigation of illegal crops. The range of this species includes Parque Nacional Natural Farallones de Cali.

Bibliography: Grant, T. and Ardila-Robayo, M.C. (2002), Grant, T. and Castro, F. (1998)

Data Providers: Taran Grant, Fernando Castro

Colostethus fraterdanieli Silvestone, 1971

This species occurs in the departments of Valle del Cauca, Quindio, Risaralda, Antioquia, Nariño and Caldas, in Colombia, between 1,000 and 2,500m asl. It is a common species. It occurs on the ground close to streams in cloud forests and in dry tropical forests. Eggs are laid on leaf-litter and then the larvae are carried to streams where they develop further. The major threats to this species are agricultural development (including crops and livestock), logging, agricultural pollution, and the fumigation of crops. Its range includes Parque Nacional Natural Farallones de Cali. Taxonomic work is needed to determine if this form is a complex of more than one species.

Taxonomy: This form is potentially a complex of more than one species according to Grant and Castro (1998).

Bibliography: Grant, T. and Castro, F. (1998), Rivero, J.A. (1988), Rivero, J.A. and Serna, M.A. (1995), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996), Silverstone, P.A. (1971)

Data Providers: Martha Patricia Ramírez Pinilla, Mariela Osorno-Muñoz, Jose Vicente Rueda, Adolfo Amézquita, María Cristina Ardila-Robayo

Colostethus infraguttatus (Boulenger, 1898)

This species occurs on the western slopes of the Ecuadorian Andes and the coastal Cordillera in the provinces of Manabí, Guayas, Bolívar, Los Ríos, Azuay, and El Oro. It has been recorded from 70-1,500m asl (Coloma 1995) and has also recently been found in Loja (Almeida 2002). It is a common species. It inhabits humid premontane forest, tropical thicket and thorny scrub, and very dry tropical forest (Coloma 1995). Eggs are laid on land in leaf-litter or under rocks, and the larvae are then carried to water by the adults where they develop further. The major threats to this species are agricultural development (involving cultivation of crops and rearing of livestock), logging, and creation of wood plantations. Introduced goats are also degrading the species' habitat, which is severely fragmented. Its geographic range overlaps with Parque Nacional Machalilla, Reserva Ecológica Manglares Churute, and Reserva Ecológica Arenillas.

Bibliography: Almeida, D. and Nogales, F. (2002), Almendariz, A. and Orces, G. (2003), Boulenger, G.A. (1898), Coloma, L.A. (1995), Parker III, T.A. and Carr, J.L. (1992)

Data Providers: Diego Cisneros-Heredia, Ana Almandáriz, Mario Yánez-Muñoz, Luis A. Coloma, Santiago Ron

Colostethus lehmanni Silverstone, 1971

This species occurs widely in the Western and Central Cordilleras, from Antioquia Department in Colombia, south to Cotapaxi and Las Pampas Provinces in northern Ecuador, from 1,460-2,120m asl. It is still common in Colombia, but it has not been recorded in Ecuador since October 1990, despite extensive survey efforts. It lives on the ground in very humid montane forest, and has also been found in open fields and very modified areas, but is always near streams. The eggs are laid in leaf-litter, and the male transports the larvae to slow-flowing streams. The serious declines noted in Ecuador can possibly be attributed to chytridiomycosis. Additional likely threats are: deforestation, due to agricultural development, cultivation of illegal crops, fire, logging, and human settlement; introduction of alien predatory fish species in streams; and pollution resulting from the spraying of illegal crops. It occurs in several protected areas in Colombia, while in Ecuador, its geographic range overlaps with the Reserva Ecológica Los Illinizas. In view of the risk of chytridiomycosis, an *ex situ* population may need to be established.

Taxonomy: The population in Ecuador might not be conspecific with the Colombian population (T. Grant and D. Cisneros-Heredia pers. comm.).

Bibliography: Coloma, L.A. (1995), Grant, T. and Ardila-Robayo, M.C. (2002), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996), Silverstone, P.A. (1971)

Data Providers: Wilmar Bolívar, Luis A. Coloma, Santiago Ron, Taran Grant

Colostethus machalilla Coloma, 1995

This species is known from more than ten localities in the Pacific lowlands of Ecuador in the provinces of El Oro, Los Ríos, Bolívar, Guayas, Azogues, and Manabí, from 10-515m asl (Parker and Carr 1992; Coloma 1995). It is not an uncommon species. It inhabits tropical thicket and thorny scrub and very dry tropical forest (Coloma 1995). It lays its eggs on land, and the larvae are then carried to water by the adults where they develop further. The major threats to the species are agriculture, involving cultivation of crops and rearing of livestock, and logging. Its geographic range overlaps with Parque Nacional Machalilla and the Reserva Ecológica Manglares Churute.

Bibliography: Benitez, M.S. and del Pino, E.M. (2003), Coloma, L.A. (1995), Parker III, T.A. and Carr, J.L. (1992)

Data Providers: Luis A. Coloma, Santiago Ron, Mario Yánez-Muñoz, Diego Cisneros-Heredia, Ana Almandáriz

Colostethus mcdiarmidi Reynolds and Foster, 1992

This species is known from the western slopes of the Bolivian Andes. It was known initially from the type locality, approximately 0.25km east of the San Onofre road, 3.3km north of the road to Cochabamba-Tunari Village, in Chapare Province, Cochabamba Department, at 1,693m asl (Reynolds and Foster 1992). Gonzalez at al. (1999) then extended its distribution to western Bolivia, reporting it in the Reserva de la Biósfera y Terretorio Indígena de Pilón Lajas, and in the Yungas forest in La Paz Department. Only four populations of this species are currently known, two in the district of Cochabamba, and two in the northern district of La Paz. The current population trend is unknown, but it is very possibly declining. The population at the type locality is probably now extinct, and has not been seen despite several visits to the area. It is a terrestrial species that inhabits the Yungas forest of Cochabamba and La Paz Districts (De la Riva *et al.* 2000). Köhler (2000a) found specimens to be common during the day in undisturbed montane forest. The larvae were described by Reynolds and Foster (1992), and develop in streams. Major threats to this species are agricultural development, road construction, and water pollution from agriculture. It occurs in the Reserva de la Biósfera y Terretorio Indígena de Pilón Lajas and Parque Nacional Carrasco.

Bibliography: De la Riva, I. *et al.* (2000), Gonzales, L., Lötters, S. and Reichle, S. (1999), Köhler, J. (2000a), Lötters, S., Morales, V.R. and Proy, C. (2003), Reynolds, R. and Foster, M. (1992)

Data Providers: Claudia Cortez, Steffen Reichle, Ignacio De la Riva, Jörn Köhler

Colostethus shuar Duellman and Simmons, 1988

This species occurs on the eastern slopes of the Andes in Napo, Tungurahua, Morona Santiago and Zamora Chinchipe Provinces, Ecuador, between 1,272 and 2,370m asl. It was at least formerly abundant, judging by the large series collected through 1984 in the Kansas Museum. It was common in a stream near Loma El Trigal, on the road between Loja y Zamora, in 1987. It lives in premontane and cloud forest (Coloma 1995) but its tolerance of disturbed habitats is unknown. Reproduction probably occurs by females laying eggs on the ground, with the males bringing the larvae to streams for them to complete their development. In north-eastern Ecuador it occurs in sympatry with *Colostethus bocagei*, *C. fuliginosus*, *C. kingsburyi*, *C. pulchellus* and *Minyobates abditus* near Volcán Reventador. In south-eastern Ecuador the species occurs with *C. kingsburyi*, and *C. pulchellus* at the Pastaza trench, and further south with *C. exasperatus*, *C. mystax* and *C. peculiaris*. The major threats to this species are habitat destruction and degradation due to agricultural development and logging. Its range overlaps with Parque Nacional Sumaco Napo-Galeras, Parque Nacional Sangay, Parque Nacional Llanganates, the Reserva Ecológica Antisana and the Reserva Ecológica Cayambe-Coca.

Bibliography: Coloma, L.A. (1995), Duellman, W.E. and Simmons, J.E. (1988)

Data Providers: Luis A. Coloma, Santiago Ron, Taran Grant

Dendrobates sylvaticus Funkhouser, 1956

This species occurs in south-western Colombia (in Cauca and Narino Departments) and north-western Ecuador (in Pichincha, Esmeraldas, Imbabura, and Los Rios Provinces). It occurs from sea level up to 1,000m asl. It is very common in Colombia but has disappeared from most of its range in Ecuador, only still surviving in the north of its range in that country. It lives in lowland and submontane rainforest and can survive in moderately degraded areas, at least in the more humid parts of its range. The eggs are laid on the ground, and the larvae are transported to bromeliads by the female. The major threats are deforestation for agricultural development, cultivation of illegal crops, logging, mining and human settlement, and pollution resulting from the spraying of illegal crops. It is sometimes recorded in the international pet trade. It occurs in several protected areas in Colombia. In Ecuador, its range overlaps the Reserva Ecológica Cotacachi-Cayapas and Parque Nacional Mache-Chindul. Management practices that could allow a commercial, sustainable harvest of this species should be investigated. Decree INDERENA No. 39 of 9 July, 1985, forbids the collection of *Dendrobates* spp. from the wild for breeding (or other) purposes. CITES Appendix II.

Taxonomy: We follow Lötters et al. (1999) in recognizing Dendrobates sylvaticus as a species distinct from D. histrionicus. It is possible that this is a complex of several species (Lötters et al. 1999), with true D. sylvaticus occurring in Ecuador.

Bibliography: Funkhouser, J.W. (1956), Lötters, S. *et al.* (1999), Morales, M. *et al.* (2002), Myers, C.W. and Daly, J.W. (1976b), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996), Stoskopf, M.K., Wisneski, A. and Pieper, L. (1985)

Data Providers: Luis A. Coloma, Santiago Ron, Taran Grant, Stefan Lötters

Epipedobates anthonyi (Noble, 1921)

This species occurs in south-western Ecuador (in El Oro, Azuay and Loja Provinces) and north-western Peru (in Ancash, Piura and Tumbes Departments), west of the Andes, at 153-1,769m asl. The record from Ancash, Peru, is doubtful (E. Lehr pers. comm.). It is likely to occur a little more widely than current records suggest. In southern Ecuador this is an abundant species. It lives in dry forest near streams and can be found in altered habitats. It lays its eggs in leaf-litter, and the males carry the larvae to running and standing water where they continue their development. This species is threatened by agrochemical pollution of waterways, and is also collected for medicinal use in Ecuador (although not currently in sufficient numbers to be a threat). It is not known with certainty if it occurs in any protected areas. The impact on it of collection for medicinal use and commercial trade in wild specimens should be monitored. CITES Appendix II.

Taxonomy: This species and Epipedobates tricolor were recently separated by Schulte (1999). We follow Graham et al. (2004) in restricting the distribution of E. anthonyi to southern Ecuador and northern Peru.

Bibliography: Duellman, W.E. and Wild, E.R. (1993), Graham, C.H. *et al.* (2004), Schulte, R. (1999), Silverstone, P.A. (1976)

Data Providers: Luis A. Coloma, Santiago Ron, Stefan Lötters

Epipedobates bassleri (Melin, 1941) **PLEASING POISON FROG**

This species occurs in the Amazon drainage of Peru, from the eastern foothills of the Andes east to the Río Huallaga, in the departaments of Huánuco and San Martín, from 270-1,200m asl. It can be extremely common where it occurs. This is a diurnal species of lowland and montane tropical moist forest that can be found in both primary and slightly degraded habitat. Eggs are deposited on the ground and the larvae are then transported to streams by the male. There is significant habitat loss within its range due to agricultural activities (mostly coffee plantations). It is not known from any protected areas, but possibly occurs in Parque Nacional Cordillera Azul and the Bosque de Protección Alto Mayo. CITES Appendix II.

Bibliography: Myers, C.W. (1987), Schulte, R. (1999), Silverstone, P.A. (1975), Silverstone, P.A. (1976), Zimmermann, H. and Zimmermann, E. (1988)

Data Providers: Javier Icochea, Karl-Heinz Jungfer

Mannophryne herminae (Boettger, 1893)

This species occurs in the mountains of the Venezuelan coastal range, from 30-1,610m asl. It is very common. This species is diurnal, and lives on the ground and along streams in semi-deciduous forest. Adults carry larvae on their backs to streams, where metamorphosis is completed. Fires are a major threat, as are agricultural encroachment and human settlement, although it appears not to be significantly threatened by pollution from domestic wastewater. Chytridiomycosis might be a potential future threat. Its range includes Parque Nacional Henri Pittier (Rancho Grande) and Parque Nacional San Esteban where it is a common species. Further work is required to resolve the taxonomy of this species. This species should be monitored carefully, given the potential future threat of chytridiomycosis.

Taxonomy: This form is a complex of more than one species.

Bibliography: Alemán, C. (1952), Barrio Amorós, C.L. (2004), Gines, H. (1959), Hellmich, W. (1940), La Marca, E. (1994e), La Marca, E. (1995a), La Marca, E. (1995b), La Marca, E. (1997), Manzanilla, J. (2001), Manzanilla, J., García-París, M. and La Marca, E. (2002), Manzanilla, J., La Marca, E. and García-París, M. (2003), Myers, C.W., Paolillo, A. and Daly, J.W. (1991), Rivero, J.A. (1961), Sexton, O.J. (1960), Test, F.H. (1962), Test, F.H., Sexton, O.J. and Heatwole, H. (1966)

Data Providers: Enrique La Marca, Jesús Manzanilla

Phyllobates aurotaenia (Boulenger, 1914) **KOKOE POISON FROG**

This species occurs on the western slopes of the Cordillera Occidental in Colombia, along the Río San Juan drainage south to the Río Raposo, in Choco and Valle del Cauca Departments, between 90 and 1,000m asl. It is a very abundant species. It lives on the ground in humid lowland and submontane forests, and is found in primary and secondary forest, but not in degraded areas. The eggs are laid in leaf-litter, and the male takes the larvae to slow-flowing water. The major threats are: deforestation due to agricultural development, cultivation of illegal crops, logging, and human settlement; introduction of alien predatory fish in streams; and pollution resulting from the spraying of illegal crops. It sometimes occurs in very small numbers in international trade. It is not known from any protected areas. Management practices that could allow a commercial, sustainable harvest should be investigated. Decree INDERENA No. 39 of 9 July, 1985, forbids the collection of *Phyllobates* spp. from the wild in Colombia for breeding (or other) purposes. CITES Appendix II.

Bibliography: Rueda-Almonacid, J.V. (1999), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996), Silverstone, P.A. (1976)

Data Providers: Wilmar Bolívar, Taran Grant, Stefan Lötters, Fernando Castro

Phyllobates bicolor Duméril and Bibron, 1841 **BLACK-LEGGED POISON FROG**

This species occurs on the western slopes of the Cordillera Occidental in Colombia, in Risaralda, Choco, Valle del Cauca, and Cauca Departments, between 500 and 1,500m asl. It is an abundant species. It lives in humid lowland and montane forests, usually occurring near streams, and can survive in logged forest, but not in open areas. The eggs are laid on the ground and the male transports the larvae to streams. The major threats are: deforestation due to agricultural development, cultivation of illegal crops, logging, and human settlement; introduction of alien predatory fish in streams; and pollution resulting from the spraying of illegal crops. It occurs in the international pet trade, but it is not known to what extent this poses a threat to the species. Chytridiomycosis might be a potential future threat. It occurs in Parque Nacional Natural Farallones de Cali. Management practices that could allow a commercial, sustainable harvest of this species should be investigated. Decree INDERENA No. 39 of 9 July, 1985, forbids the collection of *Phyllobates* spp. from the wild in Colombia for breeding (or other) purposes. CITES Appendix II.

Bibliography: Lötters, S. *et al.* (1997), Myers, C.W., Daly, J.W. and Malkin, B. (1978), Rueda-Almonacid, J.V. (1999), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996), Silverstone, P.A. (1976)

Data Providers: Wilmar Bolívar, Stefan Lötters

DISCOGLOSSIDAE

Alytes cisternasii Boscá, 1879 **IBERIAN MIDWIFE TOAD**

This species is restricted to southern and eastern Portugal and western and central Spain, from 100-1,300m asl. It can be locally common in suitable habitat, and is more abundant in the western part of its range. Population declines have been observed in Spain, potentially because of introduced predators. This species is closely associated with meadows and open oak (*Quercus*) forests, most often in sandy areas. Reproduction and larval development takes place in temporary waterbodies (most often stream habitats); larval development is relatively long in this species and may last more than one season. The species is not very adaptable. The main threats are the loss of suitable Mediterranean forest habitat, the introduction of predatory fishes and Louisiana Crayfish (*Procamabrus clarkii*), and the loss of suitable aquatic habitats through pollution, canal construction, dams, and urbanization. A potential future threat is chytridiomycosis, which has already affected the related *Alytes obstetricans* in Spain. It is known to occur in Cabañeros and Doñana National Parks, Spain, and is listed on Appendix II of the Berne Convention, and on Annex IV of the EU Natural Habitats Directive. It is protected by national legislation in Spain, and is recorded in a number of national and sub-national Red Data Books. Given the potential future threat of chytridiomycosis this species should be monitored closely.

Bibliography: Alvarez, A. and Martin, L. (2000), Arnold, E.N. (2003), Arntzen, J.W. and García-París, M. (1995), Bosch, J. and Márquez, R. (2001), Brown, L.E. and Crespo, E.G. (2000), Crespo, E.G. (1981), Fromhage, L., Vences, M. and Veith, M. (2004), Gasc, J.-P. *et al.* (eds.) (1997), Godinho, R. *et al.* (1999), Malkmus, R. (1996b), Malkmus, R. (2004), Márquez, R. (1995), Márquez, R. (1996), Martínez-Solano, I. *et al.* (2004), Martínez-Solano, I. and Bosch, J. (2001), Pleguezuelos, J.M. (1997), Pleguezuelos, J.M. and Villafranca, C. (1997), Pleguezuelos, J.M., Márquez, R. and Lizana, M. (2002), Reques, R. (2000), Rodríguez-Jiménez, A.J. (1984)

Data Providers: Pedro Beja, Jaime Bosch, Miguel Tejedo, Miguel Lizana, Iñigo Martínez-Solano, Alfredo Salvador, Mario García-París, Ernesto Recuero Gil, Jan Willem Arntzen, Rafael Marquez, Carmen Diaz Paniagua

Alytes maurus (Pasteur and Bons, 1962)

This species is restricted to the western and central Rif Mountains and middle Atlas Mountains of Morocco. It is known only from about twenty fragmented localities, from 200-2,050m asl. It is locally common in suitable habitat. This species is generally found in humid sites in montane karst and escarpment areas. Adults inhabit cracks and fissures in rocks, or live under stones close to permanent streams, pools, and other waterbodies. Surrounding vegetation may be scrub, cork oak groves, and orchards. It spawns in water, producing approximately 60 eggs at a time (with 3-4 clutches a year), which are then carried around outside the water by the male, who releases the larvae back into water at the point of hatching. The main threat to this species is considered to be the introduction of the predatory fish *Gambusia holbrooki* to breeding ponds. Domestic water pollution is also a threat to the population in Chauen, although other populations in the surrounding area are not threatened by this contamination. Overall, the threats facing this species are currently localized, and it is not believed to be seriously threatened at present. It occurs in a number of protected areas.

Taxonomy: This species was recently separated from Alytes obstetricans (Donaire-Barroso and Bogaerts 2003; Martínez-Solano et al. 2004; Fromhage, Vences and Veith 2004).
Bibliography: Altaba, C.R. (1997), Arntzen, J.W. and Szymura, J.M. (1984), Bons, J. and Geniez, P. (1996), Donaire-Barroso, D. and Bogaerts, S. (2003), Fromhage, L., Vences, M. and Veith, M. (2004), Libis, B. (1985), Martínez-Solano, I. *et al.* (2004), Mateo, J.A. *et al.* (2003), Mellado, J. and Dakki, M. (1988), Mellado, J. and Mateo, J.A. (1992), Pasteur, G. and Bons, J. (1959), Pasteur, G. and Bons, J. (1962), Salvador, A. (1996), Schleich, H.H., Kästle, W. and Kabisch, K. (1996)
Data Providers: David Donaire-Barroso, Alfredo Salvador, Tahar Slimani, El Hassan El Mouden

Discoglossus jeanneae Busack, 1986 — SPANISH PAINTED FROG

This species is endemic to isolated areas in southern, eastern and north-eastern Spain, from sea level to around 2,050m asl (in Granada). It is generally more abundant in the south of its range, and is considered to be scarce in the north, although further surveys are required. Its occurrence is very patchy within its overall range, and it is believed to be in decline, principally due to increased aridity within its range. It is likely that isolated populations have recently become extinct along the Mediterranean coast. An inhabitant of open areas, pine groves and shrubland associated with limestone or gypsum soils. This is a very aquatic species found in shallow pools, streams, springs, ponds and artificial water sources, such as drinking troughs and drainage channels. Breeding and larval development takes place within the aquatic habitats. It can be present in traditionally farmed areas. The major threat to this species is continued loss of habitat as a result of increased aridity throughout its range. It is also threatened by loss of suitable habitat (including fragmentation) to agricultural and infrastructure development. The species is particularly impacted by the loss, or contamination, of aquatic habitats (such as drinking troughs), and introductions of predatory fish and crustaceans, in particular the Louisiana Crayfish (*Procamabrus clarkii*). Its populations are now fragmented in many parts of its range. The species has been recorded from Parque Nacional de Sierra Nevada. It is listed on Appendix II of the Berne Convention and on Annexes II and IV of the EU Natural Habitats Directive. It is recorded in the national Red Data Book of Spain and is protected by national legislation. There is a need to further clarify the distribution of this species.
Bibliography: Arnold, E.N. (2003), Benavides, J. *et al.* (2001), Busack, S.D. (1986), Fromhage, L., Vences, M. and Veith, M. (2004), García-París, M. and Jockusch, E.L. (1999), Gasc, J.-P. *et al.* (eds.) (1997), Gosá, A. and Bergerandi, A. (1994), Pleguezuelos, J.M. (1997), Pleguezuelos, J.M. and Villafranca, C. (1997), Pleguezuelos, J.M., Márquez, R. and Lizana, M. (2002), Reques, R. (2000), Sancho, V. (2000), Vences, M. and Glaw, F. (1996)
Data Providers: Jaime Bosch, Miguel Tejedo, Miguel Lizana, Iñigo Martínez-Solano, Alfredo Salvador, Mario García-París, Ernesto Recuero Gil, Carmen Diaz Paniagua, Valentin Perez-Mellado, Rafael Marquez

Discoglossus montalentii Lanza, Nascetti, Capula and Bullini, 1984 — CORSICAN PAINTED FROG

This species is endemic to Corsica (France), where it is found mainly in the central part of the island, from Corte and Cervione in the north to Porto-Vecchio in the south (Noellert and Noellert 1992). It has been recorded from localities between 300m and 1,900m asl, and is absent from coastal lowlands. There is little information available on the population status of this species, which was only recently identified and differentiated from the more widespread *Discoglossus sardus*. This frog is strongly associated with running waters in high-altitude pristine woods and forests, and is especially found in areas with precipitous streams. The eggs are presumably deposited in aquatic vegetation in streams, with larvae developing in these streams. There are no known current threats to this species, but introduced predators and competitors are future possible threats. It is listed on Appendix II of the Berne Convention and on Annexes II and IV of the EU Natural Habitats Directive.
Bibliography: Alvidio, S. *et al.* (1999), Arnold, E.N. (2003), Clarke, B.T. and Lanza, B. (1990), Delaugerre, M. and Cheylan, M. (1992), Emanueli, L. *et al.* (2000), Fromhage, L., Vences, M. and Veith, M. (2004), Gasc, J.-P. *et al.* (eds.) (1997), Noellert, A. and Noellert, C. (1992), Salvidio, S., Sindaco, R. and Emanueli, L. (1999)
Data Providers: Claude Miaud, Marc Cheylan

HYLIDAE

Agalychnis saltator Taylor, 1955

This species occurs in humid lowlands and less commonly on premontane Atlantic slopes from north-eastern Honduras to south-eastern Costa Rica (Savage 2002), from 15-1,300m asl. There is a single record for this species from Nicaragua, where it probably occurs much more widely than is currently known. It is not especially common, but is regularly seen in mating aggregations at many sites. Its habitat is undisturbed lowland and montane humid and wet forests and less commonly in adjacent premontane wet forest and rainforest. This species lives in tree canopies, descending to temporary pools to reproduce. The major threats to it are general habitat loss and fragmentation through deforestation due to agricultural development and logging. The species has been recorded from several protected areas.
Bibliography: Duellman, W.E. (1970), Köhler, G. (2001), McCranie, J.R. and Wilson, L.D. (2002b), Proy, C.H. (1992), Roberts, W.E. (1994), Savage, J.M. (2002)
Data Providers: Federico Bolaños, Gerardo Chaves, Jay Savage, Gustavo Cruz, Larry David Wilson, Gunther Köhler

Anotheca spinosa (Steindachner, 1864)

This species is found as fragmented populations on the Atlantic slopes of the Sierra de Los Tuxtlas, Veracruz State and northern Oaxaca State, Mexico; eastern Honduras; central Costa Rica; and central Panama, from 95-2,000m asl. It has not been recorded from Belize, Guatemala, El Salvador, nor Nicaragua. There is no information on the population status of this species. In Costa Rica, this has always been a rarely seen species, but its call can be heard regularly in the appropriate habitat. Although several populations are known in Mexico, these are completely disjunct and it seems that the species has been extirpated from one or two locations. It is a rare species in Mexico and it has been found only once in the last 30 years. In Honduras, it is known only from two specimens. There are no recent data from Panama. This species occurs in lowland rainforests and montane humid forest where it breeds in tree holes. It is apparently restricted to intact forest. The most important threats to it are disturbance, clearance and transformation of its original habitat, arising from smallholder farming and subsistence wood collecting. It is protected in the Reserva de la Biósfera El Ocote, Parque Internacional La Amistad and the Reserva de la Biósfera Tawahka Asagni in Honduras.
Bibliography: Duellman, W.E. (2001), Ibáñez, R. *et al.* (2000), Lips, K.R. *et al.* (2004), McCranie, J.R. and Wilson, L.D. (2002b), Savage, J.M. (2002), Young, B. *et al.* (1999)
Data Providers: Georgina Santos-Barrera, Oscar Flores-Villela, Frank Solís, Roberto Ibáñez, Jay Savage, Gerardo Chaves

Aplastodiscus cavicola (Cruz and Peixoto, 1984)

This species from south-eastern Brazil ranges from Santa Teresa in the state of Espírito Santo to Juiz de Fora in the south-east of the state of Minas Gerais, from 70-800m asl. It is common. It lives in primary and secondary forests, and clearings inside forest, and is found on the border of small streams where it builds subterranean nests. The males call from underground, and the larvae develop in permanent streams. The major threats are probably related to habitat loss due to livestock grazing, wood plantations, clear-cutting, fire and human settlement. It occurs in some protected areas.
Taxonomy: This species was previously within the genus Hyla but has recently been moved to the genus Aplastodiscus (Faivovich et al. 2005).
Bibliography: Cruz, C.A.G. and Peixoto, O.L. (1984), Faivovich, J. *et al.* (2005)
Data Providers: Carlos Alberto Gonçalves da Cruz, Sergio Potsch de Carvalho-e-Silva, Oswaldo Luiz Peixoto

Aplastodiscus eugenioi (Carvalho-e-Silva and Carvalho-e-Silva, 2005)

This species is known from sea level to 300m asl along the coasts of north-eastern São Paulo and south-western Rio de Janeiro States, south-east Brazil. No information is currently available on its population status. This species occurs near very straight, flowing streams inside lowland Atlantic forest. During the day, adults can be found in bromeliads in high trees or in coiled leaves of Musaceae and Marantaceae vegetation. Males call at night from similar locations, and bushes or banana trees. Breeding is concentrated from August to January. The larvae are lotic-benthic, hiding between stones and pebbles on the sandy substrate of narrow canopied forest streams. The Atlantic forest in which this species occurs has been subject to substantial deforestation and fragmentation due to historical logging and ongoing large-scale clearance for cattle pasture and crops such as sugar cane, coffee, and exotic trees, as well as for smallholder agriculture. Forest is increasingly being cleared for coastal development projects. This species is not known to occur in any protected areas, and improved habitat protection is clearly needed.
Taxonomy: This species was previously within the genus Hyla but has recently been moved to the genus Aplastodiscus (Faivovich et al. 2005).
Bibliography: Carvalho-e-Silva, A.M.P.T. and Carvalho-e-Silva, S.P. (2005), Faivovich, J. *et al.* (2005)
Data Providers: Sergio Potsch de Carvalho e Silva

Aplastodiscus weygoldti (Cruz and Peixoto, 1985)

This species is known from the vicinity of Santa Tereza Municipality, in the state of Espírito Santo, south-eastern Brazil, at 650m asl, and from a newly discovered locality, Fazenda Palmeira, in Itapebi Municipality in the state of Bahia. It is common at the type locality, and there have been some recent collections there. It is restricted to forest, including secondary forests, and can tolerate a degree of disturbance, but it is not found in open or severely degraded areas. It is usually found on vegetation near water, and breeds in forest streams. The major threats are probably related to habitat loss due to agriculture, livestock grazing, clear-cutting and human settlement. It occurs in the Estação Biológica de Santa Lucia and the Reserva Biológica Augusto Ruschi.
Taxonomy: This species was previously within the genus Hyla but has recently been moved to the genus Aplastodiscus (Faivovich et al. 2005).
Bibliography: Cruz, C.A.G. and Peixoto, O.L. (1984), Faivovich, J. *et al.* (2005), Pimenta, B.V S. *et al.* (2005)
Data Providers: Oswaldo Luiz Peixoto, Bruno Pimenta

Ecnomiohyla miotympanum (Cope, 1863)

This species is known from the Atlantic slopes of the Sierra Madre Oriental from central Nuevo Leon to central Veracruz, Mexico. Other allopatric populations occur in southern Veracruz, north-central Oaxaca and northern Chiapas, Mexico. It probably occurs more widely than current records suggest. This is a fairly common species. It inhabits cloud forest, and is frequently associated with bromeliads or elephant-ear plants. It can sometimes be found on the ground, in bushes, or on small plants. It is a stream-breeding amphibian. A major threat to this species is habitat loss and degradation arising from agricultural development and logging. Local people also consume it and it has been observed to be common in the local trade in Jalepa. The range of this species includes at least three protected areas, but further protection of the cloud forest fragments in Mexico is needed.
Taxonomy: This species was previously within the genus Hyla but has recently been moved to the new genus Ecnomiohyla (Faivovich et al. 2005). This form is probably a complex of more than one species.
Bibliography: Duellman, W.E. (2001), Faivovich, J. *et al.* (2005), Mendoza-Quijano, F. *et al.* (2001), Pineda, E. (2003)
Data Providers: Georgina Santos-Barrera, Luis Canseco-Márquez, Oscar Flores-Villela

Hyla andersonii Baird, 1854 — PINE BARRENS TREEFROG

This species is found in eastern USA including the Pine Barrens of New Jersey; the upper Coastal Plain and parts of lower Coastal Plain of North and South Carolina; and western Florida panhandle and adjacent Alabama, some 750km south-west of the nearest South Carolina population. It is also known in Georgia from an old record of a single specimen (Means and Mohler 1979; Gosner and Black 1967; Conant and Collins 1991). There are numerous occurrences throughout its range. The largest populations occur in New Jersey (Freda and Morin 1984). Discovery of this species in Florida was fairly recent (Christman 1970). Palmer (1977) suggested that the current distribution reflects relicts from a considerably more widespread distribution in the past. Its total adult population size is unknown but it is relatively common where it occurs. Its population is relatively stable overall, but it is probably experiencing local declines due to habitat loss. The non-breeding habitat is generally pine-oak areas adjacent to breeding habitat. Activity is terrestrial and arboreal. Important egg-laying and larval habitats include open cedar swamps and sphagnaceous, shrubby, acidic, seepage bogs on hillsides below pine-oak ridges. It is intolerant of closed-canopy conditions. It is apparently secure in most of the range, although relative scarcity and specialized habitat requirements justify continued monitoring and protection. The primary threat in the New Jersey Pine Barrens is habitat destruction or alteration from residential, agricultural, and industrial development (Palmer 1977; Freda and Morin 1984). Development pressures within the Pine Barrens place isolated populations outside protected areas at increased risk of elimination. The early successional shrub bogs, seeps, and sphagnum ponds selected as breeding sites are very acidic and nutrient-poor ecosystems and any changes in the chemistry of the waters in these habitats (as, for example, from storm water runoff) would likely cause the disappearance of the characteristic flora and fauna (Ehrenfeld 1983; Morgan *et al.* 1983; Freda and Morin 1984). The sandy soils of the Pine Barrens are very porous and allow pollutants to quickly enter the ground water, which is the major water source for the wetlands upon which the treefrog depends. Development can also lower the water table, which would have dramatic effects on the hydrology of bog wetlands. Garton and Sill (1979) reported that the specific habitat requirements of the species made it susceptible to local extirpation. Unlike other sympatric treefrog species, it generally does not breed in temporary waterbodies such as natural rain pools or in human-made areas such as roadside ditches and borrow pits. However, Bullard (1965) reported chorusing males along a roadside ditch in North Carolina. As is true for other Sandhills species, plant succession due to fire suppression appears to be a significant threat in South Carolina (Cely and Sorrow 1986). Many populations on public lands provide good opportunities for conservation management of this species. For example, it occurs in 16 sites within the Carolina Sandhills National Wildlife Refuge in Chesterfield County, South Carolina (Garton and Sill 1979; Brown 1980). In New Jersey, the greatest density of treefrogs, and the largest numbers of colonies, are found in protected areas within Lebanon and Wharton State Forests and Greenwood and Pasadena wildlife management areas (Freda and Morin 1984). Most occurrences in the Florida and Alabama populations are on protected lands, specifically Eglin Air Force Base and Blackwater River State Forest in Florida, and Conecuh National Forest in Alabama (Jackson pers. comm.).
Bibliography: Baird, S.F. (1854), Blackburn, L., Nanjappa, P. and Lannoo, M.J. (2001), Brown, E.E. (1980), Bullard, A.J. (1965), Cely, J.E. and Sorrow, J.A. Jr. (1983), Cely, J.E. and Sorrow, J.A. Jr. (1986), Christman, S.P. (1970), Conant R. (1975), Ehrenfeld, J.G. (1983), Freda, J. and Gonzalez, R.J. (1986), Freda, J. and Morin, P.J. (1984), Frost, D.R. (1985), Garton, J.S. and Sill, B.L. (1979), Gerhardt, H.C. (1974), Godwin, J.C. (1995a), Gosner, K.L. (1960), Gosner, K.L. and Black, I.H. (1956), Gosner, K.L. and Black, I.H. (1957), Gosner, K.L. and Black, I.H. (1967), Hulmes, D., Hulmes, P. and Zappalorti, R. (1981), Jensen, J.B. (1991), Martof, B.S. *et al.* (1980), Means, D.B. (1983), Means,

D.B. and Longden, C.J. (1976), Means, D.B. and Moler, P.E. (1979), Moler, P.E. (1981), Morgan, M.D. *et al.* (1983), Morin, P.J., Lawler, S.P. and Johnson, E.A. (1990), Mount, R.H. (1980), Noble, G.K. and Noble, R.C. (1923), Palmer, W.M. (1977), Tardell, J.H., Yates, R.C. and Schiller, D.H. (1981), U.S. Fish and Wildlife Service (1980c), Wright, A.H. and Wright, A.A. (1949)
Data Providers: Geoffrey Hammerson

Hyla euphorbiacea Günther, 1859

This species occurs in the Sierra Madre Oriental, from central Veracruz and south-east Puebla, southward to Oaxaca, the Valley of Oaxaca and the mountains south of the valley, in Mexico. It probably occurs more widely than current records suggest. It is a common species. It inhabits lowlands around the valley of Oaxaca where, for part of the year, it can congregate in flooded grassy fields or in the pine-oak and pine forests at higher altitudes. It requires the presence of bromeliads for refuge in the dry season. This species breeds in seasonal pools and streams. At higher altitudes, forested areas are affected by infrastructure development for human settlement, which is degrading the habitat of this species. Its range does not include any protected areas.
Bibliography: Duellman, W.E. (2001), Kaplan, M. and Ramirez-Bautista, A. (1996)
Data Providers: Georgina Santos-Barrera, Luis Canseco-Márquez

Hyloscirtus alytolylax (Duellman, 1972)

This species occurs on the Pacific slopes of the Andes in southern Colombia (in Nariño and Cauca Departments) and widely in western Ecuador, from 500-2,000m asl. It is locally very common in suitable habitats. It lives on vegetation inside lowland and montane forests, usually very close to streams. Specimens have been found calling from vegetation over, and boulders in, cascading mountain streams. It can survive in secondary forest if vegetation persists around streams. The eggs are deposited among rocks at the water's edge, and the larvae develop in streams. The major threat is habitat loss due to agricultural development (including cultivation of illegal crops), logging, and human settlement, and pollution resulting from the spraying of illegal crops. It is probably also affected by the introduction of exotic fish species, pollution from agriculture, and droughts. In Ecuador, its geographic range overlaps with the Reserva Ecológica Los Illinizas and the Reserva Ecológica Manglares Churute. In Colombia it has been recorded from Parque Nacional Natural Farallones de Cali.
Taxonomy: This species was previously within the genus Hyla but has recently been moved to the resurrected genus Hyloscirtus (Faivovich et al. 2005).
Bibliography: Duellman, W.E. (1972), Faivovich, J. *et al.* (2005), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)
Data Providers: Wilmar Bolívar, Luis A. Coloma, Santiago Ron, Diego Cisneros-Heredia, Karl-Heinz Jungfer

Hyloscirtus bogotensis (Peters, 1882)

This species is found in the central part of Cordillera Oriental of the Andes (4° 40'N to 6°N), in the Cundinamarca, Boyacá and Santander Departments, Colombia, at 1,750-3,900m asl. It is common, with many recent records. It occurs in streams and in bromeliads in premontane humid forest, cloud forest, and páramo, and also in open areas and secondary forest, and reproduces in streams. Threats to this species include landscape transformation and habitat loss due to agriculture (crops and cattle ranching), the introduction of predatory trout, and water pollution due to the use of agrochemicals. It occurs in several protected areas.
Taxonomy: This species was previously within the genus Hyla but has recently been moved to the resurrected genus Hyloscirtus (Faivovich et al. 2005).
Bibliography: de Perez, G.R. and Ruiz-C., P.M. (1996), Duellman, W.E. (1972), Faivovich, J. *et al.* (2005), Mijares-Urrutia, A. (1992a), Ruiz-Carranza, P.M. and Lynch, J.D. (1982), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)
Data Providers: María Cristina Ardila-Robayo, Jose Vicente Rueda

Hyloscirtus callipeza (Duellman, 1989)

This species occurs on the western slopes of the Cordillera Oriental, Santander and Norte de Santander Departments, Colombia, at 1,050-3,000m asl. It is common, with many recent records. It lives in streams in cloud forest, and near streams in heavily disturbed areas. The eggs are laid on vegetation, and the larvae develop in the water. Threats to this species include habitat loss due to agricultural cultivation and cattle ranching, and predation from introduced trout. It occurs in three protected areas: Guanentá, Rasgon, and Los Estoraques.
Taxonomy: This species was previously within the genus Hyla but has recently been moved to the resurrected genus Hyloscirtus (Faivovich et al. 2005).
Bibliography: Duellman, W.E. (1989b), Faivovich, J. *et al.* (2005), Mijares-Urrutia, A. (1997a), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)
Data Providers: María Cristina Ardila-Robayo, Jose Vicente Rueda

Hyloscirtus jahni (Rivero, 1961)

This species is known from the Andes of Venezuela, in the states of Mérida and Trujillo. It has been recorded from 1,800-3,000m asl. Records from Sierra del Turimiquire, in Sucre and Monagas States, are misidentifications. It was formerly considered to be an uncommon species, and it t is possible that it is decreasing in some places due to habitat loss. However, in some places like Monte Zerpa, north of the city of Mérida, this frog has replaced a formerly abundant species (*Hyla platydactyla*) that has undergone serious declines. It is found alongside streams in cloud forests. The eggs are laid on leaves overhanging water, and when hatched the larvae fall into the water below. The major threat to this species' habitat is agricultural development, involving both cultivation of crops and livestock grazing. Predation by introduced trout is also a problem. Its range includes Parque Nacional Sierra Nevada, Parque Nacional Sierra de La Culata and Parque Nacional Guaramacal.
Taxonomy: This species was previously within the genus Hyla but has recently been moved to the resurrected genus Hyloscirtus (Faivovich et al. 2005).
Bibliography: Barrio Amorós, C.L. (2004), Duellman, W.E. (1977), Faivovich, J. *et al.* (2005), La Marca, E. (1985b), La Marca, E. (1992), Mijares-Urrutia, A. (1992a), Péfaur, J.E. and Rivero, J.A. (2000), Piñero, J. and Durant, P. (1993), Vial, J.L. and Saylor, L. (1993)
Data Providers: Enrique La Marca, Juan Elías García-Pérez

Hyloscirtus larinopygion (Duellman, 1973)

This species is known only from the Colombian and Ecuadorian Andes. In Colombia it occurs patchily in the Cordillera Occidental and the Cordillera Central, and on the eastern slope of the Nudo del Pasto (in the departments of Risaralda, Valle del Cauca, Quindio and Tolima). In northern Ecuador it is known only from a small area in Carchi and Imnbabura Provinces. Its altitudinal range is 1,950-3,100m asl. It probably occurs a little more widely than current records suggest. Although patchily distributed, it is common where found. It lives on vegetation (including in bromeliads and on branches) in primary and secondary forests next to water sources (usually streams). It has been found in a small, wooded ravine in otherwise cleared pastureland, and breeds in slow-moving streams. The major threats are deforestation for agricultural development, cultivation of illegal crops, logging, and human settlement, and pollution resulting from the spraying of illegal crops. In Ecuador, its geographic range overlaps with the Reserva Ecológica Cotacachi-Cayapas. It occurs in several protected areas in Colombia.
Taxonomy: This species was previously within the genus Hyla but has recently been moved to the resurrected genus Hyloscirtus (Faivovich et al. 2005).
Bibliography: Ardila-Robayo, M.C. and Acosta-Galvis, A. (2000b), Duellman, W.E. (1973), Duellman, W.E. and Hillis, D.M. (1990), Faivovich, J. *et al.* (2005), Ron, S.R. (2001), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)
Data Providers: Wilmar Bolívar, Luis A. Coloma, Santiago Ron, Juan Manuel Renjifo

Hypsiboas alboniger (Nieden, 1923)

This species is found on the eastern Andes in southern Bolivia. It was recorded in the departments of Cochabamba, Chuquisaca and Potosi (Duellman, De la Riva and Wild 1997; De la Riva *et al.* 2000). It is also known from Tarija Department. It has been recorded from 2,600-3,500m asl and is currently known from 12 populations. It is locally common. This species is arboreal and is known from open areas. It inhabits high Andean vegetation and dry inter-Andean valleys (De la Riva *et al.* 2000; Köhler 2000a). Duellman, De la Riva and Wild (1997) observed individuals perching on small trees and bushes or on brush woods, close to stream banks in the Julpe River area. It breeds in streams. The major threat is habitat loss due to mining and agriculture (which, in turn, causes water pollution and sedimentation of streams). Its range includes Parque Nacional Toro Toro.
Taxonomy: This species was previously within the genus Hyla but has recently been moved to the resurrected genus Hypsiboas (Faivovich et al. 2005). The specimens described as Hyla ocapia (Andersson 1938) were considered by Duellman, De la Riva and Wild (1997) as synonyms of Hypsiboas albonigra. Initially, the specimen described as Hyla zebra (Dumeril and Bibron 1841) came from Buenos Aires, Argentina. Nonetheless, the locality was corrected and it was reported that the collection locality was Tacopaya, in the high and arid montane regions, between Sucre and Río Grande, Chuquisaca, Bolivia (Duellman, De la Riva and Wild 1997).
Bibliography: Andersson, L.G. (1938), de la Riva, I. (1990), De la Riva, I. *et al.* (2000), Duellman, W.E., De la Riva, I. and Wild, E. (1997), Duméril, A.M.C. and Bibron, G. (1841), Faivovich, J. *et al.* (2005), Köhler, J. (2000a), Nieden, F. (1923)
Data Providers: Claudia Cortez, Steffen Reichle, Ignacio De la Riva, Jörn Köhler

Hypsiboas cipoensis (B. Lutz, 1968)

This species is known from the mountains of central Minas Gerais State in Brazil, above 900m asl. It is common. It occurs on vegetation near permanent and temporary streams (where it breeds) in forest and open areas. The major threat to this species is habitat degradation due to smallholder livestock grazing, fire, and infrastructure development for human settlement. Its range includes several protected areas.
Taxonomy: This species was previously within the genus Hyla but has recently been moved to the resurrected genus Hypsiboas (Faivovich et al. 2005).
Bibliography: Cruz, C.A.G. and Caramaschi, U. (1998), Eterovick, P.C., Barros, I.S. and Sazima, I. (2002), Faivovich, J. *et al.* (2005), Lutz, B. (1973a)
Data Providers: Paula Cabral Eterovick, Luciana Barreto Nascimento

Litoria jungguy Donnellan and Mahony, 2004

This species is found on the east coast of Australia in north-east Queensland, from the Barron River drainage and river drainages flowing east from the Atherton Tablelands, south to the Murray River (around 20km south of Tully), and from an apparently isolated population in the Broken River catchment. No information is currently available on its population status. It is restricted to rainforest where it usually occurs near streams, and it appears to construct water-filled basins for oviposition (Richards and Alford 1992; Richards 1993b). Where this species occurs outside protected areas in the Queensland wet tropics it is threatened by severe deforestation for cattle pastures and cultivation of sugar cane, as well as by logging and infrastructure development. Much of the species' range falls within the Queensland Wet Tropics World Heritage Area, and it is also found in Cape Tribulation National Park. Further work is needed to sustainably manage rainforest habitats outside this World Heritage Area.
Bibliography: Donnellan, S.C. and Mahony, M.J. (2004), Richards, S.J. (1993b), Richards, S.J. and Alford, R.A. (1992)
Data Providers: Jean-Marc Hero

Litoria pearsoniana (Copland, 1961) PEARSON'S GREEN TREEFROG

This Australian endemic occurs from the Kadanga State Forest in south-east Queensland to Gibraltar Range in north-eastern New South Wales. There is also an isolated population (genetically distinct, which also exhibits call differences) at Kroombit Tops in Queensland. It has been recorded from 200-1,000m asl. Some declines have occurred in south-east Queensland (Brisbane Forest Park and Conondale Ranges). It occurs at low densities at some sites where seemingly suitable habitat exists. This species occurs in shaded rainforest gullies and closed forest in association with fast-flowing rocky streams. It hides amongst rocks and thick vegetation, or is active at night on the ground and on low shrubs bordering streams. In winter adults form aggregations under rocks. Breeding occurs in spring and summer, and oviposition occurs in shallow water in quiet pools. About 360-730 eggs are laid cemented to rocks, twigs or the pool floor. The larvae metamorphose after 2-2.5 months. Large areas of habitat have been and continue to be degraded by introduced stock (cattle and pigs), invasion of weeds, and timber harvesting. Upstream clearing and urban development have affected downstream flow regimes and water quality. Sick and dead individuals infected by chytrid fungus have been found at Main Range, Conondale Range and Kroombit Tops in Queensland, and this might be the major cause of declines in suitable habitats. It is listed as Endangered in Queensland, and a few protected areas cover parts of its range.
Taxonomy: The taxonomy of this species requires revision.
Bibliography: Barker, J., Grigg, G. and Tyler, M. (1995), Cogger, H.G. (1992), Hines, H., Mahony, M. and McDonald, K. (1999), Hines, H.B. and the South-east Queensland Threatened Frogs Recovery Team (2002), McDonald, K.R. and Davies, M. (1990), McGuigan, K. *et al.* (1998)
Data Providers: Jean-Marc Hero, Ed Meyer, John Clarke

Phrynomedusa appendiculata (Lutz, 1925)

This species is known only from the type locality (São Bento), Novo Horizonte, Lauro Muller in Santa Catarina State, and Serra de Araracuara, Guaratuba, in Parana State, southern Brazil, at approximately 800-1,000m asl. Once somewhat common in areas where it occurred, it has not been seen since 1970 despite repeated searches. The reasons for the decline are unknown. It occurred on vegetation near forest streams in rainforest, laying eggs on vegetation overhanging the streams in which the larvae developed. The habitat in the localities where the species occurred is relatively intact. Its disappearance from apparently suitable habitat is reminiscent of that of other high-altitude frogs in the wet tropics, and chytridiomycosis cannot be ruled out as being the causative agent. It does not occur in any protected areas. Research to determine its population status and distribution, and actions to protect the original habitat, are needed.
Taxonomy: This species was resurrected from the synonymy of Phrynomedusa fimbriata by Cruz (1985).
Bibliography: Cochran, D.M. (1955), Cruz, C.A.G. (1985), Cruz, C.A.G. (1990), Heyer, W.R. *et al.* (1990)
Data Providers: Paulo Garcia, Magno Vicente Segalla, Débora Silvano

Ptychohyla euthysanota (Kellog, 1923)

This species ranges from south-eastern Oaxaca, Mexico, southward to Guatemala and eastern El Salvador (from 500-2200m asl). It probably occurs more widely than current records suggest. It is common in Guatemala and abundant in Chiapas, Mexico. Its population status is unknown in El Salvador. The subspecies *Ptychohyla euthysanota euthysanota* lives in cloud forests while the other subspecies (*P. e. macrotympanum*) lives in broadleaf forests and pine forests. Both subspecies are highly associated with mountain streams. Reproduction occurs by direct development. A major threat to this species is alteration of the original habitats and microhabitats due to smallholder agricultural activity and logging. Chytridiomycosis is also a potential threat to this species, particularly for high-altitude populations. Declines due to chytridiomycosis amongst species of this genus have already been detected in Guatemala (Mendelson *et al*. 2004). It occurs in at least two Biosphere Reserves in Chiapas (La Sepultura and El Triunfo) and is listed as "threatened" (Amenazada) by the Mexican government, although improved protection of forest habitats in southern Mexico is needed. It also occurs in Parque Nacional Montecristo in El Salvador, but is not protected in Guatemala. Given the potential threat of chytridiomycosis populations of this species should be monitored closely.

Bibliography: Duellman, W.E. (2001), Mendelson III, J.R. *et al.* (2004)

Data Providers: Georgina Santos-Barrera, Manuel Acevedo, Antonio Muñoz Alonso

Scinax oreites Duellman and Wiens, 1993

This species can be found on the eastern slopes of the Peruvian Andes in the departments of Amazonas, Pasco and San Martin, from 1,600-2,400m asl. There is no information on its population status. It can be found in upper and montane rainforest (cloud forest) and lower montane rainforest. It presumably breeds in ponds, swamps and open areas. It is not known whether or not it can survive in degraded habitats. Specific threats to this species are not known, but there is general agricultural development throughout much of the region that is likely to be affecting it. It might occur in the Bosque de Protección Alto Mayo, the Zona Reservada Biabo Cordillera Azul, Parque Nacional de Yanachaga-Chemillén, the Reserva Comunal Yanesha, and the Bosque de Protección San Matías-San Carlos (although this requires confirmation).

Bibliography: Duellman, W.E. and Wiens, J.J. (1993), Instituto Nacional de Recursos Naturales (INRENA) (2000), Rodríguez, L.O., Cordova, J.H. and Icochea, J. (1993)

Data Providers: Ariadne Angulo, Wilfredo Arizabal, Edgar Lehr, Daniel Neira

Scinax trapicheiroi (B. Lutz, 1954)

This species is known from the coastal regions of the Atlantic forest of Rio de Janeiro State, and from Ilha Grande, in Brazil, up to 600m asl. It is a very common species. It occurs inside primary and old secondary forest near slow-moving streams, and spawns in slow reaches of small brooks. It has not been recorded from disturbed areas. The major threats that it faces are habitat loss due to deforestation arising from agricultural encroachment, infrastructure development and fire. Its range includes several protected areas.

Bibliography: Garcia, P.C.A. and Vinciprova, G. (1998), Izecksohn, E. and Carvalho-e-Silva, S.P. (2001), Lutz, B. (1954), Lutz, B. (1973a)

Data Providers: Miguel Trefaut Rodrigues, Ana Maria Telles

Smilisca cyanosticta (Smith, 1953)

This species occurs on the Atlantic slopes of southern Mexico and northern Central America from Oaxaca and southern Veracruz through northern Chiapas, Mexico, and into El Peten and northern Alta Verapaz in Guatemala, and also Belize (from 300-1,200m asl). It is likely to occur more widely than current records suggest. It is uncommon, but its population is stable in suitable habitat, in Mexico, Belize, and Guatemala. Recent surveys in Oaxaca, Mexico, indicate that it has disappeared from some localities. It can be found in vegetation in humid mid-altitude and montane forests, and also occurs in secondary forest. It breeds in temporary pools and streams, and in depressions in logs that fill up with water. Habitat destruction is taking place in much of its range. The recently documented decline in Oaxaca has taken place in suitable habitat, and could be due to chytridiomycosis. It occurs in several protected areas in Belize, and in the Reserva de Manantiales Montañas del Mico in Guatemala. It is also found in the Reserva de la Biósfera El Ocote, and the Reserva de la Biósfera Montes Azules in Mexico, although more forest protection is needed in Mexico. Further monitoring needs to be conducted to determine whether or not the recently documented decline is due to chytridiomycosis.

Bibliography: Campbell, J.A. (1998), Duellman, W.E. (2001), Lee, J.C. (1996), Lips, K.R. *et al.* (2004)

Data Providers: Georgina Santos-Barrera, Julian Lee, Manuel Acevedo, Paul Walker

Xenohyla truncata (Izecksohn, 1959)

This species is known from the coastal lowlands of Rio de Janeiro State, Brazil, up to 50m asl. It is very common. It lives in bromeliads in Restinga vegetation and breeds in temporary rain pools in the same habitat. It is only usually found during the breeding period as it is otherwise hidden in bromeliads. This is the only frog that eats fruit. The major threat to it is the destruction of Restinga vegetation for the development of human infrastructure. Its range includes several protected areas. More research into the limits of its range and its ecological requirements is needed.

Bibliography: Izecksohn, E. and Carvalho-e-Silva, S.P. (2001), Lutz, B. (1973a)

Data Providers: Sergio Potsch de Carvalho-e-Silva, Ana Maria Telles, Carlos Alberto Gonçalves da Cruz

HYPEROLIIDAE

Acanthixalus sonjae Rödel, Kosuch, Veith and Ernst, 2003

This species is known from south-western Côte d'Ivoire in Taï National Park, Haute Dodo Classified Forest and Cavally Classified Forest, and from south-western Ghana in Krokosua Hills Forest Reserve and the Ankasa Conservation Area (ACA), a protected area comprised of Nini-Suhien National Park to the north twinned with Ankasa Forest Reserve to the south. It might also occur across the border in Liberia. It is not common, probably because of its very restricted habitat, or because it is reclusive and therefore easily overlooked. It is confined to primary and secondary lowland rainforest, where it is dependent upon very large tree holes (an uncommon microhabitat) in which it breeds. It has been found in wet evergreen and moist semi-deciduous forest but is not found in degraded habitats. The major threat to this species is ongoing forest loss in south-western Côte d'Ivoire, due to agricultural development, timber extraction and human settlement. It occurs in Taï National Park, Haute Dodo Classified Forest, Cavally Classified Forest and Ankasa Conservation Area.

Bibliography: Rödel, M.-O. *et al.* (2003), Rödel, M.-O. *et al.* (2005), Rödel, M.-O. and Branch, W.R. (2002)

Data Providers: Mark-Oliver Rödel, Arne Schiøtz

Afrixalus nigeriensis Schiøtz, 1963

This species ranges from extreme south-eastern Guinea through Côte d'Ivoire to western Ghana, with a disjunct population in south-western Nigeria, and is likely to occur in eastern Liberia. In suitable habitats it is very common. Primary rainforest is the only habitat in which it is found, and it is not tolerant of any habitat alteration. It is often found with *Afrixalus dorsalis* but separated by microhabitat preferences, with *A. dorsalis* using more open, exposed sites, and *A. nigeriensis* calling from dense vegetation. During breeding, the eggs are laid on leaves overhanging temporary ponds, into which the larvae fall and develop. It is probably losing much of its habitat as a result of agricultural encroachment, expanding human settlements, and logging. This species occurs in several protected areas.

Taxonomy: This species is closely related to Afrixalus equatorialis (Schiøtz 1999).

Bibliography: Rödel, M.-O. (2000b), Rödel, M.-O. *et al.* (2005), Rödel, M.-O. and Branch, W.R. (2002), Schiøtz, A. (1963), Schiøtz, A. (1967), Schiøtz, A. (1999)

Data Providers: Arne Schiøtz, Mark-Oliver Rödel

Afrixalus vibekensis Schiøtz, 1967

This species is known only from three general areas: Mount Nimba in western Côte d'Ivoire; Taï National Park and Haute Dodo Classified Forest in south-western Côte d'Ivoire; and Bobiri Forest Reserve in south-western Ghana. It presumably also occurs in Liberia and Guinea, but there have not yet been any records. It is not common, but it is very hard to find and so is perhaps under-recorded. It is a species of forest edge habitats, not being found in the forest interior, but nor is it found in heavily degraded habitats outside forest (such as farm bush). It is typically found along forest roads and in tree-fall gaps. It breeds in small temporary ponds and puddles, with the eggs being laid either on leaves above water, or directly in the water. It is probably losing much of its habitat as a result of agricultural encroachment, expanding human settlements, and logging. It is present in Taï National Park and Haute Dodo Classified Forest (Côte d'Ivoire) and in Bobiri Forest Reserve (Ghana).

Taxonomy: Schiøtz (1999) noted that the name vibekensis is grammatically incorrect, and proposed that it be changed to vibekae. However, according to Frost (AMNH website), this is an unjustified emendation.

Bibliography: Rödel, M.-O. (2000b), Rödel, M.-O. and Branch, W.R. (2002), Schiøtz, A. (1967), Schiøtz, A. (1999)

Data Providers: Arne Schiøtz, Mark-Oliver Rödel

Heterixalus carbonei Vences, Glaw, Jesu and Schimmenti, 2000

This species is known from Kirindy and Tsingy de Bemahara in western Madagascar (below 200m asl), and from Montagne d'Ambre in northern Madagascar (at around 900m asl). It presumably occurs in suitable habitat between these locations. Records from Tsaratanana could refer either to this species or to *Heterixalus betsileo*. It is uncommon in currently known localities. It is a dry forest species in the west and a rainforest species in the north, and has not been found outside forest so far. It breeds in temporary and permanent ponds. The major threat to it is forest loss for subsistence agriculture and local wood extraction. It occurs in Parc National Tsingy de Bemaraha and Parc National de Montagne d'Ambre.

Bibliography: Glos, J. (2003), Vences, M. *et al.* (2000a)

Data Providers: Christopher Raxworthy, Miguel Vences, Frank Glaw

Heterixalus rutenbergi (Boettger, 1881)

This species occurs widely in the central plateau of Madagascar from 1,200-1,500m asl. It is an uncommon species. It lives in montane grassland, croplands, and disturbed areas at relatively high altitudes, but not in rice fields. It has a specialized breeding habitat, favouring acidic brown waters in permanent and temporary waterbodies. The transformation of bogs into rice fields might be a threat to this species. It is found in international trade, with hundreds being exported annually, although it is not clear that this constitutes a threat to the species. It is perhaps in competition with *Heterixalus betsileo*, which does well in rice fields. It probably occurs in the Réserve Spéciale d'Ambohitantely, and perhaps in other protected areas.

Bibliography: Blommers-Schlösser, R.M.A. (1982), Blommers-Schlösser, R.M.A. and Blanc, C.P. (1991), Glaw, F. and Vences, M. (1994), Raxworthy, C.J. and Nussbaum, R.A. (1996b), Vallan, D. (2000b)

Data Providers: Franco Andreone, Miguel Vences, Frank Glaw

Hyperolius acutirostris Bucholz and Peters, 1875

This species is known only from south-western Cameroon, where it occurs as far east as the Yaounde region. It is generally a lowland species, but it has been found up to 1,300m asl to the north-east of Mount Cameroon. In suitable habitats it can be a common species. It is strictly arboreal, and is confined to mature forest with large trees, with breeding taking place in water in tree holes. A major threat to this species is presumed to be ongoing habitat loss for logging, agriculture and human settlements. It has not been confirmed from any protected areas.

Bibliography: Amiet, J.-L. (1975), Amiet, J.-L. (1980b), Amiet, J.-L. (1986), Perret, J.-L. (1966), Perret, J.-L. (1975), Schiøtz, A. (1967), Schiøtz, A. (1999)

Data Providers: Jean-Louis Amiet, Arne Schiøtz

Hyperolius ademetzi Ahl, 1931

This species is known only from several localities in the mountains of western Cameroon, from Mount Manenguba north to the Bamileke and the Bamenda Highlands, ranging from 750-1,900m asl. It is common on the Bamileke Plateau, and is very common on the Mbos Plains at Mboassoum and Santchou. It lives in savannah, tall grassland, bush land, and herbaceous vegetation. Breeding takes place in shallow marshes, ponds, lakes and slow-flowing streams with tall, reedy vegetation. It might suffer from loss of habitat as a result of encroachment by agriculture and human settlements, but it is adaptable and is probably not at serious risk. It might occur in Bafut-Ngemba Forest Reserve.

Bibliography: Amiet, J.-L. (1975), Amiet, J.-L. (1978a), Gartshore, M.E. (1986), Perret, J.-L. (1966), Schiøtz, A. (1999)

Data Providers: Jean-Louis Amiet, Arne Schiøtz

Hyperolius bopeleti Amiet, 1980 "1979"

This species is known only from coastal areas of south-western Cameroon within 30km of the coast. It appears to be an uncommon species. It lives in degraded former forest (farm bush) on sandy soil, and can live within a few metres of the sea. Breeding takes place in small pools, and the eggs are placed 4-5m above still water into which the larvae fall and develop. Although it is clearly adaptable, it is probably at risk from expanding agriculture and human settlements within its small range. It is not known to occur in any protected areas.

Bibliography: Amiet, J.-L. (1979), Schiøtz, A. (1999)

Data Providers: Jean-Louis Amiet, Arne Schiøtz

Hyperolius chlorosteus (E. Boulenger, 1915)

This species ranges from Sierra Leone, through Liberia and southern Guinea, to south-central Côte d'Ivoire. In suitable habitats it is a common species. It is arboreal, and confined to primary rainforest where it is generally found by streams. It breeds exclusively in flowing water, laying its eggs on leaves above water into which the larvae fall and develop. It is threatened by ongoing habitat loss for logging, agriculture and human settlements. It occurs in many protected areas, including Taï National Park in Côte d'Ivoire and Sapo National Park in Liberia.

Bibliography: Rödel, M.-O. (2000b), Rödel, M.-O. (2003), Rödel, M.-O. and Branch, W.R. (2002), Rödel, M.-O. and Ernst, R. (2003), Schiøtz, A. (1964a), Schiøtz, A. (1967), Schiøtz, A. (1999)

Data Providers: Mark-Oliver Rödel, Arne Schiøtz

Hyperolius wermuthi Laurent, 1961

This species is known only from southern Guinea, Liberia and western Côte d'Ivoire. It is so similar to *Hyperolius fusciventris* that it might well be overlooked. It probably occurs up to over 1,000m asl on Mount Nimba. It is not a common species. It is found only in primary forest, and breeds in swamps and small temporary ponds. Agricultural expansion, logging, and encroaching human settlements are threats affecting this species. It occurs in several protected areas, including the Mount Nimba World Heritage Site, Taï National Park, and Diécké Classified Forest. Further taxonomic work is required to resolve the possibility that this species is a synonym of *H. soror*.

Taxonomy: This species is probably a synonym of Hyperolius soror, which is known with certainty only from its type locality in southern Guinea (Schiøtz 1999).

Bibliography: Laurent, R.F. (1961), Rödel, M.-O. (2000b), Schiøtz, A. (1967), Schiøtz, A. (1999)

Data Providers: Mark-Oliver Rödel, Arne Schiøtz

Hyperolius zonatus Laurent, 1958

This species ranges from eastern Sierra Leone to south-central Côte d'Ivoire, through to extreme southern Guinea. It presumably occurs in Liberia, but there do not appear to be any confirmed records. It is not an uncommon species. It lives only in primary rainforest and is usually found close to small temporary ponds and swamps. Eggs are laid on vegetation above small, stagnant pools. Its forest habitat is being degraded by agricultural expansion, logging and expanding human settlements. It occurs in Haute Dodo and Cavally Classified Forests, Mount Nimba World Heritage Site, and presumably in several other protected areas.

Bibliography: Laurent, R.F. (1958b), Rödel, M.-O. (2000b), Rödel, M.-O. (2003), Schiøtz, A. (1967), Schiøtz, A. (1999)

Data Providers: Arne Schiøtz, Mark-Oliver Rödel

Kassina cochranae (Loveridge, 1941)

This West African species is known from the forest zone of Sierra Leone, Liberia, southern Guinea, and extreme western Côte d'Ivoire (where it occurs at least in the Mount Nimba area). Earlier records of this species from further to the east are now separated as *Kassina arboricola* and *K. schioetzi*. There is no information on its population status, but it is probably not rare. It is an arboreal, forest-dwelling species, which can exist in secondary forest. There also records from moist savannah and montane savannah areas as well as montane grassland. It seems to be able to survive in habitat fragments and gallery forests, but is unlikely to tolerate complete opening up of its habitat. It presumably breeds in both temporary and permanent waterbodies, favouring large, well-vegetated pools, like other members of its genus. Certain populations are probably suffering as a result of severe deforestation taking place due to agricultural expansion, logging and expanding human settlements. It occurs in the Mount Nimba World Heritage Site (Guinea and Liberia), and in the protected area at Pic de Fon (Guinea).

Taxonomy: We follow Perret (1985) and Rödel et al. (2002) in considering Kassina arboricola to be separate from K. cochranae.

Bibliography: Barbault, R. (1984), Lamotte, M. (1967), Perret, J.-L. (1985), Rödel, M.-O. (2000a), Rödel, M.-O. *et al.* (2002), Rödel, M.-O. and Bangoura, M.A. (2004), Rödel, M.-O. and Spieler, M. (2000), Schiøtz, A. (1967), Schiøtz, A. (1999)

Data Providers: Mark-Oliver Rödel, Arne Schiøtz

Leptopelis kivuensis Ahl, 1929

This species occurs in the highlands of eastern Democratic Republic of Congo, western Rwanda, north-western Burundi, and south-western Uganda. Its altitudinal range is unclear, although it is probably generally above 1,500m asl. This is a common species. It lives in montane forests. There is no information on its adaptability to secondary habitats. It breeds in seasonally flooded swamp forests where the eggs are buried in nests in the ground and the larvae then washed into water after flooding. Little information is available on the threats it faces, although it is likely to be affected by loss of habitat for agriculture, wood extraction and human settlements. It occurs in Virunga National Park (Democratic Republic of Congo), Kibale National Park (Uganda), and Bwindi National Park (Uganda).

Bibliography: Drewes, R.C. and Vindum, J.V. (1994), Laurent, R.F. (1972), Laurent, R.F. (1973), Schiøtz, A. (1975), Schiøtz, A. (1999), Vonesh, J. (2001)

Data Providers: Arne Schiøtz, Robert Drewes, James Vonesh

Leptopelis macrotis Schiøtz, 1967

This species ranges from central Sierra Leone, through Liberia, southern Guinea and Côte d'Ivoire, to southern Ghana. It is not uncommon. This species is arboreal and lives along streams in primary rainforest. Its breeding biology is unknown, but it presumably breeds in the proximity of streams, with nests that are built on land near the water. Its forest habitat is being degraded by agricultural expansion, logging and growing human settlements. It occurs in several protected areas, including Gola and Kambui Forest Reserves in Sierra Leone, Taï National Park in Côte d'Ivoire, Haute Dodo and Cavally Classified Forests in Côte d'Ivoire, and Bobiri Forest Reserve in Ghana.

Bibliography: Rödel, M.-O. (2000b), Rödel, M.-O. *et al.* (2005), Rödel, M.-O. and Branch, W.R. (2002), Schiøtz, A. (1967), Schiøtz, A. (1999)

Data Providers: Mark-Oliver Rödel, Arne Schiøtz

Leptopelis occidentalis Schiøtz, 1967

This species occurs in Liberia, southern Côte d'Ivoire and south-western Ghana. It possibly ranges as far east as Nigeria and its western limits in Liberia are unknown. In suitable habitats it is very common. It is an arboreal species of primary forest, only rarely occurring in secondary forest. It breeds in small streams and small temporary ponds. The eggs are laid in holes in the ground close to water, or in dry areas where temporary ponds will form at the start of the rains. It is affected by habitat loss as a result of expanding human settlements and agricultural cultivation, and the collection of wood. In Côte d'Ivoire, it occurs in Tai and Mont Sangbe National Parks, and in Haute Dodo and Cavally Classified Forests.

Taxonomy: The relationship between this species and Leptopelis boulengeri requires further investigation (Schiøtz 1967, 1999).

Bibliography: Rödel, M.-O. (2000b), Rödel, M.-O. (2003), Rödel, M.-O. *et al.* (2005), Rödel, M.-O. and Branch, W.R. (2002), Schiøtz, A. (1967), Schiøtz, A. (1999)

Data Providers: Mark-Oliver Rödel, Arne Schiøtz

Leptopelis yaldeni Largen, 1977

This species is endemic to Gojjam Province, northern Ethiopia, at altitudes of 2,000-2,700m asl. It is common to abundant at many sites within its limited range. It is confined to montane grassland. Breeding activity is particularly associated with the banks of small streams, in which larval development occurs. The eggs are laid in nests on land near the water. The most likely threats are posed by human settlement and agricultural encroachment, but these seem to be minor in relation to the area of suitable habitat available. It is not known from any protected areas.

Bibliography: Largen, M.J. (1977), Largen, M.J. (2001), Schiøtz, A. (1999)

Data Providers: Malcolm Largen, Arne Schiøtz

Leptopelis zebra Amiet, 2001

This species is known only from southern Cameroon south of the Sanaga River, at 720m asl, and away from the coastal plain, although it might occur in neighbouring countries. It appears to be uncommon and is thinly distributed within its range. This species lives in lowland rainforest, in flat-bottomed valleys with slow-flowing streams, or on the ground with puddles and water holes in the rainy season. Breeding takes place in still water and marshes, and the eggs are presumably laid in nests on land, near water. It is probably threatened by ongoing forest loss, due to agricultural development, logging and expanding human settlements. It is presumed to occur in some protected areas, but this has not been confirmed.

Bibliography: Amiet, J.-L. (2001)

Data Providers: Jean-Louis Amiet, Arne Schiøtz

LEPTODACTYLIDAE

Alsodes nodosus (Duméril and Bibron, 1841)

This species is restricted to central Chile from 150-1,500m asl. Voucher specimens do not support records from Argentina. It is locally common. It can be found in temperate shrubland and seasonal and permanent streams, in which it reproduces. It is not tolerant of habitat destruction. Urban sprawl is rapidly destroying available habitat for this species, and some populations close to the main cities (such as Santiago) have disappeared. It has been included in the Chilean national legislation as near threatened and it occurs in Parque Nacional Cerro La Campana.

Bibliography: Formas, J.R. (1995), Glade, A. (1993), Servicio Agrícola Ganadero (1998), Veloso, A. and Navarro, J. (1988)

Data Providers: Alberto Veloso, Herman Núñez

Atelognathus jeinimenensis Meriggio, Veloso, Young and Núñez, 2004

This species is known from the vicinity of one small pond in the Reserva Nacional Lago Jeinimeni, southern Chile. It appears to be fairly common within its extremely limited range. The small pond which forms the only area where this species is known from measures 68.8m by 80m, and around 50cm deep at the deepest point. Most other ponds in the area dry out in summer. In the vicinity are pine plantations and degraded *Nothofagus pumilio* forest. This species presumably breeds by larval development. A major threat to this species is a plan to construct a paved road crossing the reserve to improve an existing road that is currently impassable in winter. Unfortunately, the planned route passes close to the only known breeding pond, which will probably cause direct mortality and pollution, and would also isolate it from the Jeinimeni River and lake. The known range of this species is encompassed by the Reserva Nacional Lago Jeinimeni. Studies are urgently needed prior to the approval of the planned road to assess further the ecology and, in particular, the dispersal patterns of this species. At this time, unsupervised public access to the breeding pond should be restricted, in order to remove any potential disturbance.

Bibliography: Meriggio, V. *et al.* (2004)

Data Providers: Alberto Veloso

Ceratophrys ornata (Bell, 1843) **ORNATE HORNED FROG**

This species can be found in the Pampean region of Argentina (Buenos Aires, Córdoba, Entre Ríos, La Pampa, Mendoza and Santa Fe), Uruguay (Rocha and San José), and Rio Grande do Sul, Brazil, from 0-500m asl. It has apparently disappeared from at least two sites in Uruguay (Rocha, in Laguna de Castillos, and San Jose, in Delta del Tigre). It is rare in Argentina. This frog occurs in grasslands on the ground near temporary waterbodies, and also occurs in roadside ditches and in irrigated cropland. The eggs are laid on the bottom of temporary ponds. Habitat loss (due to agricultural development and housing development) is a major threat, as is water and soil pollution due to agriculture, industry, and human settlement. It is sometimes subject to persecution because of unfounded beliefs that it is venomous. It is also collected for the international pet trade and its eggs are sold internationally for scientific research. It occurs in some protected areas.

Bibliography: Braun, P.C. and Braun, C.A.S. (1980), Cei, J.M. (1980), Cochran, D.M. (1955), Di Tada, I.E. *et al.* (1996), Gambarotta, J.C., Saralegui, A. and Gonzalez, E.M. (1999), Langone, J.A. (1994), Lavilla, E.O. *et al.* (2000), Lavilla, E.O. and Cei, J.M. (2001), Lynch, J.D. (1982a), Maneyro, R. and Langone, J.A. (2001), Salas, N.E. *et al.* (1998)

Data Providers: Axel Kwet, Gabriel Skuk, Débora Silvano, Esteban Lavilla, Ismael di Tada, Rafael Lajmanovich

Craugastor berkenbuschii (Peters, 1870)

This species occurs from the Atlantic foothills and slopes of south-eastern San Luis Potosi and northern Veracruz, to northern Oaxaca to the isthmus of Tehuantepec, Mexico. It is known from 400-1,900m asl. This is a common species, although recent surveys in Oaxaca, Mexico, indicate that it has disappeared from some sites. It prefers rocky streams in premontane and lower montane wet forests, and is a direct developing species. Intense and rapid disappearance of cloud forests is a major threat. Recently documented declines in Oaxaca could be due to chytridiomycosis. Its range does not include any protected areas and urgent protection of the cloud forest remnants in Mexico is required. Further work should be conducted to determine whether or not the recently documented declines are due to chytridiomycosis. This species is protected by Mexican law under the "Special Protection" category (Pr).

Taxonomy: This species was previously within the genus Eleutherodactylus (Crawford and Smith 2005).

Bibliography: Campbell, J.A. and Savage, J.M. (2000), Crawford, A.J. and Smith, E.N. (2005), Lips, K.R. *et al.* (2004)

Data Providers: Georgina Santos-Barrera, Oscar Flores-Villela

Craugastor chac (Savage, 1987)

This species occurs on the Atlantic versant from central Belize and central Guatemala to the La Ceiba city area on the northern coast of Honduras, from 20-1,000m asl. It is common in Guatemala, but relatively uncommon elsewhere. It lives on the forest floor in lowland moist forest and premontane wet forest, and also in cocoa plantations and degraded forest. It breeds by direct development. The major threat to it is habitat loss due to agricultural development for the cultivation of crops and livestock grazing, logging, development of infrastructure for human settlement, and fire. It is found in several protected areas in all three countries in which it occurs.

Taxonomy: This species was previously within the genus Eleutherodactylus (Crawford and Smith 2005).
Bibliography: Campbell, J.A. (1998), Campbell, J.A. (2001), Crawford, A.J. and Smith, E.N. (2005), Lee, J.C. (1996), Lee, J.C. (2000), McCranie, J.R. and Köhler, G. (1999a), McCranie, J.R. and Wilson, L.D. (2002b), Savage, J.M. (1987), Savage, J.M. (1987)
Data Providers: Paul Walker, Manuel Acevedo, Gustavo Cruz, Larry David Wilson, Randy McCranie, Gunther Köhler

Craugastor laticeps (Duméril, 1853)

This species can be found on the Atlantic slopes of Mexico, from southern Veracruz to Tabasco and Chiapas, and southwards to western Belize, Guatemala, and northern Honduras, from 10-1,500m asl. It is uncommon in Belize and Guatemala, and rare in Mexico. There are few localities known for Honduras. Recent surveys in Oaxaca, Mexico, indicate that it has disappeared from some localities. It occurs in leaf-litter in lowland and premontane tropical forest and is tolerant of moderate habitat alteration (it occurs in cacao and shade-coffee plantations in Honduras). Reproduction is by direct development. Forest destruction and the conversion of forest to shaded crops are low threats, although subsistence agriculture is a threat in Honduras. The recent declines in Oaxaca could be due to chytridiomycosis. It occurs in several protected areas throughout its range. Further work should be conducted to determine whether or not the recent declines are due to chytridiomycosis. It is protected by Mexican Law under the "Special Protection" category (Pr).
Taxonomy: This species was previously within the genus Eleutherodactylus (Crawford and Smith 2005).
Bibliography: Campbell, J.A. (1998), Crawford, A.J. and Smith, E.N. (2005), Lee, J.C. (1996), Lips, K.R. *et al.* (2004), McCranie, J.R. and Wilson, L.D. (2002b), Savage, J.M. (1987)
Data Providers: Georgina Santos-Barrera, Manuel Acevedo, Paul Walker, Julian Lee, Gustavo Cruz, Larry David Wilson

Craugastor rostralis (Werner,1896)

This species is known from extreme eastern Guatemala near the Honduran border, and from the following localities in western and north-central Honduras: Cerro Quebrada Grande, Montana Pico Pijol, Montana La Fortuna, Montana Portillo Grande, Parque Nacional Cusuco, and Montana Merendon west of San Pedro Sula. Its altitudinal range is 1,050-1,800m asl. This is a moderately common species. It lives on the forest floor in premontane and lower montane wet forest, and also occurs in degraded forest and coffee plantations (but not in more open habitats). It presumably breeds by direct development. The major threat to this species is severe habitat loss due to agricultural development, livestock grazing, logging, human settlement, and fire. It occurs in Parque Nacional Cusuco and Parque Nacional Texiguat in Honduras, but not in any protected areas in Guatemala.
Taxonomy: This species was previously within the genus Eleutherodactylus (Crawford and Smith 2005).
Bibliography: Campbell, J.A. (2001), Crawford, A.J. and Smith, E.N. (2005), Dunn, E.R. and Emlen, J.T. (1932), McCranie, J.R. and Wilson, L.D. (2002b), Savage, J.M. (1987), Stuart, L.C. (1963)
Data Providers: Gustavo Cruz, Larry David Wilson, Randy McCranie, Manuel Acevedo

Craugastor yucatanensis (Lynch, 1965)

This species is endemic to the Yucatan Peninsula, in east-central Yucatan and north-central Quintana Roo, Mexico. The type locality is 10m asl. It is rarely encountered but is occasionally locally common. Its habitat is lowland tropical semi-deciduous and deciduous forest. It is both terrestrial and arboreal and is sometimes found in caverns and cenotes. Breeding is by direct development. The major threats to this species is habitat loss and disturbance due to tourist activities, in particular along the Quintana Roo Mayan area. A portion of this species' range is within the Reserva de la Biósfera Sian Ka'an, which affords it some protection. Protection of the original forest in the Yucatan Peninsula is also recommended. This species is protected by Mexican Law under the "Special Protection" category (Pr).
Taxonomy: This species was previously within the genus Eleutherodactylus (Crawford and Smith 2005).
Bibliography: Campbell, J.A., Lamar, W.W. and Hillis, D.M. (1989), Crawford, A.J. and Smith, E.N. (2005), Lee, J.C. (1996), Lee, J.C. (2000)
Data Providers: Julian Lee, Rogelio Cedeño Vázquez

Crossodactylodes bokermanni Peixoto, 1983 "1982"

This species is known only from two localities in south-eastern Brazil at around 650m asl in the state of Espírito Santo: Santa Teresa and Castelo. It presumably occurs between these two localities, and probably more widely. It is a common species. It is confined to forest, where it is arboreal, living in epiphytic bromeliads. Breeding is by larval development in bromeliads. The major threat is habitat loss, especially due to the collection of bromeliads, and also due to agricultural development, wood plantations, livestock grazing, logging, human settlement and tourism, though some of its habitat is quite well protected. It occurs in the Reserva Biológica Augusto Ruschi and Parque Estadual do Forno Grande.
Bibliography: Gomes, N. (1988), Peixoto, O.L. (1982)
Data Providers: Débora Silvano, Oswaldo Luiz Peixoto

Crossodactylodes izecksohni Peixoto, 1983 "1982"

This species is known only from the vicinity of Santa Teresa, in the state of Espírito Santo, south-eastern Brazil, at 675m asl, although it might occur more widely. It is a common species. Its habitat is terrestrial and epiphytic bromeliads near the ground inside forests and on the forest edge, but not in more degraded habitats. Breeding is by larval development in bromeliads. The area where it is found is quite well protected (as a biological reserve), but habitat loss is taking place nearby, due to agricultural development, wood plantations, bromeliad-collecting, logging, human settlement and tourism. It occurs in the Reserva Biológica Augusto Ruschi.
Bibliography: Gomes, N. (1988), Peixoto, O.L. (1982)
Data Providers: Débora Silvano, Oswaldo Luiz Peixoto

Crossodactylus schmidti Gallardo, 1961

This species can be found from 300-750m asl in Misiones, Argentina; Tres Baras de Paraná, Paraná, Brazil (here, its range is severely fragmented); and Itapua Department, Paraguay. It is common in its limited range. It occurs near permanent streams (in which it breeds) in rainforest, and probably does not tolerate habitat disturbance. Threats to this species include selective logging, clear-cutting of primary forests, pollution of soil and water due to agricultural practices, and industrial pollution by organic wastes. The introduction and spread of *Rana catesbeiana* is also a threat to this species. It occurs in Parque Estadual Rio Guarani, Brazil, and in Argentina in the Reserva de la Biósfera Yabotí, Parque Nacional Iguazú, and several provincial reserves.
Bibliography: Cei, J.M. (1980), Faivovich, J. (1998), Gallardo, J.M. (1961a), Lavilla, E.O. *et al.* (2000), Lavilla, E.O. and Cei, J.M. (2001)
Data Providers: Magno Vicente Segalla, Paulo Garcia, Débora Silvano, Esteban Lavilla, Diego Baldo

Cycloramphus brasiliensis (Steindachner, 1864)

This species is known from the Serra dos Órgãos and Serra da Mantiqueira, in Rio de Janeiro State, Brazil, from 800-1,200m asl. This is not a common species. It occurs on rock wall seeps and in forest streams in primary and good quality secondary forest. Larvae have been observed on rocks that are covered with a film of running water, either on exposed rocks in or next to streams. Habitat loss due to infrastructure development for human settlement is a major threat, and this is taking place in some protected areas, even though this is illegal. The range of the species includes several protected areas, but there remains a need for improved conservation and maintenance of existing habitat.
Bibliography: Bokermann, W.C.A. (1951), Heyer, W.R. (1983)
Data Providers: Sergio Potsch de Carvalho-e-Silva, Ronald Heyer

Cycloramphus semipalmatus (Miranda-Ribeiro, 1920)

This species is known from Serra do Mar in the state of São Paulo, in Brazil, from about 800m asl. This is a reasonably common species; however, there has been an unexplained decline over its whole range recently. It was once common in Boracéia, but has been considered locally extinct there since 1988. This species is found under, or on top of, rocks in or next to small forest streams in primary and secondary forest. It presumably has larvae that are found on rocks that are covered with a film of running water, either on exposed rocks in or next to streams, like other members of the genus. There is a steel works on the coast that pollutes the water, which might be affecting local populations. The reason for the observed decline is currently unknown, but chytridiomycosis cannot be ruled out. The range of the species includes a few protected areas. Further research into the cause of the recent declines is needed.
Taxonomy: This species was removed from the synonymy of Cycloramphus asper by Heyer (1983).
Bibliography: Bertoluci, J.A. and Heyer, W.R. (1995), Eterovick, P.C. *et al.* (2005), Heyer, W.R. (1983), Heyer, W.R. *et al.* (1988), Heyer, W.R. *et al.* (1990)
Data Providers: Vanessa Verdade, Ronald Heyer

Eleutherodactylus alalocophus Roa-Trujillo and Ruíz-Carranza, 1991

This species is known from the western flank of the central Andes in the departments of Quindío, Valle del Cauca, Caldas and Risaralda, Colombia, from 2,650-3,100m asl. It is a very common species in its small range. It occurs on herbaceous vegetation or on humid rocks, about 20cm above the ground. It is possible to find individuals under small waterfalls or in small brooks covered by undergrowth, or under alder crops (*Alnus acuminata*) in the forest and forest edges. It has not been found outside forest habitat. Breeding is by direct development. There are no known major threats to this species, since its habitat is relatively secure. Its range does not include any protected areas. It should be noted that some other species of *Eleutherodactylus* that are associated with streams have undergone dramatic declines and disappearances, possibly due to chytridiomycosis, so the status of this species should be monitored carefully.
Bibliography: Acosta-Galvis, A.R. (2000), Ardila-Robayo, M.C. and Acosta-Galvis, A. (2000a), Lynch, J.D. and Duellman, W.E. (1997), Lynch, J.D., Ruiz-Carranza, P.M. and Ardila-Robayo, M.C. (1997), Roa-Trujillo, S.H. and Ruiz-Carranza, P.M. (1991), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)
Data Providers: Fernando Castro, Maria Isabel Herrera, John Lynch

Eleutherodactylus anolirex Lynch, 1983

This species occurs in the northern Cordillera Oriental in the departments of Norte de Santander and Santander, Colombia, and nearby at Macizo de Tamá in Venezuela. Its altitudinal range is 1,900-3,550m asl. It is common in Colombia, but there is little information on its population status in Venezuela. It is a cloud forest species, also living in páramo grassland and sub-páramo bushland areas. Its ability to adapt to modified habitats is unknown. It is usually found at night on low vegetation; during the day it hides under rocks, logs or among vegetation. It is presumed to be a direct developing species. The major threats are deforestation for agricultural development (including cultivation of illegal crops), logging, and human settlement, and pollution resulting from the spraying of illegal crops. Fire might also be a threat. However, it has a broad altitudinal range, and overall its habitats are probably not seriously threatened. The Venezuelan populations are within Parque Nacional El Tamá and the Estación Demonstrativo El Rasgon. Its occurrence in protected areas in Colombia is unclear.
Bibliography: Acosta-Galvis, A.R. (2000), Ardila-Robayo, M.C. and Acosta-Galvis, A. (2000a), Barrio Amorós, C.L. (2004), Frost, D.R. (1985), La Marca, E. (1997), Lynch, J.D. (1983), Lynch, J.D. and Duellman, W.E. (1997), Lynch, J.D., Ruiz-Carranza, P.M. and Ardila-Robayo, M.C. (1997), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)
Data Providers: Fernando Castro, Enrique La Marca, María Cristina Ardila-Robayo

Eleutherodactylus celator Lynch, 1976

This species can be found in cloud forests from 1,750-2,800m asl, on the Pacific versant of the western Andes in northern Ecuador and adjacent southern Colombia (Nariño Department). It is fairly common, or at least was so when last searched for in the mid-1980s. It is a nocturnal species that has been found in terrestrial bromeliads, and may be encountered on the sides of roads and in herbaceous vegetation, in leafy cloud forests. It is presumed to be a direct developing species although the site of egg deposition is not known. It is tolerant of habitat disturbance provided bromeliads are available. This species is threatened by deforestation occurring for a range of reasons, including logging and agricultural development for the cultivation of crops (some of them illegal) and livestock grazing. In Ecuador, its geographic range overlaps with the Reserva Ecológica Cotacachi-Cayapas, and the Reserva Geobotánica Pululahua. It also occurs in the Reserva La Planada private reserve, Colombia.
Bibliography: Acosta-Galvis, A.R. (2000), Lynch, J.D. (1976a), Lynch, J.D. (1998b), Lynch, J.D. and Burrowes, P.A. (1990), Lynch, J.D. and Duellman, W.E. (1997), Lynch, J.D., Ruiz-Carranza, P.M. and Ardila-Robayo, M.C. (1997), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)
Data Providers: Fernando Castro, Maria Isabel Herrera, Santiago Ron, Luis A. Coloma, John Lynch

Eleutherodactylus dimidiatus (Cope, 1862)

This species is widespread in Cuba from 0-1,375m asl. It is moderately common in suitable habitat. This is a terrestrial species that requires closed mesic forest. It breeds by direct development and lays its eggs in damp leaf-litter. The main threat to this species is habitat destruction as a result of deforestation due to agricultural development for crop cultivation and subsistence farming, charcoal manufacture, and infrastructure development for human settlement and tourism. Agricultural pollution is also a threat. This species occurs in many protected areas.
Bibliography: Centro Nacional de Areas Protegidas (CNAP) (2002), Hedges, S.B. (1993), Hedges, S.B. (1999), Hedges, S.B. (2001), Henderson, R.W. and Powell, R (1999), Henderson, R.W. and Powell, R. (2001), Schwartz, A. and Henderson, R.W. (1991)
Data Providers: Blair Hedges, Luis Díaz

Eleutherodactylus eileenae Dunn, 1926

This species is widespread in western and central Cuba from 0-830m asl. It is a common species. It is found in closed-canopy mesic forests, and is normally terrestrial but calls from arboreal sites. It has not been recorded outside forest habitat. Eggs are laid on the ground, and it breeds by direct development. The major threats to this species are agricultural development and pollution, and infrastructure development for human settlement and tourism. It occurs in several protected areas, although more effective protection is required for this species.

Bibliography: Hedges, S.B. (1993), Hedges, S.B. (1999), Hedges, S.B. (2001), Henderson, R.W. and Powell, R (1999), Henderson, R.W. and Powell, R. (2001), Schwartz, A. and Henderson, R.W. (1991)
Data Providers: Blair Hedges, Luis Díaz

Eleutherodactylus epipedus Heyer, 1984

This species is known only from near Santa Teresa, in the state of Espirito Santo, south-eastern Brazil, at around 650m asl, although it might be more widespread. It is extremely abundant in its small range. It lives in the leaf-litter on the floor of primary and secondary forest, and breeds by direct development. The area where the species is found is quite well protected (as it is a biological reserve), but habitat loss is taking place nearby (where the species might occur), due to agricultural development (including the creation of wood plantations), logging, human settlement and tourism. It occurs in the Reserva Biológica Augusto Ruschi.
Bibliography: Haddad, C.F.B. and Abe, A.S. (1999), Heyer, W.R. (1984), Lynch, J.D. and Duellman, W.E. (1997)
Data Providers: Débora Silvano, Oswaldo Luiz Peixoto

Eleutherodactylus flavescens Noble, 1923

This species is restricted to eastern Dominican Republic from 0-909m asl. Coastal populations have probably been extirpated from western La Romana. It is very common in suitable habitat, especially in the eastern part of its range. It is found in mesic forests and occasionally mangroves, but does not adapt well to degraded forests. It calls from a variety of elevated surfaces. Breeding is by direct development, and the eggs are laid on the ground or in bromeliads. This species is threatened by habitat loss due to development of infrastructure (such as hotels) for tourism, and agricultural encroachment by smallholder farmers and livestock grazing. It occurs in several protected areas.
Bibliography: Hedges, S.B. (1993), Hedges, S.B. (1999), Hedges, S.B. (2001), Henderson, R.W. and Powell, R (1999), Henderson, R.W. and Powell, R. (2001), Schwartz, A. (1982c), Schwartz, A. and Henderson, R.W. (1991)
Data Providers: Blair Hedges, Sixto Inchaustegui, Marcelino Hernandez, Robert Powell

Eleutherodactylus galdi (Jimenez de la Espada, 1870)

In Ecuador, this species is known from 1,000-1,800m asl on the eastern slope of the Cordillera Oriental, from 1,700-1,975m asl in the Cordillera del Cutucú, and from 1,500-1,550m asl in the Cordillera del Condór. The only Peruvian record is at 1,700m asl on the western slope of the Cordillera de Colán, Bagua Province, Amazonas Department, from 05° 36'S; 78° 19'W. It presumably occurs more widely, in particular in areas between the known Ecuadorian and Peruvian ranges. This is an uncommon species in Ecuador, where it was first recorded as recently as 2003. In Peru, only a single specimen has been recorded. This species can be found in evergreen secondary and old growth humid montane forest with herbaceous plants, shrubs, and lianas. Specimens have been found on leaves of bushes or palm fronds 1-2m above the ground (Lynch and Duellman 1980). In Peru, the species was found along a stream in humid montane forest. Reproduction occurs by direct development. A major threat to this species is habitat destruction through an increase in livestock farming, agro-industrial development, and selective wood extraction. The range of this species overlaps with the Zona Reservada Cordillera de Colán in Peru, and in Ecuador with Parque Nacional Sumaco Napo-Galeras, Parque Nacional Sangay, and Parque Nacional Podocarpus.
Bibliography: Almendariz, A. (1997), APECO (1999), Duellman, W.E. and Pramuk, J.B. (1999), Jiménez de la Espada, M. (1871), Lynch, J.D. and Duellman, W.E. (1980), Lynch, J.D. and Duellman, W.E. (1997), Morales, M. (2003), Ortiz, J.C. and Ibarra-Vidal, H. (1992)
Data Providers: Lily Rodríguez, Jorge Luis Martinez, Luis A. Coloma, Santiago Ron, Diego Almeida, Manuel Morales

Eleutherodactylus glaucoreius Schwartz and Fowler, 1973

This species has a restricted range in eastern Jamaica, occurring from 0-1,650m asl. It is not uncommon. This terrestrial species, often found on rocks, requires rainforest but can occur in secondary forest. Eggs are laid on the ground and it breeds by direct development. Habitat destruction is taking place, even within the protected area in which it occurs, and there are coffee plantations within the park's limits. Hikers also disturb the species' habitat, and there is a lot of litter left behind from tourists visiting the park. The protected area in which it occurs is the Blue and John Crow Mountains National Park.
Bibliography: Hedges, S.B. (1993), Hedges, S.B. (1999), Hedges, S.B. (2001), Henderson, R.W. and Powell, R (1999), Henderson, R.W. and Powell, R. (2001), Schwartz, A. and Fowler, D.C. (1973), Schwartz, A. and Henderson, R.W. (1991)
Data Providers: Blair Hedges, Susan Koenig, Byron Wilson

Eleutherodactylus hylaeformis (Cope, 1875)

This species is found in the cordilleras of Costa Rica and western Panama, from 1,500-2,500m asl (Savage 2002). It is an abundant species regularly seen in appropriate habitat, and has not declined at sites where many other species have disappeared, such as Monteverde (Pounds *et al.* 1997) and Las Tablas (Lips 1998). This is a nocturnal species found in low vegetation in dense montane forest and rainforest. It may be found in both primary and secondary forest and is presumed to breed by direct development. Deforestation is a potential threat to this species, although all known populations are within protected areas. This species is protected in several national parks and private reserves in Costa Rica, and is probably present in a number of Panamanian protected areas.
Bibliography: Lips, K.R. (1998), Pounds, J.A. *et al.* (1997), Savage, J.M. (2002)
Data Providers: Alan Pounds, Federico Bolaños, Gerardo Chaves, Frank Solís, Roberto Ibáñez, Jay Savage, César Jaramillo, Querube Fuenmayor

Eleutherodactylus illotus Lynch and Duellman, 1997

This species occurs on the Pacific slopes of the Andes from the department of Valle del Cauca in Colombia, south to the province of Pichinca in Ecuador, from 1,380-2,560m asl. It is presumably more widespread than current records suggest. It is not particularly common, but it is not rare. This species inhabits cloud forest. It is not known if it can tolerate habitat degradation, but other members of its species group can tolerate limited disturbance. It is presumed to breed by direct development, but the site of egg deposition is not known. The major threats are thought to be deforestation for the creation of plantations, cultivation of illegal crops, logging, and human settlement, and pollution resulting from the spraying of illegal crops. In Ecuador, its geographic range overlaps with the Reserva Ecológica Cotacachi-Cayapas, but it is not known from any protected areas in Colombia.
Bibliography: Lynch, J.D. and Duellman, W.E. (1997)
Data Providers: John Lynch, Luis A. Coloma, Santiago Ron

Eleutherodactylus juanchoi Lynch, 1996

This species is known from both flanks of the Cordillera Occidental in the departments of Risaralda, Valle del Cauca, and Cauca, in Colombia, from 1,500-2,090m asl. It is often rare, but can also be locally common. This species inhabits cloud forests, and dense populations occur in some areas in forest and in open areas of scattered trees. It can occur in disturbed habitats as long as there are bromeliads on trees. Individuals are active up to 3m above the ground and are frequently found in bromeliads. Breeding is by direct development, and the eggs are deposited inside bromeliads. A localized threat to this species is habitat loss and degradation caused by smallholder farming and livestock grazing. There are three protected areas within this species' range.
Bibliography: Acosta-Galvis, A.R. (2000), Lynch, J.D. (1996b), Lynch, J.D. (1998b), Lynch, J.D., Ruiz-Carranza, P.M. and Ardila-Robayo, M.C. (1997), Rincon-Franco, F. and Castro, F. (1998), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996), Ruiz-Carranza, P.M., Lynch, J.D. and Ardila-Robayo, M.C. (1997)
Data Providers: Fernando Castro, Maria Isabel Herrera, John Lynch

Eleutherodactylus kareliae La Marca, 2005

This species is known only from the Venezuelan Andes in the state of Mérida from the region of Mucubají, from 2,500-3,395m asl. It appears to be reasonably common within its small range, given the number of specimens that have been collected. It is a species of sub-páramo bushland and páramo grassland, and presumably breeds by direct development. There are no significant threats to this species. It occurs in Parque Zoológico y Jardín Botánico Nacional Simón Bolívar and Parque Nacional Sierra Nevada. Monitoring of this species started in mid 2005, and there are plans to survey the known localities for at least a year or more (E. La Marca pers. comm.) .
Bibliography: La Marca, E. (2005)
Data Providers: Enrique La Marca

Eleutherodactylus luteolateralis Lynch, 1976

This species can be found from 1,140-1,960m asl in the Río Blanco drainage in Provincia Pichincha, in the north-western Andes in Ecuador, and probably occurs more widely. During the course of survey work in 2002-2003 it was found to be common in Curipollo, Nonegal. This species can be found in montane cloud forest in humid tropical and humid temperate regions, in bromeliads in the sub canopy, and also in pastures and secondary forest. Individuals have been found on low vegetation at night, or on herbaceous plants and ferns near streams (Lynch and Duellman 1997). Reproduction occurs by direct development. There are no major threats to this species. Its range does not overlap any protected areas.
Bibliography: Lynch, J.D. (1976c), Lynch, J.D. and Duellman, W.E. (1997)
Data Providers: Luis A. Coloma, Santiago Ron, Diego Almeida

Eleutherodactylus manezinho Garcia, 1996

This species occurs in Sao Bento do Sul, Corupa, Blumenau, Florianopilis, and Garuva, Santa Catarina State, Brazil, at 100-700m asl. It is likely to occur more widely. It is abundant and its population is stable. It occurs inside secondary and old growth forest in humid areas, on the ground or on stones and low vegetation. The details of its breeding biology are unknown. A major threat to this species is habitat loss due to deforestation. It occurs in Parque Municipal do Maciço da Costeira.
Bibliography: Garcia, P.C.A. (1996)
Data Providers: Paulo Garcia, Débora Silvano

Eleutherodactylus martinicensis (Tschudi, 1838)

This species occurs on Guadeloupe, Marie-Galante, La Desirade, Iles des Saintes, Martinique, Dominica, Antigua, St Martin (introduced), and St Barthelemy (where it has also been introduced) in the Lesser Antilles. It has been extirpated on St Lucia. It occurs from sea level up to at least 1,250m asl on Guadeloupe. It is a very common species, and is more common in undisturbed habitats. It occurs primarily in mesic forest areas, but has also been collected in dry forest. It has also been found in disturbed habitats, such as banana plantations, sugar cane fields, gardens, and houses. It is active on the ground, calling from soft, wet surfaces, but retreats to arboreal bromeliads. The eggs are laid on the ground. Although not seriously threatened, this species is affected by introduced predators, such as cats, rats and mongooses, by forest loss, and possibly also by pesticides. Another species in the genus (*Eleutherodactylus johnstonei*) is perhaps a competitor, and appears to be replacing this species in open areas. It occurs in several protected areas.
Bibliography: Breuil, M. (2002), Breuil, M. (2004), Hedges, S.B. (1993), Hedges, S.B. (1999), Hedges, S.B. (2001), Henderson, R.W. and Powell, R (1999), Henderson, R.W. and Powell, R. (2001), Kaiser, H. and Hardy, Jr, J.D. (1994), Kaiser, H. and Henderson, R.W. (1994), Kaiser, H., Green, D.M. and Schmid, M. (1994), Kraus, F. and Campbell, E. (2002), Schwartz, A. (1967), Schwartz, A. and Henderson, R.W. (1991)
Data Providers: Blair Hedges, Beatrice Ibéné, Michel Breuil, Robert Powell

Eleutherodactylus megalops Ruthven, 1917

This species is known from northern and western areas from Sierra Nevada de Santa Marta, in the locality of San Lorenzo, in the departments of Cesar, Guajira, and Magdalena in Colombia. It has been recorded from 1,300-2,450m asl. It is very common. This is a terrestrial species known from cloud forest areas, which occurs on fallen leaves and under rocks and logs. It breeds by direct development. Cultivation and fumigation of crops, and the rearing of livestock, are major threats to this species' habitat Its range includes Parque Nacional Sierra Nevada de Santa Marta.
Bibliography: Acosta-Galvis, A.R. (2000), Cochran, D.M. and Goin, C.J. (1970), Lynch, J.D. and Duellman, W.E. (1997), Lynch, J.D. and Ruiz-Carranza, P.M. (1985a), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996), Ruthven, A.G. (1917b)
Data Providers: Martha Patricia Ramírez Pinilla, Mariela Osorno-Muñoz, Jose Vicente Rueda, Adolfo Amézquita, María Cristina Ardila-Robayo

Eleutherodactylus miyatai Lynch, 1984

This species is known from the western slopes of the Cordillera Oriental in the departments of Boyaca, Cundinamarca, and Santander, Colombia, from 1,740-2,400m asl. It is an abundant species. It inhabits low level vegetation in very humid cloud forests, and is able to adapt to secondary forest as well as forest edges. Breeding is by direct development. The major threat to this species is habitat destruction and degradation caused primarily by agricultural development. Its range includes the Santuario de Fauna y Flora Guanentá Alto Río Fonce, and the Estación Demonstrativo El Rasgon.
Bibliography: Acosta-Galvis, A.R. (2000), Lynch, J.D. (1984b), Lynch, J.D. and Ardila-Robayo, M.C. (1999), Lynch, J.D. and Duellman, W.E. (1997), Lynch, J.D., Ruiz-Carranza, P.M. and Ardila-Robayo, M.C. (1997), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)
Data Providers: Martha Patricia Ramírez Pinilla, Mariela Osorno-Muñoz, Jose Vicente Rueda, Adolfo Amézquita, María Cristina Ardila-Robayo

Eleutherodactylus molybrignus Lynch, 1986

This species is known from the departments of Cauca, Valle, Risaralda, and Choco on the Cordillera Occidental, Colombia, from 1,110-2,350m asl. It is usually a common species. It occurs along streams on medium to low level

vegetation in primary and secondary cloud forest. Although it has not been recorded outside forest it is tolerant of a degree of habitat disturbance. Breeding is by direct development. Habitat loss caused by agricultural development (including the cultivation of illegal crops) is a localized threat to this species, but there are currently no major threats to it. Other high-altitude, stream-breeding *Eleutherodactylus* species have undergone declines possibly due to chytridiomycosis, so this might be a potential future threat. It occurs in Parque Nacional Natural Munchique, Parque Nacional Natural Farallones de Cali, and Parque Nacional Natural Tatamá. Given the possible threat of chytridiomycosis this species should be monitored carefully.

Bibliography: Acosta-Galvis, A.R. (2000), Lynch, J.D. (1986a), Lynch, J.D. (1998b), Lynch, J.D. (1999), Lynch, J.D. and Duellman, W.E. (1997), Lynch, J.D., Ruiz-Carranza, P.M. and Ardila-Robayo, M.C. (1997), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996), Ruiz-Carranza, P.M., Lynch, J.D. and Ardila-Robayo, M.C. (1997)

Data Providers: Fernando Castro, Maria Isabel Herrera, John Lynch

Eleutherodactylus oeus Heyer, 1984

This species is known only from near Santa Teresa, in the state of Espirito Santo, south-eastern Brazil, at around 650m asl, although it might be more widespread. It is a common species within its small known range. It lives in the leaf-litter on the ground of primary and secondary forest, and breeds by direct development. The area where the species is found is quite well protected (as a biological reserve), but habitat loss is taking place nearby (where the species might occur), due to creation of wood plantations, smallholder farming, logging, human settlement and tourism. The biological reserve in which it occurs is the Reserva Biológica Augusto Ruschi.

Bibliography: Haddad, C.F.B. and Abe, A.S. (1999), Heyer, W.R. (1984), Lynch, J.D. and Duellman, W.E. (1997)

Data Providers: Bruno Pimenta, Oswaldo Luiz Peixoto

Eleutherodactylus pantoni Dunn, 1926

This species is widespread in Jamaica, and has been recorded from 0-1,640m asl. It is considered to be a common species. It is found in a variety of terrestrial habitats, including riparian forest, open forest and forest edges; it can also be found in banana groves and pastures as long as they are near the forest edge, and can tolerate moderate habitat disturbance. Eggs are laid on the ground, and it breeds by direct development. It is intolerant of complete habitat clearance arising from agricultural and infrastructural development. Its range includes Blue and John Crow Mountains National Park, and several forest reserves.

Bibliography: Hedges, S.B. (1993), Hedges, S.B. (1999), Hedges, S.B. (2001), Henderson, R.W. and Powell, R (1999), Henderson, R.W. and Powell, R. (2001), Schwartz, A. and Henderson, R.W. (1991)

Data Providers: Blair Hedges, Susan Koenig, Byron Wilson

Eleutherodactylus percnopterus Duellman and Pramuk, 1999

This species is endemic to Cajamarca and Amazonas Departments, northern Peru. It is present at two localities (at 1,138m and 1,750m asl) on the eastern slopes of the Cordillera del Condór; a single locality (at 1,300m asl) on the southern edge of the Cordillera del Condór; and at altitudes of 1,830m asl and 2,400m asl in the northern part of the Cordillera Central. This species is believed to have a continuous distribution between the Cordillera del Condór and the Cordillera Central, and might prove to be more widespread. There is no information on its population status. Records of three adult males and one adult female were used to describe this species. It can be found in humid and semi-arid montane forest, but it is not known if it can occur in modified habitats. The holotype was collected in an arboreal bromeliad by day in semi-arid forest. Specimens from the eastern slopes of the Cordillera del Condór were found on low vegetation at night in humid montane forest. This species breeds by direct development. It is threatened in the south of its range by deforestation through increased agricultural activity (rearing of livestock and cultivation of crops), by selective wood extraction and by increasing colonization of the area. It is present in the Zona Reservada Santiago-Comaina, and is also believed to occur in the Zona Reservada Cordillera de Colán. Further research into this species is required.

Bibliography: Conservation International (1997), Duellman, W.E. and Pramuk, J.B. (1999)

Data Providers: Lily Rodríguez, Jorge Luis Martinez, Wilfredo Arizabal, Daniel Neira

Eleutherodactylus riveti (Despax, 1911)

This species' geographic range in southern Ecuador includes Andean cordilleras surrounding the Cuenca basin, from 2,620-3,600m asl, and Parque Nacional Podocarpus. It is known from more than ten localities. It is an uncommon to rare species in El Cajas and Podocarpus. It occurs on the ground and in low vegetation in cloud forest and páramo vegetation, in well-preserved habitats. Reproduction is by direct development. This species is not seriously threatened as it generally occurs in areas that are not heavily affected by habitat destruction and degradation. Its range overlaps Parque Nacional Sangay, and it occurs in both Parque Nacional Podocarpus and Parque Nacional Cajas.

Bibliography: Despax, R. (1911), Lynch, J.D. and Duellman, W.E. (1997)

Data Providers: Luis A. Coloma, Santiago Ron, Mario Yánez-Muñoz, Diego Almeida

Eleutherodactylus roseus (Boulenger, 1918)

This species occurs in the lowlands of western Colombia from 0-900m asl, in the departments of Valle del Cauca, Choco, Risaralda, and Antioquia, and it probably occurs a little more widely. Records from Ecuador are in error. It is an uncommon species. It appears to be restricted to primary and secondary forest, and is not found in open areas. It lives on fallen leaves on the ground and on very low herbaceous vegetation. It is presumed to breed by direct development, but the site of egg deposition is not known. The major threats are likely to be deforestation for the creation of plantations, cultivation of illegal crops, logging, and human settlement, and pollution resulting from the spraying of illegal crops. It occurs in Parque Nacional de Las Orquídeas.

Bibliography: Acosta-Galvis, A.R. (2000), Kattan, G. (1984), Lynch, J.D. (1980c), Lynch, J.D. (1999), Lynch, J.D. and Duellman, W.E. (1997), Lynch, J.D., Ruiz-Carranza, P.M. and Ardila-Robayo, M.C. (1997), Paez, V.P. *et al.* (2002), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)

Data Providers: Fernando Castro, Taran Grant, Wilmar Bolívar

Eleutherodactylus sanctaemartae Ruthven, 1917

This species is known from the western flank of the Sierra Nevada de Santa Marta, in the departments of Cesar, Guajira and Magdalena, Colombia, from 1,100-2,600m asl. It is very common. This arboreal species is found on dense vegetation and branches, and is active up to 1.5m above the ground. It is more common in the interior of forests than next to streams. Breeding is by direct development. Cultivation and fumigation of crops, and the rearing of livestock, are major threats to this species' habitat. Other high-altitude, stream-breeding *Eleutherodactylus* species have undergone declines possibly due to chytridiomycosis, so this might be a potential future threat. Its range includes Parque Nacional Sierra Nevada de Santa Marta, a natural reserve area. Given the possible threat of chytridiomycosis this species should be monitored carefully.

Bibliography: Acosta-Galvis, A.R. (2000), Cochran, D.M. and Goin, C.J. (1970), Lynch, J.D. and Duellman, W.E. (1997), Lynch, J.D. and Ruiz-Carranza, P.M. (1985a), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996), Ruthven, A.G. (1917b)

Data Providers: Martha Patricia Ramírez Pinilla, Mariela Osorno-Muñoz, Jose Vicente Rueda, Adolfo Amézquita, María Cristina Ardila-Robayo

Eleutherodactylus sanguineus Lynch, 1998

This species is known from Antioquia, Choco, Risaralda and Valle del Cauca Departments on the western flank of the Cordillera Occidental, Colombia, from 50-1,500m asl. It probably occurs more widely, in particular between known sites. This is a locally abundant species. It is restricted to closed-canopy forest alongside streams in primary forest. Breeding is by direct development. It is probably affected by ongoing forest loss in some parts of its range, especially for agriculture and logging, as well as by fumigation of illegal crops. However, much of its habitat is relatively remote from human influence, though this is likely to change in the near future. Other high-altitude, stream-breeding *Eleutherodactylus* species have undergone declines possibly due to chytridiomycosis, so this might be a potential future threat. Some populations are within Parque Nacional de Las Orquídeas and Parque Nacional Natural Tatamá. Given the possible threat of chytridiomycosis this species should be monitored carefully.

Bibliography: Acosta-Galvis, A.R. (2000), Lynch, J.D. (1998b), Lynch, J.D. (1999), Lynch, J.D., Ruiz-Carranza, P.M. and Ardila-Robayo, M.C. (1997), Paez, V.P. *et al.* (2002)

Data Providers: Fernando Castro, Maria Isabel Herrera, John Lynch

Eleutherodactylus savagei Pyburn and Lynch, 1981

This species is known from Serranía de Macarena and Piedemonte in the Cordillera Oriental in the departments of Meta and Condinamarca, Colombia, from 1,000-2,400m asl. It is a common species. This nocturnal species is associated with fast-flowing streams, with individuals usually occurring on vegetation up to 50cm above the ground, sometimes in secondary habitats. Breeding is by direct development. This is an adaptable species, and probably is not significantly threatened by habitat loss at present, although its habitat will become threatened by cultivation and fumigation of crops (which could cause pollution of streams), and the rearing of livestock. Other high-altitude, stream-breeding *Eleutherodactylus* species have undergone declines possibly due to chytridiomycosis, so this might be a potential future threat. Some populations of this species are within Parque Nacional Natural Serranía de La Macarena. Given the possible threat of chytridiomycosis this species should be monitored carefully.

Bibliography: Acosta-Galvis, A.R. (2000), Lynch, J.D. (1994b), Lynch, J.D. and Duellman, W.E. (1997), Lynch, J.D., Ruiz-Carranza, P.M. and Ardila-Robayo, M.C. (1997), Pyburn, W.F. and Lynch, J.D. (1981), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)

Data Providers: Martha Patricia Ramírez Pinilla, Mariela Osorno-Muñoz, Jose Vicente Rueda, Adolfo Amézquita, María Cristina Ardila-Robayo

Eleutherodactylus silverstonei Lynch and Ruíz-Carranza, 1996

This species is known from the Pacific slope of the Cordillera Occidental, in the departments of Valle del Cauca and Choco, in Colombia, from 1,700-2,250m asl. It is uncommon. This is a nocturnal species found on medium to high level vegetation in primary cloud forest. Breeding is by direct development. There are currently no major threats to the species' habitat although there are plans to build a road across the Serrania de los Paraguas. This will become a major threat if the plans go ahead, and would provide access for the expansion of agricultural activities and logging. Most of the range of this species is within the mountains of Los Paraguas, which forms a natural unit of the high Andean ecosystem. At present there is an ongoing effort to transform this area into a wildlife reserve. Other populations are inside Parque Nacional Natural Farallones de Cali. Conservation of the species' habitat is essential for its long-term survival since it is restricted to primary forest.

Taxonomy: The form is the sister species of Eleutherodactylus appendiculatus according to Lynch and Ruíz-Carranza (1996b).

Bibliography: Acosta-Galvis, A.R. (2000), Lynch, J.D. (1998b), Lynch, J.D. (1999), Lynch, J.D. and Ruiz-Carranza, P.M. (1996b), Lynch, J.D., Ruiz-Carranza, P.M. and Ardila-Robayo, M.C. (1997), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996), Ruiz-Carranza, P.M., Lynch, J.D. and Ardila-Robayo, M.C. (1997)

Data Providers: Fernando Castro, Maria Isabel Herrera, John Lynch

Eleutherodactylus simoterus Lynch, 1980

This species is known from the departments of Caldas, Risaralda and Tolima on the Cordillera Central, in Colombia, from 2,700-4,350m asl. The species is very abundant in Parque Nacional Natural Los Nevados and is also common elsewhere. It occurs in páramo vegetation and is active at night, calling on the ground among grasses and low bushes. During the day it occurs on graminaceous vegetation or under logs and rocks. It also occurs above the tree line and can be found in pastureland, but this is a marginal habitat for the species. Breeding is by direct development. Habitat loss caused by smallholder livestock grazing and cultivation of crops (some of them illegal) is a threat to it outside protected areas. However, this species is adaptable and much of its range is at altitudes above the level of significant human impact, and so it is not greatly threatened. Most populations are inside Parque Nacional Natural Los Nevados.

Bibliography: Acosta-Galvis, A.R. (2000), Ardila-Robayo, M.C. and Acosta-Galvis, A. (2000a), Lynch, J.D. (1980b), Lynch, J.D. and Duellman, W.E. (1997), Lynch, J.D., Ruiz-Carranza, P.M. and Ardila-Robayo, M.C. (1996), Lynch, J.D., Ruiz-Carranza, P.M. and Ardila-Robayo, M.C. (1997), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)

Data Providers: Fernando Castro, Maria Isabel Herrera, John Lynch

Eleutherodactylus spinosus Lynch, 1979

This species' range is the Amazonian slopes of the Cordillera de Matanga and the Cordillera del Cóndor in southern Ecuador, from 1,707-2,835m asl. It is rare in the Cordillera del Cóndor. This species can be found on low vegetation in well-preserved cloud forests. Breeding is by direct development. Its range is not significantly threatened since people are averse to entering the area due to the land mines left during the Ecuador-Peru border war in 1995. It does not occur in any protected areas.

Bibliography: Almendariz, A. (1997), Lynch, J.D. (1979c), Lynch, J.D. and Duellman, W.E. (1997)

Data Providers: Luis A. Coloma, Santiago Ron, Fernando Nogales, Diego Almeida

Eleutherodactylus tamsitti Cochran and Goin, 1970

This Colombian species is known from the eastern slopes of the Cordillera Oriental in the extreme west of the department of Caquetá, as well as from the type locality in the headwaters of the Río Magdalena, in the department of Huila. It occurs at moderate altitudes between 1,350 and 2,040m asl. It is a common species. It is nocturnal, occurring on vegetation along streams and on damp soils. Breeding is by direct development. The major threats to this species' habitat are the cultivation and fumigation of crops, and the rearing of livestock. Other high-altitude, stream-breeding *Eleutherodactylus* species have undergone declines possibly due to chytridiomycosis, so this might be a potential future threat. Its range includes Parque Nacional Natural Cueva de los Guácharos. Given the possible threat of chytridiomycosis this species should be monitored carefully.

Taxonomy: Lynch (1976b) elevated this taxon to species status with no further comment. Lynch, Ruíz-Carranza and Ardila-Robayo (1994) redescribed the species, and noted a possible synapomorphy with E. cremnobates.

Bibliography: Acosta-Galvis, A.R. (2000), Cochran, D.M. and Goin, C.J. (1970), Lynch, J.D. (1976b), Lynch, J.D. and Duellman, W.E. (1997), Lynch, J.D., Ruiz-Carranza, P.M. and Ardila-Robayo, M.C. (1994), Lynch, J.D., Ruiz-Carranza, P.M. and Ardila-Robayo, M.C. (1997), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)
Data Providers: Martha Patricia Ramírez Pinilla, Mariela Osorno-Muñoz, Jose Vicente Rueda, Adolfo Amézquita, María Cristina Ardila-Robayo

Eleutherodactylus tayrona Lynch and Ruíz-Carranza, 1985

This species is known from the Sierra Nevada de Santa Marta, in the departments of Cesar, Guajira and Magdalena, Colombia, from 1,300-2,700m asl. It is extremely abundant. This is a nocturnal species that can be observed perching on arboreal bromeliads, in which it shelters during the day. Breeding is by direct development, and the eggs are also laid on arboreal bromeliads. The major threats to this species' habitat are cultivation and fumigation of crops, and the rearing of livestock. Its range includes Parque Nacional Natural Sierra Nevada de Santa Marta.
Bibliography: Acosta-Galvis, A.R. (2000), Cochran, D.M. and Goin, C.J. (1970), Lynch, J.D. and Ruiz-Carranza, P.M. (1985a), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)
Data Providers: Martha Patricia Ramírez Pinilla, Mariela Osorno-Muñoz, Jose Vicente Rueda, Adolfo Amézquita, María Cristina Ardila-Robayo

Eleutherodactylus vanadise La Marca, 1984

This species is known from La Mucuy, Monterey, Monte Zerpa and the Bosque de San Weusebio, in Mérida State, in the Venezuelan Andes, from 1,800-2,600m asl. It is a common species. It lives in bushes and on the ground in cloud forests and secondary forests. Breeding is by direct development. Its habitats are not seriously threatened at present, and much of its range is in protected areas. Some populations are within Parque Nacional Sierra de La Culata and Parque Nacional Sierra Nevada.
Bibliography: Barrio Amorós, C.L. (2004), Frost, D.R. (1985), La Marca, E. (1984), La Marca, E. (1992), La Marca, E. (1997)
Data Providers: Enrique La Marca, Juan Elías García-Pérez

Eleutherodactylus vicarius Lynch and Ruíz-Carranza, 1983

This species is known from the departments of Huila, Nariño and Cauca, on the east slope of the highlands of the Cordillera Central, Colombia, from 2,900-3,275m asl. It is common. This nocturnal species occurs on vegetation up to 1.5m above ground, inside the forest as well as next to streams. During the day it can be found under rocks and logs, and it is also found in páramo vegetation. Breeding is by direct development. The major threat to this species is habitat loss, in particular in Nariño Department, caused by logging and agricultural development for crop cultivation (including illegal crops) and rearing of livestock. Other high-altitude, stream-breeding *Eleutherodactylus* species have undergone declines possibly due to chytridiomycosis, so this might be a potential future threat. The range of the species includes Parque Nacional Natural Puracé. Given the possible threat of chytridiomycosis this species should be monitored carefully.
Bibliography: Acosta-Galvis, A.R. (2000), Lynch, J.D. and Duellman, W.E. (1997), Lynch, J.D. and Ruiz-Carranza, P.M. (1983), Lynch, J.D., Ruiz-Carranza, P.M. and Ardila-Robayo, M.C. (1997), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)
Data Providers: Fernando Castro, Maria Isabel Herrera, John Lynch

Eleutherodactylus viridis Ruíz-Carranza, Lynch and Ardila-Robayo, 1997

This species is known from three localities in the western part of Antioquia Department, on the western and eastern slopes of the Cordillera Occidental, and from one locality in northern Antioquia Department, on the northern face of the Cordillera Occidental, Colombia, between 1,480 and 1,940m asl, It is an uncommon species. It is restricted to very humid forests, and occurs on Araceae vegetation and ferns, up to 1.5m above the ground. Breeding is by direct development. There are no threats to the species' habitat at present as its known range is wholly within two parks. Three of the localities in which it occurs are within Parque Nacional de Las Orquídeas, and the fourth is in Parque Nacional Natural Paramillo.
Bibliography: Acosta-Galvis, A.R. (2000), Lynch, J.D. (1998b), Lynch, J.D., Ruiz-Carranza, P.M. and Ardila-Robayo, M.C. (1997), Paez, V.P. *et al.* (2002), Ruiz-Carranza, P.M., Lynch, J.D. and Ardila-Robayo, M.C. (1997)
Data Providers: Fernando Castro, Maria Isabel Herrera, John Lynch

Eupsophus roseus (Duméril, Bibron, 11841)

This species is known from 38°S to 40°S in Cautín and Valdivia Provinces, Chile, from 50-1,000m asl. It is locally common. This species can be found under logs close to swamps or streams in temperate *Nothofagus* forest, and it may persist in fairly disturbed areas. Eggs are deposited in small, water-filled holes on hillsides. The major threat to this species is habitat destruction caused by wood extraction and establishment of pine and eucalyptus plantations. In the northern part of its range it is threatened by forest fires. It occurs in Parque Nacional Tolhuaca and the Monumento Natural Cerro Ñielol. Legislation to protect the *Nothofagus* forest habitat is needed.
Taxonomy: Specimens from Argentina formerly referred to this species belong to Eupsophus calcaratus (E. Lavilla pers. comm.).
Bibliography: Formas, J.R. (1995), Núñez, J.J., Zárraga, A.M. and Formas, J.R. (1999), Servicio Agrícola Ganadero (1998), Veloso, A. and Navarro, J. (1988)
Data Providers: Alberto Veloso, Herman Núñez, Jose Núñez, Juan Carlos Ortiz

Eupsophus vertebralis Grandison, 1961

This species occurs in the lake region of Chile, approximately from 40°S to 44°S, and from a single locality in Argentina (Puerto Blest, Río Negro Province). Its altitudinal range is from 50-1,000m asl. It is uncommon even in suitable habitats. In Chile it was recorded as recently as November 2002, but there have been no records for Argentina since 1973. This species is found under large logs and rocks near streams in temperate *Nothofagus* forest. Eggs are deposited in small, water-filled holes on hillsides. The major threat to this species is habitat destruction caused by wood extraction and establishment of pine and eucalyptus plantations. It occurs in Parque Nacional Tolhuaca and Parque Natural Alerce Costero in Chile. In Argentina, it occurs in Parque Nacional Nahuel Huapi. There is a need for improved legislation to protect remaining tracts of *Nothogagus* forest in the range of this species.
Bibliography: Basso, N.G. and Ubeda, C.A. (1999), Formas, J.R. (1989), Formas, J.R. (1991), Formas, J.R. (1992), Formas, J.R. (1993), Formas, J.R. (1994), Formas, J.R. (1995), Lavilla, E.O. *et al.* (2000), Lavilla, E.O., Barrionuevo, S. and Baldo, D. (2002), Servicio Agrícola Ganadero (1998), Veloso, A. and Navarro, J. (1988)
Data Providers: Alberto Veloso, Herman Núñez, Jose Núñez, Juan Carlos Ortiz, Carmen Úbeda

Gastrotheca andaquiensis Ruíz-Carranza and Hernández, 1976

This species occurs on the Amazonian slopes of the Andes in southern Colombia (in Caquetá, Huila, and Putumayo Departments) and in Ecuador south to Zamora Province, at 1,000-2,000m asl. It is a moderately common species. It is arboreal, living on the vegetation next to water sources inside cloud forest. There is a record of an individual observed in a flat area on a ridge, with a relatively open canopy and many tree falls, but otherwise there is no information on its adaptability to secondary habitats. The eggs are carried in a pouch on the female's back, where they develop directly without a larval stage. The major threats are deforestation due to smallholder livestock ranching and cultivation of crops (including some illegal crops), logging, and human settlement, and pollution resulting from the spraying of illegal crops. In Ecuador, its geographic range overlaps with the Reserva Ecológica Cayambe-Coca and the Reserva Ecológica Antisana, and Parque Nacional Sumaco Napo-Galeras, Parque Nacional Llanganates, and Parque Nacional Sangay. It is not known from any protected areas in Colombia.
Taxonomy: This genus has recently been moved from the family Hylidae (Faivovich et al. 2005).
Bibliography: Duellman, W.E. (1989a), Duellman, W.E. and Lynch, J.D. (1988), Duellman, W.E., Maxson, L.R. and Jesiolowski, C.A. (1988), Faivovich, J. *et al.* (2005), Ruiz-Carranza, P.M. and Hernández-Camacho, J.A. (1976a), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)
Data Providers: Wilmar Bolívar, Luis A. Coloma, Santiago Ron

Gastrotheca aureomaculata Cochran and Goin, 1970

This species is known from the departments of Cauca and Huila on the eastern slopes of the Cordillera Central in south-central Colombia, from 2,000-2,600m asl. This is a common species. It is arboreal, occurring on vegetation alongside streams in Andean forests. It has also been recorded from relatively disturbed areas such as in trees in farmers' gardens. Its main requirement is dense vegetation. The eggs develop in a pouch on the back of the female and then the larvae are transported to small pools where they develop further. A major threat resulting in destruction of its habitat is the cultivation of illegal crops. Water pollution is also a threat. The range of the species does not include any protected areas. More research into its extent of occurrence is needed, and establishment of a protected area for this species would be advisable.
Taxonomy: This genus has recently been moved from the family Hylidae (Faivovich et al. 2005).
Bibliography: Cochran, D.M. and Goin, C.J. (1970), Duellman, W.E. (1989a), Faivovich, J. *et al.* (2005)
Data Providers: Fernando Castro, John Lynch

Hemiphractus bubalus (Jiménez de la Espada, 1871)

This species occurs in the lower Amazonian slopes of the Andes in Ecuador, Peru and Colombia (Caquetá to Putumayo), from 300-2,000m asl. It is a rare species. Individuals have been found in dense cloud forests where it favours perches, being found on the branches of bushes and small trees (Trueb 1974). At Cordillera del Cutucú, Ecuador, specimens have been collected in very wet forest, where the ground and most trees were covered with moss (Duellman and Lynch 1988); it was also collected at the same habitat type in Peru. It is not present in modified habitats. This species reproduces by direct development and the eggs are carried in a pouch on the female's back. It is probably a specialized predator on other frog species that only survives in areas of high frog density. This species is threatened by forest loss due to infrastructure development for human settlements, logging, and agricultural development (including for the cultivation of crops and the rearing of livestock). Although much forest habitat remains within the range of this species, it is very sensitive to slight habitat alteration and the rate of forest loss within the majority of its range (the Ecuadorian portion) is very high. Its geographic range overlaps with the Reserva Ecológica Cayambe-Coca, Parque Nacional Sumaco Napo-Galeras, and Parque Nacional Sangay, in Ecuador. In Peru it is present in the Zona Reservada Santiago-Comaina.
Taxonomy: This genus has recently been moved from the family Hylidae (Faivovich et al. 2005).
Bibliography: Duellman, W.E. and Lynch, J.D. (1988), Faivovich, J. *et al.* (2005), Jiménez de la Espada, M. (1871), Reynolds, R. and Icochea, J. (1997), Trueb, L. (1974)
Data Providers: Luis A. Coloma, Santiago Ron, Diego Cisneros-Heredia, Fernando Castro, Jose Vicente Rueda

Hemiphractus fasciatus Peters, 1862

This species occurs through much of the central and eastern cordilleras of Panama, south through the Pacific slopes of Colombia (in Antioquia and Cauca Departments, and almost certainly more widely) and the northern slopes of the western and central cordilleras, to north-western Ecuador (south to the Guajalito Protection Forest in Pichincha Province). It is known only from a small number of localities within its overall range, from 300-2,000m asl. This is a very rare species. Its habitat is very humid lowland, lower montane and cloud forests; it inhabits primary forest only. By day, individuals have been found in leaf-litter on the forest floor, whereas by night they favour perches above the ground. It lives only in areas of high frog densities, since it preys on other frogs. Breeding is by direct development; the eggs are carried on the back of the female. The major threats are deforestation due to agricultural development (including cultivation of illegal crops), logging, and human settlement, and pollution resulting from the spraying of illegal crops. It has been recorded from Parque Internacional La Amistad, the Reserva Forestal Fortuna, and Parque Nacional Darién in Panama. In Ecuador, its geographic range overlaps with the Reserva Ecológica Cotacachi-Cayapas. It is not known from any protected areas in Colombia.
Taxonomy: This genus has recently been moved from the family Hylidae (Faivovich et al. 2005).
Bibliography: Duellman, W.E. (2001), Faivovich, J. *et al.* (2005), Ibáñez, R. *et al.* (2000), Peters, W.C.H. (1862), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996), Trueb, L. (1974), Young, B. *et al.* (1999)
Data Providers: Luis A. Coloma, Santiago Ron, Karl-Heinz Jungfer, Frank Solís, Roberto Ibáñez, César Jaramillo, Querube Fuenmayor

Lepidobatrachus asper Budgett, 1899

This species is known from the Chaco of Paraguay (in Central, Presidente Hayes, and Alto Paraguay Departments) and northern Argentina (in Chaco, Cordoba, Corrientes, Formosa, Santa Fe, and Santiago del Estero Provinces). In Paraguay it occurs up to 200m asl. It is a common species in Paraguay but is very rare in Argentina, where it was last collected in 1986. Extensive work in an area in Cordoba where it was once recorded has not turned up any recent specimens. It inhabits dry scrubland and semi-arid areas, and breeds in temporary pools and water tanks on cattle farms. In Argentina, it occurs in vegetation near saline lakes. During the dry season individuals burrow underground and wait for rains before emerging again. The breeding season is short and larval development is rapid. This species can be threatened by fires, and potentially also by over-grazing by livestock. Its range includes Parque Nacional Defensores del Chaco in Paraguay, although it is not known from any protected areas in Argentina.
Bibliography: Aquino, A.L., Scott, N.J. and Motte, M. (1996), Di Tada, I.E. *et al.* (1996)
Data Providers: Lucy Aquino, Ismael di Tada, Julian Faivovich

Leptodactylus laticeps Boulenger, 1918

This species occurs in the Gran Chaco of Paraguay, Bolivia and Argentina, from 0-300m asl. It is common in parts of Paraguay and Bolivia but is rare in Argentina due to over-harvesting for the international pet trade. It is a terrestrial species of open habitats that breeds in temporary ponds. It probably does not adapt well to anthropogenic disturbance. Over-harvesting for the international pet trade is a major threat. It is collected in Paraguay and Argentina, and each adult is worth $300-$600. It does occur in several protected areas, but monitoring of its population status is needed, and there is a need to ensure that harvesting of this species from the wild is managed in a sustainable manner.
Bibliography: Alvarez, B.B. *et al.* (2002), Alvarez, B.B. *et al.* (2003), Aquino, A.L., Scott, N.J. and Motte, M. (1996), De la Riva, I. *et al.* (2000), Frost, D.R. (1985), Köhler, J. (2000a)
Data Providers: Claudia Cortez, Steffen Reichle, Lucy Aquino, Ismael di Tada

Phyllonastes lochites (Lynch, 1976)

This species is known from moderate altitudes on the Amazonian slopes of the Andes from the Cordillera del Cóndor in Peru, and the Cordillera de Cutucú in Ecuador (in Pastaza, Zamora Chinchipe, and Morona Santiago Provinces). It has an altitudinal rage of 900-1,700m asl. It was recently recorded from the Alfonso Ugarte military post in Amazonas Department, Cordillera del Cóndor, Peru, at 1,138m asl. It is rarely encountered, possibly due to its secretive habits. The holotype was collected during the day in leaf-litter in cloud forest (Lynch 1976d), and it also occurs in old growth and secondary forest. Reproduction occurs via direct development. Its range in the Cordillera del Cóndor is not significantly threatened since people are averse to entering the area due to the land mines left during the Ecuador-Peru border war in 1995. Its geographic range overlaps Parque Nacional Sangay in Ecuador.

Bibliography: Almendariz, A. (1997), Lynch, J.D. (1976d)

Data Providers: Diego Cisneros-Heredia, Ana Almandáriz, Jorge Luis Martinez, Daniel Neira

Pleurodema bibroni Tschudi, 1838 **FOUR-EYED FROG**

This species is known from Uruguay (in the departments of Canelones, Florida, Lavalleja, Maldonado, Montevideo, Rocha, San José and Treinta y Tres, Artigas, Durazno, and Río Negro) and from Brazil (Rio Grande do Sul), from 0-1,100m asl. This species is rare and occurs in widely scattered populations. It is probably extinct in Montevideo Department because of habitat destruction. It occurs in coastal sand plains, open savannahs, rocky outcrops, grasslands and open montane habitats, and probably does not tolerate habitat disturbance. Breeding takes place in temporary pools. The main threat is habitat destruction due to encroaching cultivation of crops, establishment of pine plantations, and encroaching human settlements. It occurs in Floresta Nacional de São Francisco de Paula.

Taxonomy: This form is probably a complex of more than one species. It was long confused with Pleurodema thaul, until the work of Donoso-Barros (1969).

Bibliography: Braun, C.A.S. (1973), Braun, P.C. and Braun, C.A.S. (1980), Klappenbach, M.A. and Langone, J.A. (1992), Langone, J.A. (1994), Lavilla, E.O. *et al.* (2000), Maneyro, R. and Langone, J.A. (2001)

Data Providers: Débora Silvano, Esteban Lavilla, Paulo Garcia, Jose Langone

Pleurodema kriegi (Müller, 1926)

This species is endemic to the Pampa de Achala, Cordoba Province, Argentina, from 1,800-2,600m asl. It is abundant within its small range, although it is seen only during the breeding season. It occurs in montane grasslands and associated rocky outcrops. Adults live under rocks or in abandoned rodent holes outside the breeding season. It reproduces explosively during the first rains in November and December. Pairs spin a gelatinous nest attached to vegetation in temporary pools, or sometimes in backwater pools of streams. Significant threats to this species have previously included extensive cattle ranching and the associated alteration of water sources. However, the recent declaration of protected areas within its range means that the future of this species now looks much more secure. It occurs in Parque Nacional Quebrada del Condorito and the Reserva Hídrica Provincial de Pampa de Achala.

Bibliography: Di Tada, I.E. *et al.* (1996), Lavilla, E.O. *et al.* (2000), Lavilla, E.O. and Cei, J.M. (2001)

Data Providers: Esteban Lavilla, Ismael di Tada

Proceratophrys bigibbosa (Peters, 1872)

This species is known from the Rio Grande do Sul, Brazil, and central districts of Misiones Province, Argentina, from 300-1,200m asl. It has never been recorded as being abundant, and one population in Sao Francisco de Paula has disappeared. It inhabits *Araucaria* forests in mountainous regions, and breeds in small streams. Outside the breeding season it occurs in leaf-litter. The eggs may be deposited under stones on streambeds. A major threat to this species is habitat loss due to deforestation, for smallholder livestock ranching, and the establishment of pine plantations. It is also threatened by pollution of soil and water due to agricultural practices and industrial pollution with organic wastes. This species' range overlaps with several protected areas.

Taxonomy: Proceratophrys palustris is similar to this species.

Bibliography: Kwet, A. and Di-Bernardo, M. (1999), Kwet, A. and Faivovich, J. (2001), Lavilla, E.O. *et al.* (2000), Lavilla, E.O. and Cei, J.M. (2001)

Data Providers: Débora Silvano, Axel Kwet, Paulo Garcia, Julian Faivovich

Rupirana cardosoi Heyer, 1999

This species is restricted to the region of Chapada Diamantina, in the northern part of the Espinhaço Range in the state of Bahia, eastern Brazil, at around 1,200m asl. This species is common within its small range. It lives on the banks of small streams with white sand and rocks, in high-altitude grassy vegetation, and breeds in temporary streams and ponds. The major threats are habitat loss due to expanding cultivation of crops and livestock grazing, and fire. It occurs in Parque Nacional Chapada da Diamantina.

Bibliography: Heyer, W.R. (1999)

Data Providers: Flora Junca, Débora Silvano

Stefania satelles Señaris, Ayarzaguena and Gorzula, 1997 "1996"

This species is known from Aprada tepui (tepuis are Venezuelan flat top mountains) at 2,500m asl, and from Angasima tepui (Adanta) and Upuigma tepui (El Castillo), from between 2,000 and 2,100m asl. The mountain chains of Angasima tepui and Upuigma tepui are not physically connected, and lie about eight to 10km apart. Aprada tepui is likewise separated from the Chimantá massif, and lies about 20km to the north-east of it. This species therefore has a disjunct distribution. It is common on these summits. This is a nocturnal frog found on open, rocky surfaces, and in crevices and depressions close to watercourses. It carries its eggs and juveniles on its back, and breeds by direct development. There are no known threats to the species' habitat at present. This species occurs within Parque Nacional Canaima. In addition, Venezuelan flat top mountains (tepuis) are protected by law, so all the species occurring on them are protected.

Taxonomy: This genus has recently been moved from the family Hylidae (Faivovich et al. 2005). Some specimens of this species resemble Stefania ginesi, but in these cases their general aspect is that of a somewhat slimmer and slightly smaller frog. Specimens from Terekeyuren (Murisipan) tepui and Kamarkawarai tepui, from the Los Testigos massif, closely resemble S. satelles, but were not assigned to this species pending further specimens becoming available.

Bibliography: Barrio, C. (1998), Duellman, W.E. and Hoogmoed, M.S. (1984), Faivovich, J. *et al.* (2005), La Marca, E. (1997), MacCulloch, R.D. and Lathrop, A. (2002), Señaris, J.C., Ayarsagüena, J. and Gorzula, S. (1997)

Data Providers: Celsa Señaris, Enrique La Marca

Telmatobius bolivianus Parker, 1940

This species is known only from the Yungas forests of La Paz Department, Bolivia, from 2,000-3,000m asl. *Telmatobius ifornoi*, known only from Chuspipata, in Nor Yungas Province, La Paz Department, at 3,050m asl, is now considered to be a synonym (Lavilla and Ergueta 1999). This is the most common and widespread *Telmatobius* species in Bolivia. It is an aquatic species that occurs in fast-flowing rivers and streams in cloud forests and Yungas forest. It is often present in the muddy bottoms of streams. There is no information on its breeding biology, though it presumably takes place by larval development in streams. It is affected by ongoing habitat loss and degradation, as a result of logging and agricultural expansion. It is also threatened by water pollution and aquaculture. Despite these threats its populations appear to be currently stable. However, chytridiomycosis is a potential future threat that could cause serious declines, but this has not yet been confirmed in this species. It occurs in Parque Nacional y Área Natural de Manejo Integrado Cotapata, and Área Natural de Manejo Integrado Nacional Apolobamba. Given the possible threat of chytridiomycosis, this species should be monitored closely.

Taxonomy: This species was formerly considered to be a synonym of Telmatobius marmoratus (Vellard 1970). It was resurrected as a full species by De la Riva et al. (2000). T. ifornoi is included as a synonym of this species, following De la Riva (2004).

Bibliography: De la Riva, I. (2004), De la Riva, I. *et al.* (2000), Lavilla, E. and Ergueta, P. (1995), Lavilla, E. and Ergueta, P. (1999), Vellard, J. (1970)

Data Providers: Claudia Cortez, Steffen Reichle, Ignacio De la Riva, Jörn Köhler

Telmatobius jelskii (Peters, 1873)

This species is known from much of the central Andes in Peru (from the departaments of Ayacucho, Huancavelica and Junín), from 2,700-4,500m asl. It was previously common, but has undergone declines. It is a semi-aquatic riparian frog, and may be found in muddy beds of streams among shrublands and grasslands. It has been found in ditches on arable land. Breeding takes place in streams. This species is locally affected by harvesting for both food and traditional medicine, and by water pollution (from agrochemicals and domestic waste). *Telmatobius* populations living at high altitudes might be particularly prone to becoming infected with chytridiomycosis, although this disease has yet to be reported from this species. It might be present in the Reserva Chacamarca although this requires confirmation. There is a need to regulate its harvesting and to reduce the local water pollution. Given the possible threat of chytridiomycosis this species should be monitored closely.

Bibliography: Rodríguez, L.O., Cordova, J.H. and Icochea, J. (1993), Sinsch, U. (1986), Sinsch, U. (1990), Sinsch, U., Salas, A.W. and Canales, V. (1995)

Data Providers: Javier Icochea, Ulrich Sinsch, Edgar Lehr

Telmatobius simonsi Parker, 1940

This species is endemic to the Bolivian Andes, where it has been recorded from the departments of Chuquisaca, Cochabamba and Santa Cruz (Köhler 2000a), from 1,000-2,800m asl. It is locally common, although it is apparently in decline. It is an aquatic species, occurring in both open and forest habitats, in inter-Andean valleys. It can be found at night by the sides of roads, in waterways or trenches, or in ponds and small streams (Köhler 2000a). There is no information on its breeding biology, though it presumably takes place by larval development in water. It is probably declining because of water pollution, and habitat loss and degradation due to agricultural development, logging, and livestock grazing. *Telmatobius* populations living at higher altitudes might be particularly prone to becoming infected with chytridiomycosis, so this disease might be a potential threat for this species in the future. It occurs in Parque Nacional El Palmar and Parque Nacional Amboró. Given the possible threat of chytridiomycosis there is a need for close monitoring of the population status of this species.

Taxonomy: Populations from the La Siberia area, previously considered to belong to Telmatobius simonsi, have recently been described as T. sibiricus (De la Riva and Harvey 2003).

Bibliography: De la Riva, I. and Harvey, M.B. (2003), Köhler, J. (2000a), Parker, H.W. (1940)

Data Providers: Claudia Cortez, Steffen Reichle, Ignacio De la Riva, Jörn Köhler

Thoropa saxatilis Cocroft and Heyer, 1988

This species occurs in the southernmost part of the Atlantic forest in the states of Santa Catarina and Rio Grande do Sul, southern Brazil, from 300-1,000m asl. It is rarely collected, although it was found in 2001, and it appears to have disappeared from some localities. This species lives in forested areas on rocky cliffs; eggs are deposited under waterfalls on rocks. Some populations of this species have been affected by changes in watercourses, and by sedimentation caused by road construction, as well as by general forest loss. However, these factors do not fully account for the recorded declines. Like amphibians in some other parts of the wet tropics, it appears to have disappeared from areas of apparently suitable habitat, and chytridiomycosis cannot be ruled out as a threat, even though this disease has not yet been confirmed from Brazil. This species occurs in Parque Nacional da Serra Geral and Parque Nacional de Aparados da Serra. Given the possible threat of chytridiomycosis, there is a need for close monitoring of the population status of this species.

Bibliography: Cocroft, R.B. and Heyer, W.R. (1988), Garcia, P.C.A. and Vinciprova, G. (1998)

Data Providers: Paulo Garcia

LIMNODYNASTIDAE

Adelotus brevis (Günther, 1863) **TUSKED FROG**

This Australian endemic has a disjunctive distribution, occurring in the Clarke Range (mid-eastern Queensland), then from Shoalwater Bay (mid-eastern Queensland) south along the coast to Moss Vale (mid-eastern New South Wales), and inland to Blackdown Tableland and Carnarvon Gorge. It was formerly common across a broad altitudinal range but at present it is common only at altitudes of less than 400m asl. There is no information on the status of inland populations of this species. Elswhere, it is now absent from some areas of apparently suitable habitat. For example, it has not been recorded along the Great Dividing Range in recent surveys. Upland populations in northern New South Wales have also declined, and the species is listed as threatened in the region. There is no published information on its overall population size, structure, genetics or dynamics. This species is found in wet forest and dry forest environs usually along streams, but also around dams. See Katsikaros and Shine (1997) for studies on diet, habitat use, mating systems and sexual dimorphism. Breeding takes place in streams and ponds. Unpigmented eggs are laid in a foam nest hidden from the light, and development is usually complete within 71 days. The major threat to this species is loss and degradation of its habitat through agricultural and urban development. Other significant threats are the introduced predatory fish *Gambusia holbrooki*, and the spread of weeds. Dead frogs that have suffered from chytridiomycosis have been found in south-eastern Queensland and north-eastern New South Wales. The range of the species includes several protected areas. Research into the spread of chytrid fungus and education on methods of minimizing and preventing its spread is also needed as a conservation measure.

Bibliography: Barker, J., Grigg, G. and Tyler, M. (1995), Czechura, G.V. (1986b), Hines, H., Mahony, M. and McDonald, K. (1999), Katsikaros, K. and Shine, R. (1997), Martin, A.A. (1967)

Data Providers: Harry Hines, Ed Meyer, Jean-Marc Hero, David Newell, John Clarke

MANTELLIDAE

Boophis majori (Boulenger, 1896)

This species occurs in eastern Madagascar from Ambohimitombo south to Andringitra, from 900-1,500m asl. Records from elsewhere require confirmation, and probably refer to other species. It is locally common where found. This is a rainforest species that is not found in secondary habitats. It is most often seen at night along streams in which it probably breeds. The major threat to this species is rapid loss and degradation of its forest habitat due to subsistence agriculture, timber extraction, charcoal manufacture, invasive spread of eucalyptus, livestock grazing and expanding human settlements. It occurs in Parc National d'Andringitra and Parc National de Ranomafana.

Taxonomy: The taxonomy of this species was revised by Glaw et al. (2001).

Bibliography: Blommers-Schlösser, R.M.A. (1979b), Blommers-Schlösser, R.M.A. and Blanc, C.P. (1991), Glaw, F. *et al.*. (2001), Glaw, F. and Vences, M. (1994)

Data Providers: Ronald Nussbaum, Frank Glaw, Miguel Vences

Boophis occidentalis Glaw and Vences, 1994

This species has been recorded from four widely separated localities in western and north-western Madagascar: Isalo; Bemaraha; Sahamalaza, and outside the Réserve Spéciale de Kalambatritra. It occurs from close to sea level up to 800m asl. There is little information on the population status of this species, but it can be locally abundant. It lives in dry and transitional forest, and has been found in severely degraded habitats with planted trees along streams in a village, although it probably cannot survive in completely open habitats. It is an explosive breeder in streams. The major threat to this species is rapid habitat loss and degradation due to subsistence agriculture, timber extraction, charcoal manufacture, livestock grazing, fires and expanding human settlements. It is probably also affected by pollution of its breeding streams. It occurs in Parc National de Isalo and is likely to occur in the Réserve Spéciale de Kalambatritra, although it has not yet been found there. It also occurs in one planned protected area (Sahamalaza).

Taxonomy: This species was previously considered to be a subspecies of Boophis albilabris, but it was raised to full specific rank by Andreone et al. (2002). The north-western population could perhaps belong to an undescribed species (M. Vences pers. comm.).

Bibliography: Andreone, F. (1993), Andreone, F. *et al.* (2002), Glaw, F. and Vences, M. (1994)

Data Providers: Frank Glaw, Miguel Vences, John Cadle

Boophis rhodoscelis (Boulenger, 1882)

This species occurs only in east-central Madagascar. Although there has been some confusion in identifying this species, studies of type specimens show that it clearly represents a valid, distinct species that seems to be restricted to highland areas from 900-1,500m asl. It is a rare species, known from only a few localities. It lives in rainforest, and also in open grassland close to forest fragments. Breeding presumably takes place in streams and brooks. This species is threatened by the loss and degradation of its forest habitat due to subsistence agriculture, timber extraction, charcoal manufacture, invasive spread of eucalyptus, livestock grazing, fires and expanding human settlements. It occurs in Parc National de Ranomafana, and probably in several other protected areas, including those near Andasibe.

Bibliography: Blommers-Schlösser, R.M.A. (1979b), Blommers-Schlösser, R.M.A. and Blanc, C.P. (1991), Glaw, F. and Vences, M. (1994), Glaw, F. and Vences, M. (1997), Raxworthy, C.J. and Nussbaum, R.A. (1996b), Vallan, D. (2000b)

Data Providers: Franco Andreone, Miguel Vences, Denis Vallan

Boophis rufioculis Glaw and Vences, 1997 "1996"

This species occurs in the central part of the eastern rainforest belt of Madagascar, from Mantadia south to Antoetra, from 900-1,200m asl. It is locally common. This species is found only in pristine rainforest, and probably breeds in small brooks and streams. Its forest habitat is receding due to subsistence agriculture, timber extraction, charcoal manufacture, invasive spread of eucalyptus, livestock grazing and expanding human settlements. It occurs in Parc National de Mantadia.

Bibliography: Glaw, F. and Vences, M. (1997), Vallan, D. (2002), Vallan, D. *et al.* (2004)

Data Providers: Frank Glaw, Denis Vallan

Mantella laevigata Methuen and Hewitt, 1913 CLIMBING MANTELLA

This species is relatively widely distributed in north-eastern Madagascar, from Marojejy south to Folohy (where its habitat has been degraded), and occurs from 0-600m asl. It is known from more than five localities and probably occurs at more sites than are currently known. It is locally abundant. This is a rainforest species, which is often particularly abundant in bamboo forest and other types of forest with abundant tree holes (in which it breeds). It is primarily terrestrial but also climbs on low vegetation. Its forest habitat is receding due to subsistence agriculture, timber extraction, charcoal manufacture, invasive spread of eucalyptus, livestock grazing and expanding human settlements. It is traded in low numbers for the international pet trade, but not at a level that is likely to constitute a threat. This species occurs in several protected areas, and is also maintained and bred in several facilities outside Madagascar. CITES Appendix II.

Bibliography: Andreone, F. *et al.* (2000), Blommers-Schlösser, R.M.A. and Blanc, C.P. (1991), Busse, K. (1980), Daly, J.W. *et al.* (1996), Glaw, F. and Vences, M. (1992b), Glaw, F. and Vences, M. (1994), Glaw, F., Vences, M. and Schmidt, K. (2000), Guibé, J. (1978), Heying, H. (2001), Oetter, K., Wanke, S. and Vences, M. (2001), Raselimanana, A.P., Raxworthy, C.J. and Nussbaum, R.A. (2000), Staniszewski, M. (2001), Vences, M. *et al.* (1998), Vences, M., Glaw, F. and Böhme, W. (1999)

Data Providers: Franco Andreone, Frank Glaw

Mantidactylus bertini (Guibé, 1947)

This species has a relatively broad distribution in south-eastern Madagascar from Ranomafana south to Andohahela, and occurs from 500-1,300m asl. It is a rather rare species. It lives in crevices among boulders and rocky areas, usually close to flowing waters. This species is found in pristine forest, and does not survive in secondary or degraded areas. The details of its breeding biology are unknown, though breeding possibly takes place in water flowing among rocks. This species is threatened by the loss and degradation of its forest habitat due to subsistence agriculture, timber extraction, charcoal manufacture, invasive spread of eucalyptus, livestock grazing and expanding human settlements. It occurs in Parc National de Ranomafana, Parc National d'Andringitra and Parc National d'Andohahela, and in the Réserve Spéciale du Pic d'Ivohibe.

Bibliography: Andreone, F. and Randriamahazo, H. (1997), Blommers-Schlösser, R.M.A. and Blanc, C.P. (1991), Glaw, F. and Vences, M. (1994), Nussbaum, R.A. *et al.* (1999), Raxworthy, C.J. and Nussbaum, R.A. (1996a)

Data Providers: Ronald Nussbaum, John Cadle, Franco Andreone

Mantidactylus blanci (Guibé, 1974)

This species occurs in the Ranomafana area, south through the Andringitra Mountains to the Chaines Anosyennes, in south-eastern Madagascar. It has been recorded at 800-1,500m asl, and possibly also occurs lower than this. It is a locally abundant species. It is a terrestrial species of rainforest that is not tied to water, and also occurs in somewhat degraded habitats. Breeding presumably takes place by direct development. Its forest habitat is receding due to subsistence agriculture, timber extraction, charcoal manufacture, the invasive spread of eucalyptus, livestock grazing and expanding human settlements. It occurs in Parc National de Ranomafana and Parc National d'Andringitra.

Taxonomy: This species was removed from the synonymy of Mantidactylus decaryi by Glaw and Vences (2000).

Bibliography: Blommers-Schlösser, R.M.A. and Blanc, C.P. (1991), Glaw, F. and Vences, M. (2000), Glaw, F. and Vences, M. (2002a)

Data Providers: Miguel Vences, Frank Glaw

Mantidactylus decaryi (Angel, 1930)

This species is known from many localities in south-eastern Madagascar from Ranomafana south to Midongy-du-Sud, from 700-1,050m asl. It is a locally common species. It inhabits primary and secondary rainforest, and is sometimes found in quite disturbed habitats. Breeding takes place by direct development, and away from water. This species is threatened by the loss and degradation of its forest habitat due to subsistence agriculture, timber extraction, charcoal manufacture, invasive spread of eucalyptus, livestock grazing and expanding human settlements. It occurs in Parc National de Ranomafana, the Réserve Spéciale du Pic Ivohibe, and Parc National de Midongy-du-Sud.

Taxonomy: This species can be confused with Mantidactylus boulengeri and M. leucomaculatus (F. Andreone pers. comm.). Mantidactylus blanci was recently removed from the synonymy of M. decaryi by Glaw and Vences (2000).

Bibliography: Blommers-Schlösser, R.M.A. and Blanc, C.P. (1991), Glaw, F. and Vences, M. (1994), Glaw, F. and Vences, M. (2000), Glaw, F. and Vences, M. (2002a)

Data Providers: Frank Glaw, John Cadle

Mantidactylus leucocephalus (Angel, 1930)

This species occurs in south-eastern Madagascar, from Mindongy-du-Sud south to Fort Dauphin, from near sea level up to 900m asl. It is very abundant. This adaptable species does require some tree cover, and lives in leaf-litter in rainforest, degraded habitats, and eucalyptus plantations. It is independent of water and is presumed to breed by direct development. This species is threatened by the loss and degradation of its forest habitat due to subsistence agriculture, timber extraction, charcoal manufacture, livestock grazing and expanding human settlements. It occurs in Parc National d'Andohahela and Parc National de Midongy-du-Sud.

Taxonomy: This species was previously considered to be part of Mantidactylus boulengeri (Glaw and Vences 2002a).

Bibliography: Andreone, F. and Randriamahazo, H. (1997), Glaw, F. and Vences, M. (2002a)

Data Providers: Christopher Raxworthy, Franco Andreone

Mantidactylus leucomaculatus (Guibé, 1975)

This species occurs in northern Madagascar from Marojejy south to Ambatovaky, and from the islands of Nosy Boraha (Ile St Marie) and Nosy Mangabe. It has been recorded from sea level up to 700m asl. It is locally abundant, but very rare in some places. This species is found only in undisturbed rainforest, where it lives independently of water, and probably breeds by direct development. It is threatened by the loss and degradation of its forest habitat due to subsistence agriculture, timber extraction, charcoal manufacture, invasive spread of eucalyptus, livestock grazing and expanding human settlements. It occurs in Parc National de Marojejy and Parc National de Masoala, the Réserve Spéciale de Nosy Mangabe and the Réserve Spéciale d'Ambatovaky, and the Réserve de Biosphère de Mananara-Nord.

Taxonomy: This species was considered to be Boophis maculatus by Blommers-Schlosser and Blanc (1991).

Bibliography: Andreone, F. *et al.* (2003a), Andreone, F. and Randriamahazo, H. (1997), Glaw, F. and Vences, M. (1992a), Glaw, F. and Vences, M. (1992c), Glaw, F. and Vences, M. (1994), Guibé, J. (1975), Guibé, J. (1978), Raselimanana, A.P., Raxworthy, C.J. and Nussbaum, R.A. (2000)

Data Providers: Franco Andreone, Christopher Raxworthy

Mantidactylus plicifer (Boulenger, 1882)

This species has been recorded from two localities at 400-900m asl in south-eastern Madagascar: Ranomafana, and Chaines Anosyennes. It is suspected to occur more widely, in particular between these two known sites. It is a moderately common species, but is less common than the closely related *Mantidactylus luteus*. This is a species of pristine rainforest only. It is not tied to water, so presumably breeds by direct development. It is threatened by the loss and degradation of its forest habitat due to subsistence agriculture, timber extraction, charcoal manufacture, invasive spread of eucalyptus, livestock grazing and expanding human settlements. It occurs in Parc National de Ranomafana, and perhaps in Parc National d'Andohahela.

Taxonomy: This species is similar to Mantidactylus luteus, and some specimens and populations might be confused between these two species. It was recently revised by Vences and Glaw (2001).

Bibliography: Andreone, F. *et al.* (2003a), Blommers-Schlösser, R.M.A. and Blanc, C.P. (1991), Glaw, F. and Vences, M. (1994), Vences, M. and Glaw, F. (2001)

Data Providers: Frank Glaw, Miguel Vences

Mantidactylus spiniferus Blommers-Schlösser and Blanc, 1991

This species is known only from south-eastern Madagascar, from Andringitra south to Andohahela, where it ranges from 600-1,000m asl. Records from north-eastern Madagascar are erroneous. It is a rare species with a patchy distribution. This is a species of pristine rainforest only, which does not live in altered habitats. It is found on the forest floor, and is particularly associated with bamboo. Breeding is presumed to be by direct development. It is threatened by the loss and degradation of its forest habitat due to subsistence agriculture, timber extraction, charcoal manufacture, invasive spread of eucalyptus, livestock grazing and expanding human settlements. It occurs in the Réserve Spéciale de Kalambatritra, Parc National d'Andohahela, and Parc National d'Andringitra.

Bibliography: Blommers-Schlösser, R.M.A. and Blanc, C.P. (1991), Glaw, F. and Vences, M. (1994), Nussbaum, R.A. *et al.* (1999), Vences, M. and Glaw, F. (2001)

Data Providers: Christopher Raxworthy, Miguel Vences

MEGOPHRYIDAE

Leptolalax dringi Dubois, 1987

This Bornean endemic has been found at many sites in Sabah, and in adjacent parts of Sarawak and Kalimantan, from 200-1,500m asl. There are no estimates of subpopulation status, but it is not rare at sites where it has been found. It

lives in closed-canopy forests, and breeding occurs in small, clear, rocky streams. The main threat to this species is clearance of its forest habitat. It is found in several large parks in Sabah, Sarawak and east Kalimantan.
Bibliography: Dubois, A. (1987), Inger, R.F. and Stuebing, R.B. (1997), Inger, R.F., Stuebing, R.B. and Tan, F.-L. (1995), Malkmus, R. *et al.* (2002), Matsui, M. (1997)
Data Providers: Robert Inger, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun

Leptolalax gracilis (Günther, 1872)

This species has been recorded mainly from Borneo, where there are records from Sarawak (Malaysia), Kalimantan (Indonesia) and Brunei Darussalam. In peninsular Malaysia, records from two mountain peaks (Gunung Tahan and Gunung Benom) have been assigned to this species (Grandison 1972; Berry 1975). In Peninsular Thailand there are records from Thong Pha Phum Forest, in Kanchanaburi Province, but these require verification. It probably occurs more widely on Borneo than current records suggest. It has an altitudinal range of 150 to above 1,500m asl. In Borneo it appears to be abundant at some sites in some years and much less common in others, while in Peninsular Malaysia it appears to be an uncommon species. It is confined to primary and old secondary rainforests. Adults and juveniles live in the floor litter and in the herb and shrub strata. Breeding occurs in streams with clear water and sandy to rocky bottoms. Larvae live amid the rocks on the bottom of the watercourse. Deforestation is the principal threat to this species, while siltation of streams following deforestation is a threat to the larval habitat. In mainland Southeast Asia one population is securely protected in Taman Negara National Park, and this species is also found in at least three protected areas in Borneo.
Taxonomy: Dubois (1983) suggested that the Peninsular Malaysian populations might be taxonomically distinct from Bornean Leptolalax gracilis.
Bibliography: Berry, P.Y. (1975), Dubois, A. (1983), Grandison, A.C.G. (1972a), Inger, R.F. and Stuebing, R.B. (1997)
Data Providers: Peter Paul van Dijk, Robert Inger, Jeet Sukumaran, Yodchaiy Chuaynkern

Leptolalax maurus Inger, Lakim, Biun and Yambun, 1997

This species is currently known only from Gunung Kinabalu, Borneo, at 1,850m asl. There is no information on its population status. All known specimens were found on the ground in montane forest (oak-chestnut); breeding presumably takes place in streams. There are currently no major threats to this species. It is found in Gunung Kinabalu National Park.
Bibliography: Inger, R.F *et al.* (1997), Inger, R.F. and Stuebing, R.B. (1997), Malkmus, R. (2000), Malkmus, R. *et al.* (2002)
Data Providers: Robert Inger, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun

Megophrys kobayashii Matsui and Malkmus, 1997 — KOBAYASHI'S HORNED FROG

This species is restricted to Gunung Kinabalu National Park, the Crocker Range, and Mount Trus Madi, Borneo, from 1,300-1,600m asl. It is recorded infrequently. It is a terrestrial species of montane forests, and breeding takes place in small forest streams. There are currently no major threats to this species. All known populations are within protected areas.
Bibliography: Malkmus, R. *et al.* (2002), Malkmus, R. and Matsui, M. (1997)
Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun

Oreolalax lichuanensis Hu and Fei, 1979

This species is known from Sichuan, Hubei, Hunan, Guizhou and Chongqing Provinces in central China, from 1,790-2,300m asl. It is uncommon. It occurs in forest and shrubland habitat, and breeding takes place in small, shallow-gradient streams. The major threats to this species are very rapid habitat destruction and degradation, through logging in particular. Its range overlaps several protected areas.
Bibliography: Fei, L. *et al.* (1999), Liu, C.-C., Hu, S.-Q. and Fei, L. (1979), MacKinnon, J. *et al.* (1996)
Data Providers: Fei Liang, Ye Changyuan

Oreolalax rugosus (Liu, 1943)

This species is known from southern Sichuan and northern Yunnan Provinces, China, from 1,800-3,300m asl. It appears to have a small population. It inhabits riparian habitats, and breeds in small- to medium-sized hill streams. The major threats to this species are habitat destruction and degradation due to clear-felling and agricultural expansion. The range of this species overlaps with several protected areas.
Bibliography: Fei, L. *et al.* (1999), Liu, C.C. (1943), MacKinnon, J. *et al.* (1996), The Comprehensive Scientific Expedition to the Qinghai-Xizang Plateau (1997), Ye, C.-Y, Fei, L. and Hu, S.Q. (1993)
Data Providers: Fei Liang, Wu Guanfu

Oreolalax schmidti (Liu, 1947)

This species is endemic to central Sichuan Province in China, and occurs from 1,700-2,520m asl. It is known from only seven or eight locations and its population appears to be small. It occurs in shrublands and coniferous forest, and breeding takes place in small streams and marshes. Habitat destruction and degradation are possible threats to this species. Its range overlaps several protected areas.
Bibliography: Fei, L. *et al.* (1999), Inger, R.F. *et al.* (1990), Liu, C.C. (1947), MacKinnon, J. *et al.* (1996), The Comprehensive Scientific Expedition to the Qinghai-Xizang Plateau (1997)
Data Providers: Xie Feng, Wu Guanfu

Vibrissaphora ailaonica Yang, Chen and Ma, 1983

This species is restricted to Ailaoshan and Wuliangshan in central Yunnan Province, China, from 800-2,600m asl. It is rare and difficult to find. It inhabits evergreen broadleaf forests and breeds in slow-flowing streams. Its habitat is well protected, and it is not facing any known threats. The entire known range of this species is within Ailaoshan and Wuliangshan National Nature Reserves.
Bibliography: MacKinnon, J. *et al.* (1996), Yang, D.-T. (1991b), Yang, D.-T. *et al.* (1983), Ye, C.-Y, Fei, L. and Hu, S.Q. (1993)
Data Providers: Yang Datong, Lu Shunqing

Xenophrys baluensis (Boulenger, 1899) — KINABALU HORNED FROG

This species is known from Gunung Kinabalu and the Crocker Range on Borneo, in Sabah (Malaysia), from 1,200-1,900m asl. There are no estimates of the status of its subpopulations but it does not appear to be abundant. It is restricted to montane forests, where adults and juveniles have been found in leaf-litter on the forest floor. Breeding is thought to take place in slow-flowing regions of clear, rocky streams. There are no major threats to this species. The two protected areas in which it is found, namely Gunung Kinabalu and Tama Negara National Parks, are well protected.
Bibliography: Inger, R.F. and Stuebing, R.B. (1997), Malkmus, R. *et al.* (2002)
Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun

Xenophrys dringi Inger, Stuebing and Tan, 1995 — DRING'S HORNED FROG

This species is known only from Gunung Mulu National Park, Borneo, at 1,800m asl, and has not been found in Kinabalu National Park despite intensive sampling there, so its range appears to be genuinely restricted. There is very little information on population status. The only known specimens were found along a small, clear, rocky stream in montane forest. Larvae presumably develop in slow-flowing parts of these streams. There are no major threats to this species since its habitat is well protected. Continued protection of Gunung Mulu National Park is required to ensure the long-term conservation of this species.
Bibliography: Inger, R.F. and Stuebing, R.B. (1997), Inger, R.F., Stuebing, R.B. and Tan, F.-L. (1995)
Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun

Xenophrys longipes (Boulenger, 1886)

This species is only known from the mountain ranges of southern Peninsular Thailand and Peninsular Malaysia, from 300-1,000m asl. Records from Cambodia remain unconfirmed. It probably occurs more widely than current records suggest. This is an uncommon species even in prime habitat. It inhabits undisturbed evergreen rainforest and montane moss forest. Larvae live in small, clear, swift-flowing streams. Some subpopulations might be threatened by local forest clearance, although overall its montane forest habitat is reasonably secure. It occurs in a number of protected areas in Thailand, including the Hala-Bala Wildlife Sanctuary, but stronger protection of its habitat in Peninsular Malaysia is required.
Taxonomy: Records of Xenophrys longipes from northern Viet Nam (Tran et al. 1992) are provisionally placed under Megophrys lateralis; while these animals might represent a taxon distinct from M. lateralis, they are unlikely to be conspecific with X. longipes from Peninsular Malaysia.
Bibliography: Berry, P.Y. (1975), Chan-ard, T. *et al.* (1999), Inger, R.F., Orlov, N. and Darevsky, I.S. (1999), Leong, T.M. (2001a), Leong, T.M. and Chou, L.M. (1998), Leong, T.M. and Lim, K.K.P. (2003), OEPP - Office of Environmental Planning and Policy [of Thailand] (1997), Orlov, N.L. *et al.* (2000), Taylor, E.H. (1962), Tran, K. *et al.* (1992)
Data Providers: Yodchaiy Chuaynkern, Norsham Yaakob, Jeet Sukumaran, Leong Tzi Ming

Xenophrys mangshanensis (Fei and Ye, 1991) — MANGSHAN HORNED TOAD

This species is known from southern Hunan and northern Gaungdong Provinces in China, from 380 to over 1,000m asl. It is a very rare species. It inhabits forests and streams (in which it breeds). The major threats to this species are habitat destruction and degradation, arising from smallholder agriculture and dam construction. It is recorded from at least one protected area, Mangshan National Nature Reserve.
Bibliography: Fei, L. *et al.* (1999), Fei, L., Ye, C.Y. and Huang Y. Z. (1990), MacKinnon, J. *et al.* (1996)
Data Providers: Michael Wai Neng Lau, Bosco Chan

Xenophrys omeimontis (Liu, 1950) — OMEI HORNED TOAD

This species is known from six locations in southern Sichuan, China, from 700-1,500m asl. Records tentatively referred to this species were reported from Fan Si Pan Mountain, Lao Cai Province, northern Viet Nam, at 1,400-1,900m asl, by Orlov *et al.* (2000), but the identity of these records has not yet been confirmed. This is a common species. It inhabits hill streams and forests, and breeding takes place in streams. The habitat of this species is threatened by smallholder farming activities and tourism. Part of the range of this species falls within protected areas in China. The one location in Viet Nam from which it has been tentatively recorded is within Hoang Lien Son National Park.
Bibliography: Fei, L. *et al.* (1999), Inger, R.F. *et al.* (1990), Liu, C.C. (1950), MacKinnon, J. *et al.* (1996), Orlov, N.L. *et al.* (2000), Ye, C.-Y, Fei, L. and Hu, S.Q. (1993)
Data Providers: Fei Liang, Wu Guanfu, Peter Paul van Dijk, Annemarie Ohler

MICROHYLIDAE

Cophixalus bombiens Zweifel, 1985 — BUZZING FROG

This Australian endemic is known from Windsor Tableland, Thornton Peak, Shiptons Flat, Mount Boolbun South and Cape Tribulation, in northern Queensland, Australia, from 900-1,300m asl. It occurs at high densities. It inhabits moist vine forest, and calls from sticks, logs and low vegetation, and from under leaves on the forest floor. It appears to have persisted in areas selectively logged within the past 15 years. Breeding is believed to take place by direct development. The major threat to this species is surface water extraction and resulting changes in flow regimes. It only occurs in a small area of state forest (McDonald 1992), which provides protection for its habitat, although the species does not occur in a national park.
Bibliography: Barker, J., Grigg, G. and Tyler, M. (1995), Hoskin C.J. (2004), McDonald, K.R. (1992), Zweifel, R.G. (1985)
Data Providers: Jean-Marc Hero, Ross Alford, Michael Cunningham, Conrad Hoskin, Keith McDonald

Cophixalus crepitans Zweifel, 1985 — RATTLING FROG

This Australian endemic is known only from a single location, north-east of Coen, in the McIlwraith Range, eastern Cape York Peninsula, in the far north of Queensland. It has a large population, spread over a moderate area, despite being known only from a single location. This species is confined to vine forest within tropical rainforest. It breeds by direct development. The main threat to this species is habitat degradation resulting from tourist activities. Its range is within a protected area.
Bibliography: Barker, J., Grigg, G. and Tyler, M. (1995), Hoskin C.J. (2004), Zweifel, R.G. (1985)
Data Providers: Jean-Marc Hero, Ross Alford, Michael Cunningham, Conrad Hoskin, Keith McDonald

Cophixalus exiguus Zweifel and Parker, 1969 — SCANTY FROG

This Australian endemic is found in a small area south of Cooktown, north-eastern Queensland, where, after a gap of 25 years, it was recently collected from Big Tableland, between 555 and 620m asl. It is an abundant species within its restricted range. This species is found beneath cover (logs, stones, and leaf-litter) in rainforest comprising vine forest, including areas with *Acacia*. It calls from beneath leaves and in hollow tree trunks. Breeding takes place by direct development. Threats to this species arise mainly from human impacts on the national parks it inhabits, including for example: erosion following human traffic, and development of walking tracks and other tourist facilities. Improved management of the protected areas in this species' range is necessary to limit the disturbance caused by tourist activities.

Bibliography: Barker, J., Grigg, G. and Tyler, M. (1995), Hoskin C.J. (2004), McDonald, K.R. (1992), Zweifel, R.G. (1985)
Data Providers: Jean-Marc Hero, Ross Alford, Michael Cunningham, Conrad Hoskin, Keith McDonald

Dyscophus antongilii Grandidier, 1877 — TOMATO FROG

This species occurs in north-eastern Madagascar, where it has a relatively wide, but poorly understood, distribution. Specific records come from around Antongila Bay, Ambatovaky, Andivoranto (a historical record), and near Andasibe. Other reported localities for this species, especially the southernmost ones, might in fact refer to *Dyscophus guineti*. It occurs from sea level up to 600m asl. It is locally abundant, especially in and around Maroansetra. However, there is circumstantial evidence for local population declines here, perhaps due to increased urbanization. In Ambatovaky its population is stable and abundant. It lives in primary rainforest, coastal forest, secondary vegetation, degraded scrub, and highly disturbed urban areas. It is a very adaptable species, but possible declines in Maroansetra indicate that there might be a limit to the extent that it can persist in urbanized habitats. It appears to be localized to sandy ground near the coast, and breeds in ditches, flooded areas, swamps, and temporary and permanent still or very slowly flowing water. Pollution of waterbodies is a potential threat, and in the past this species was subject to collection for international trade, although this is now largely under control and restricted. It occurs in the Réserve Spéciale d'Ambatovaky and probably in Parc National de Masoala. This species is sometimes bred for commercial purposes outside Madagascar, and many specimens exchanged in the pet trade are captive bred. Captive breeding programmes and the CITES Appendix I status of this species have effectively halted commercial exploitation of it in Madagascar (if indeed this was ever a major threat), and any future trade in it needs to be well regulated. There is a well-managed captive breeding programme involving many US zoos, and it is now also kept in a zoo in Madagascar. Further taxonomic work is required to resolve confusion between this species and *D. guineti*. CITES Appendix I.
Taxonomy: The differences between this species and Dyscophus guineti are not clear.
Bibliography: Andreone, F. and Luiselli, L.M. (2003), Blommers-Schlösser, R.M.A. and Blanc, C.P. (1991), Glaw, F. and Vences, M. (1994), Guibé, J. (1978), Pintak, T. (1987), Raxworthy, C.J. and Nussbaum, R.A. (2000), Schmid, A.A. (1970)
Data Providers: Christopher Raxworthy, Miguel Vences, Franco Andreone, Ronald Nussbaum

Elachistocleis erythrogaster Kwet and Di-Bernardo, 1999

This species is restricted to the south-eastern border of the Planalto das Araucárias, Serra Geral, Rio Grande do Sul, Brazil, from 900-1,200m asl. It is uncommon but its population is apparently stable and it is regularly recorded. It occurs in subterranean habitats in open fields and breeds explosively in temporary ponds. The major threat to this species is habitat loss due to cattle ranching. It occurs in Parque Nacional da Serra Geral and Parque Nacional de Aparados da Serra, and also in the Pro-Mata (Protection of the Mata Atlântica in Minas Gerais (PROMATA/MG)) Reserve.
Bibliography: Kwet, A. and Di-Bernardo, M. (1998), Kwet, A. and Di-Bernardo, M. (1999), Kwet, A. and Sole, M. (2002)
Data Providers: Débora Silvano, Axel Kwet, Paulo Garcia

Glyphoglossus molossus Günther, 1868

This species is known from north-central Myanmar (Zug *et al.* 1998), through mainland Thailand (Taylor 1962), southern Lao People's Democratic Republic (Stuart 1999), and Cambodia (Bourret 1942), to southern Viet Nam, from southern Gai Lai Province to the Mekong River (Orlov *et al.* 2002). It is found up to 600m asl. It is locally common at breeding sites, but is otherwise a highly cryptic fossorial species, only occasionally seen on the forest floor (Zug *et al.* 1998). Large numbers are traded for consumption in rural markets, indicating either large populations, or intensive collection at limited breeding sites (Taylor 1962; P. van Dijk pers. comm.). It is an inhabitant of dipterocarp forest and other deciduous forest areas, and breeds in seasonal or temporary deep rain pools (Heyer 1973; Inger and Colwell 1977; Zug *et al.* 1998). This species is threatened by local consumption in substantial numbers in parts of Thailand and Lao People's Democratic Republic, where it is collected during breeding seasons. The females found in markets in Thailand are getting smaller, suggesting an adverse effect of collection on the species. It is apparently not greatly affected by forest degradation, but it is generally not commensal in human habitation or agricultural landscapes. It inhabits many protected areas in the region, and ensuring their integrity (particularly by preventing collection of frogs at breeding sites) should go a long way towards securing the conservation of this species. The effects of harvesting of non-protected populations should also be investigated.
Bibliography: Bourret, R. (1942), Heyer, W.R. (1973), Inger, R.F. and Colwell, R.K. (1977), Murphy, R.W. (n.d.), Orlov, N.L. *et al.* (2002), Stuart, B.L. (1999), Zug, G.R., Htun Win, Thin T., ThanZawMin, WinZawLhon, KyawKyaw (1998)
Data Providers: Peter Paul van Dijk, Tanya Chan-ard

Kalophrynus baluensis Kiew, 1984

This species has been found at several sites within Gunung Kinabalu National Park, from 1,300-1,800m asl, and at one site in the Crocker Range to the south, in western Sabah, Borneo. It is regarded as very common within Gunung Kinabalu National Park. It lives within the litter of montane forests (oak-chestnut), and is presumed to breed in small temporary pools on the forest floor and possibly in phytotelms (water-filled cavities in plants such as bromeliads). There are no major threats to this species. Both of the known regions where it occurs lie within protected areas, and continuation of rigorous management of the existing parks is the best guarantee for the conservation of this species.
Bibliography: Inger, R.F. and Stuebing, R.B. (1997), Malkmus, R. *et al.* (2002)
Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Kalophrynus nubicola Dring, 1984

This species is known only from Gunung Mulu National Park in Sarawak, Borneo. It has not been recorded in the heavily surveyed Gunung Kinabalu National Park, and probably does not occur in Sabah. It is restricted to altitudes above 1,500m asl. Nothing is known about its population status. It is known from montane forest and is presumed to breed in small, temporary forest pools. There are currently no major threats to this species. Although it is known only from Gunung Mulu National Park, it might occur in other montane forests in other parts of Sarawak and Kalimantan, so the continued maintenance of these forest habitats is essential.
Bibliography: Dring, J.C.M. (1984b)
Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Kalophrynus subterrestris Inger, 1966

This species is widely distributed throughout much of the lowland forest of Borneo, below 300m asl, and is likely to occur more widely than currently recorded. It is relatively abundant where it occurs. This is a lowland, tropical moist forest species, not found in modified habitats, and is presumed to breed in small pools of standing water on the forest floor. It is threatened by the loss of habitat as a result of clear-cutting of tropical forest. It has been recorded from Lanjak Entimau Wildlife Sanctuary.
Bibliography: Inger, R.F. (1966)
Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Kaloula kokacii Ross and Gonzales, 1992 — BICOL NARROW-MOUTHED FROG

This species is found on Catanduanes Island and on several mountains of the Bicol Peninsula, in the Philippines, from 200-300m asl. It is a common species. It inhabits lower altitude montane and lowland forests, where it is found in forest, along forest edges, and in secondary growth vegetation. This is a highly adaptable species that also occurs in modified habitats beside these forests. It lives and presumably breeds in water-filled tree-holes and hollows. The main threat to this species is continued destruction of lowland rainforest for agricultural development and human settlements. However, this species is adaptable and is probably not significantly threatened. A protected area needs to be established on the island of Catanduanes to protect this island's biodiversity.
Bibliography: Alcala, A.C. and Brown, W.C. (1985), Parker, H.W. (1934), Ross, C.A. and Gonzales, P.C. (1992)
Data Providers: Arvin Diesmos, Angel Alcala, Rafe Brown, Leticia Afuang, Genevieve Gee, Katie Hampson, Mae Leonida Diesmos, Aldrin Mallari, Perry Ong, Dondi Ubaldo, Baldwin Gutierrez

Kaloula mediolineata Smith, 1917

This species is known from mainland Thailand, adjoining southern Lao People's Democratic Republic (Taylor 1962; Stuart 1999), and Dac Lac Province in southern Viet Nam (Orlov 2002). It presumably occurs more widely than current records suggest. There is no reliable information available on the population status of this species. Large numbers in markets could indicate large populations, or intensive collection, or both. It has not been found during some recent herpetofauna surveys of areas where it was historically known to occur (P. van Dijk pers. comm.), suggesting a possible decline. It is known mostly from areas originally covered with deciduous dipterocarp forest, and has not been reported from agricultural areas. Breeding takes place in seasonal pools (Heyer 1973). The major threat to this species is intensive collection for local consumption, gravid females being preferred. Its habitat has also been extensively impacted by fire and other anthropogenic processes, or cleared completely for agricultural development and other land uses. It is known to occur in or near a number of protected areas, but several of these are not secure from the threats of uncontrolled fires and collecting of frogs for human consumption. Efforts are needed to secure these national parks and wildlife sanctuaries, and to manage the exploitation of populations of this species outside protected areas.
Bibliography: Heyer, W.R. (1973), Orlov, N.L. *et al.* (2002), Stuart, B.L. (1999), Taylor, E.H. (1962)
Data Providers: Peter Paul van Dijk, Tanya Chan-ard

Microhyla perparva Inger and Frogner, 1979

This species is endemic to eastern and central Borneo where it is known from scattered localities below 250m asl. It is likely to occur more widely than currently recorded. As the species is easy to find when it is breeding, it is presumed to be abundant. It occurs in primary lowland rainforest where adults live on the ground in the leaf-litter and breed in very small rain pools. The main threat to this species is deforestation through clear-cutting. It has been recorded from several protected areas.
Bibliography: Inger, R.F. and Stuebing, R.B. (1997)
Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Microhyla petrigena Inger and Frogner, 1979

This species occurs below 700m asl in central and north-eastern Borneo in Kalimantan (Indonesia), Sabah and Sarawak (Malaysia), and Brunei Darussalam. It also occurs on Tawitawi Island in the Sulu Archipelago of the Philippines, where a record of this species (Diesmos and Leong pers. comm.) was previously incorrectly assigned to *Microhyla annectens*. As the species is easy to find when it is breeding, it is presumed to be abundant. Adults occur in the litter of lowland primary rainforest, and breed in small, clear streams. The main threat to this species is deforestation through clear-cutting. It has been recorded from at least three protected areas including Lanjak Entimau Wildlife Sanctuary (Sarawak) and Batu Apoi National Park (Brunei).
Bibliography: Inger, R.F. and Stuebing, R.B. (1997), Malkmus, R. *et al.* (2002)
Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni, Arvin Diesmos, Leong Tzi Ming

Oreophryne jeffersoniana Dunn, 1928

This species is known only from the islands of Sumbawa, Rinca, Komodo, and the western part of Flores, in the Lesser Sunda Islands, Indonesia, below 600m asl. It is not an abundant species, but is still regularly recorded. It lives in bushes and trees in tropical dry forest and shrubland. Breeding is presumably by direct development, with the eggs being laid on the ground. Very little is known about threats to this species, but plans for introducing livestock to the area would be particularly detrimental. It occurs in Komodo National Park and perhaps other protected areas within its range.
Bibliography: Auffenberg, W. (1980), Iskandar, D.T. and Colijn, E. (2000)
Data Providers: Djoko Iskandar, Mumpuni

Ramanella montana (Jerdon, 1854)

This species is currently reported to be widely distributed throughout the Western Ghats of India. The type locality is Wayanad, and the species is only known with certainty from this site (S.D. Biju pers. comm.). It is rare and difficult to find. It inhabits low foliage, such as leaf sheaths of palms and tree fern fronds, in tropical moist forests. It breeds by larval development, and deposits its eggs in tree holes where the larvae develop. Breeding begins soon after the onset of monsoon rains. This species has been recorded from a cardamom plantation adjoining a forest reserve suggesting that it is tolerant of a degree of habitat modification, but presumably still requires trees for breeding. The major threat to it is conversion of areas of suitable forest habitat to agricultural land (including eucalyptus, coffee and tea plantations). It has only been recorded with certainty from Wayanad Wildlife Sanctuary in Kerala. Records from other protected areas, namely Indira Gandhi National Park and Kalakkad Wild Life Sanctuary (both in Tamil Nadu), Kudremukh National Park (in Karnataka), Bhimashankar Wild Life Sanctuary (in Maharashtra), and Purna Wild Life Sanctuary (in Gujarat), may refer either to this species or to congenerics. Further taxonomic studies are urgently needed to clarify its precise distribution and altitudinal range, and to resolve confusion with related species (current collections of it probably represent more than one species).
Taxonomy: The taxonomy of this species requires urgent attention as the collections of this species probably represent more than one taxon (S.D. Biju pers. comm.).
Bibliography: Biju, S.D. (2001), Chanda, S.K. and Deuti, K. (1997), Daniel, J.C. and Shull, E.M. (1963), Dutta, S.K. (1997), Krishna, S.N., Krishna, S.B. and Vijayalaxmi, K.K. (2004), Padhye, A.D. and Ghate, H.V. (2002), Vasudevan, K., Kumar, A. and Chellam, R. (2001)
Data Providers: S.D. Biju, Gajanan Dasaramji Bhuddhe, Sushil Dutta, Vivek Ashok Gour-Broome, Karthikeyan Vasudevan, Chelmala Srinivasulu, S.P. Vijayakumar

Ramanella obscura (Günther, 1864)

This species occurs in a number of isolated populations in the low country wet zone and the central hills of Sri Lanka, including Sinharaja Forest, Knuckles Range, and Namunukula and Udwattakele. It has an altitudinal range of

460-1,220m asl. It is a locally common species with a stable population. It is arboreal, terrestrial, and sub-fossorial, and mostly inhabits moist montane forest. Adults can be found in leaf-litter, under ground cover, in tree holes and crevices, and in water tanks. Larvae are found in stagnant waters. It can also be found in gardens, secondary forest and other lightly disturbed areas. The main threat to this species is agrochemical pollution of land and water. It has been recorded in a number of protected areas: the Knuckles Range, Namunukula Forest Reserve, Sinharaja World Heritage Site, the Royal Botanical Gardens, and Udawattakele Reserve Forest.
Bibliography: de Silva, A. and de Silva, P. (1994), Dutta, S.K. (1997), Dutta, S.K. and Manamendra-Arachchi, K. (1996), Heerath, N.D., Rathnayake, N.D. and Hewamathes, K.K. (2001), Kirtisinghe, P. (1957), Rathnayake, N.D. (2001), Rathnayake, N.D. and Weerasinghe, N. (2000)
Data Providers: Kelum Manamendra-Arachchi, Anslem de Silva

Scaphiophryne madagascariensis (Boulenger, 1882)

This species occurs on the central plateau of Madagascar from Ankaratra south to Andringitra, from 1,300-2,000m asl. It is locally common, but the extent of its habitat is somewhat limited. This is a fossorial species found in montane forests, savannahs and agricultural areas. Breeding takes place in large, temporary, and perhaps also some permanent, pools. The major threat to this species is considered to be the loss of suitable breeding habitats to agricultural activities, even though this is an adaptable species. Introduction of predatory fish into pools is also a significant threat. It occurs in Parc National d'Andringitra.
Taxonomy: The name Scaphiophryne madagascariensis applies to populations formerly included in S. pustulosa (Vences et al. 2002).
Bibliography: Blommers-Schlösser, R.M.A. and Blanc, C.P. (1991), Glaw, F. and Vences, M. (1994), Vences, M. *et al.* (2002a)
Data Providers: Christopher Raxworthy, Miguel Vences

MYOBATRACHIDAE

Geocrinia lutea (Main, 1963) — WALPOLE FROG

This Australian endemic is found in the south-west corner of Western Australia, near Walpole and in Nornalup National Park, from 0-300m asl. This is a common species that occurs at many sites within its restricted range. It is found in dense vegetation adjacent to streams, and also hides in wet forest litter on peaty sand. Males call from tunnels in hummocks of mud or clay covered with low matted vegetation, where females lay 25-30 eggs. The larvae undergo direct development and emerge after approximately 50 days. Too frequent fires can be a major threat to the species. However, most of its habitat is protected so it is not significantly threatened. Its habitat is protected within Walpole-Nornalup National Park and Mount Frankland National Park, and most of its range is within state forest. There are many new protected areas also being created in this region.
Bibliography: Barker, J., Grigg, G. and Tyler, M. (1995), Driscoll, D. and Roberts, J.D. (1997), Main, A.R. (1957), Main, A.R. (1965), Tyler, M.J., Smith, L.A. and Johnstone, R.E (1994)
Data Providers: Dale Roberts, Jean-Marc Hero

Pseudophryne bibronii Günther, 1859 — BIBRON'S TOADLET

This Australian endemic is found from the south-east corner of Queensland, along the east coast of New South Wales, and into central Victoria and South Australia (including Kangaroo Island), from 20-1,000m asl. It was considered to be the most common and widespread member of its genus, but populations have appeared to decline in some areas in recent years. This species is found in dry forest, woodland, shrubland and grassland, and shelters under leaf-litter and other debris in moist soaks and depressions. Calling is from February to August and frogs have been noted calling in temperatures of only 4°C. Between 70 and 200 large eggs are deposited terrestrially on damp leaf mould, in shallow nests or under stones and logs near water, and these hatch after rain floods the area and provides pools for larvae. Metamorphosis takes three to seven months. The major threat to this species is habitat loss due to transport infrastructure development and agriculture (including cultivation of crops and livestock rearing). Increasing water salinity is also a problem. However, the specific reasons for the many declines are not known. There are no conservation measures in place for this species, apart from its habitat being protected when it occurs in national parks and state forests. The causes of the recent declines need to be identified.
Bibliography: Barker, J., Grigg, G. and Tyler, M. (1995), Hero, J.-M., Littlejohn, M. and Marantelli, G. (1991), Pengilley, R.K. (1973)
Data Providers: Jean-Marc Hero, Graeme Gillespie, Frank Lemckert, Murray Littlejohn, Peter Robertson

Taudactylus liemi Ingram, 1980 — LIEM'S TINKER FROG

This Australian endemic occurs in the Eungella area of Queensland, west of Mackay, from Cathu State Forest in the north to Crediton in the south, from 180-1,250m asl. It is a common species and is commonly heard, but it is sparsely distributed and rarely seen. There have been no observed declines in the population. It is confined to rocky margins of fast-flowing creeks and seepages in montane rainforest in the Eungella area (Rettalick and Hero 1998). Males call from hidden positions. Eggs are laid under rocks in side pools, where the larvae complete their development. There are several potential threats to this species, but no evidence yet of them affecting populations. These threats are forest grazing and trampling of streamside vegetation by livestock, introduced cane toads (*Bufo marinus*) which could penetrate natural habitats via roads and use ponds for breeding, and the chytrid fungus (which has been found in some streams where this species occurs, but there is no evidence that it has infected this species so far). The species' habitat is protected within a national park. It is also listed as threatened in Queensland, and research and monitoring of populations is in place. Given the presence of the chytrid fungus, populations should be monitored carefully.
Bibliography: Barker, J., Grigg, G. and Tyler, M. (1995), Ingram, G.J. (1980), Retallick, R.W.R. and Hero, J.-M. (1998), Retallick, R.W.R., Hero, J.-M. and Alford, R.A. (1997)
Data Providers: Jean-Marc Hero, Ross Alford, Michael Cunningham, Keith McDonald, John Clarke, Richard Retallick

PELOBATIDAE

Pelobates cultripes (Cuvier, 1829) — WESTERN SPADEFOOT

This species is present in most of the Iberian Peninsula (except the northern area of the Peninsula and parts of central and northern Portugal), and southern France. There are also isolated populations in western France. It occurs from sea level (France and Spain) up to 1,770m asl (Spain). This species is generally common in suitable habitat. However, population declines have been observed in most of its range. The burrowing habits of this species generally restrict its distribution to areas with sandy or soft soils. It occurs in dunes, oak forest, scrub, cultivated land, and open areas, sometimes close to human habitation. In France it is largely restricted to coastal regions. It breeds in temporary pools and livestock ponds with thick vegetation that occasionally may be brackish. This species has a long larval development period, which makes it vulnerable to introduced predators and desiccation of ponds. In Iberia threats include the isolation of populations by agricultural intensification, destruction of wetland habitats (by urban development) and their pollution (with agrochemicals), and introduction of predatory Louisiana crayfish (*Procamabrus clarkii*) and fish (such as *Gambusia holbrooki*) to breeding areas. Mortality on roads, and tourism development, are causing localized declines in some populations. In France, tourism and wetland drainage are the principal threats to this species. Overall, the severity of the threats to this species appears to be increasing. It occurs in a number of protected areas, including several NATURA 2000 sites, and is listed on Appendix II of the Berne Convention and on Annex IV of the EU Natural Habitats Directive. It is protected by national legislation in Spain, and is listed in a number of national and subnational Red Data Books.
Bibliography: Alvarez, A. and Martin, L. (2000), Arnold, E.N. (2003), Blanco-Moreno, R., Campos-Sánchez, J. and Montes-Perálvarez, P. (1998), Busack, S.D. and Zug, G.R. (1976), Cei, J.M. and Crespo, E.G. (1971), Cejudo, D. (1990), Ferrand de Almeida, N. *et al.* (2001), García-París, M., Buchholtz, D. R. and Parra-Olea, G. (2003), Gasc, J.-P. *et al.* (eds.) (1997), Godinho, R. *et al.* (1999), Herrero, P. and Talavera, R.R. (1988), Lizana, M. and Marco, A. (2001), Lizana, M., Márquez, R. and Martín-Sánchez, R. (1994), Malkmus, R. (1996b), Malkmus, R. (2004), Martínez-Solano, I. and Bosch, J. (2001), Paulo, O. (1997), Pleguezuelos, J.M., Márquez, R. and Lizana, M. (2002), Reques, R. (2000)
Data Providers: Pedro Beja, Jaime Bosch, Miguel Tejedo, Miguel Lizana, Iñigo Martínez-Solano, Alfredo Salvador, Mario García-París, Ernesto Recuero Gil, Valentin Perez-Mellado, Carmen Diaz Paniagua, Marc Cheylan, Rafael Marquez, Philippe Geniez

PETROPEDETIDAE

Arthroleptella landdrosia Dawood and Channing, 2000 — LANDDROS MOSS FROG

This species is endemic to the Hottentots Holland and Kogelberg Mountains, South Africa, reaching the coast near Rooi Els and Betty's Bay. It occurs from sea level up to 1,600m asl. This species occurs in small, widely scattered populations. It inhabits fynbos heathland and does not survive in degraded areas. Breeding is by direct development, and eggs are laid in wet vegetation, such as mossy areas, near rivers, hillside or roadside seepages, and heavily vegetated streams. Even though its habitat is largely protected, the major threats to this species are the spread of alien species (in particular pines) and too frequent fires. Coastal populations are likely to be affected by urban development. However, these threats are believed to be relatively minor. Much of this species' range is protected in the Hottentots Holland and Kogelberg Nature Reserves.
Bibliography: Channing, A. (2001), Dawood, A. and Channing, A. (2000), Minter, L.R. *et al.* (2004)
Data Providers: Leslie Minter, Alan Channing, James Harrison

Arthroleptella lightfooti (Boulenger, 1910) — LIGHTFOOT'S MOSS FROG

This species is endemic to Table Mountain and to other mountains on the Cape Peninsula, South Africa, where it occurs from sea level up to 1,000m asl. It is moderately common. It is a species of fynbos heathland and forest that does not survive in degraded areas. Breeding is by direct development, with 5-12 eggs being laid in moss or similar vegetation in wet mossy areas near rivers, hillside or roadside seepages, and heavily vegetated streams. Even though its habitat is largely protected, the major threats to this species are the spread of alien species (in particular pines) and too frequent fires. Coastal populations are likely to be affected by urban and tourist development. However, these threats are believed to be relatively minor. Most of this species' range is in Cape Peninsula National Park and Kirstenbosch Botanic Gardens.
Bibliography: Channing, A. (2001), Channing, A., Hendricks, D. and Dawood, A. (1994), Minter, L.R. *et al.* (2004), Passmore, N.I. and Carruthers, V.C. (1995), Wager, V.A. (1986)
Data Providers: Leslie Minter, Alan Channing, James Harrison

Petropedetes cameronensis Reichenow, 1874

This species occurs from south-eastern Nigeria to south-western Cameroon, generally at low altitudes, and also on the island of Bioko (Equatorial Guinea). It is fairly common. It lives close to flowing water in closed-canopy lowland forest. The eggs are placed on moist rock surfaces close to streams, and the larvae develop on the rock surfaces in damp conditions. This is the most water-dependent member of the genus in Cameroon. It is threatened by the loss of forest habitat due to agricultural development, logging and expanding human settlements. This species occurs in Korup National Park.
Bibliography: Amiet, J.-L. (1973a), Amiet, J.-L. (1978b), Amiet, J.-L. (1989), Amiet, J.-L. (1991), Böhme, W. (1975), Herrmann, H.-W. *et al.* (2005), Joger, U. (1982), Lawson, D.P. (1993), Mertens, R. (1965), Perret, J.-L. (1966), Perret, J.-L. (1984), Schiøtz, A. (1963), Schiøtz, A. (1966)
Data Providers: Jean-Louis Amiet

Petropedetes johnstoni (Boulenger, 1888 "1887")

This species is known only from the lowland, coastal plain of south-western and southern Cameroon. It is a common species. It lives in lowland forest and mangrove forests, and can tolerate a limited degree of habitat disturbance. The males call in forest, often far from water, and guard a nest of eggs on large leaves a few centimetres above the ground. This species appears not to be water-dependent, and the larvae are presumably terrestrial. It is threatened by the loss of forest habitat due to agricultural development, logging and expanding human settlements. It occurs in Korup National Park, and possibly in a few other protected areas.
Bibliography: Amiet, J.-L. (1983b), Amiet, J.-L. (1991), Herrmann, H.-W. *et al.* (2005), Lawson, D.P. (1993), Parker, H.W. (1936), Perret, J.-L. (1984), Sanderson, I.T. (1936)
Data Providers: Jean-Louis Amiet

Petropedetes natator Boulenger, 1905

This species occurs in the hilly parts of West Africa in Sierra Leone, Liberia, Guinea, and Côte d'Ivoire, from near sea level up to 1,400m asl. Although it is patchily distributed, it is very abundant where it occurs, for example on the Freetown Peninsula in Sierra Leone. It is found only in forested hilly country, and lives in or near water, breeding in fast-flowing streams. The eggs are laid on land, and the larvae attach themselves by means of suckers to rocks in waterfalls and rapids. It is presumably threatened by the loss of forest habitat due to agricultural development, logging and expanding human settlements. In some places it is also adversely affected by mining activities, for example on the Simandou Range, and on Mount Nimba. It occurs in a few protected areas, including Mont Sangbe National Park in Côte d'Ivoire.
Taxonomy: J.L. Amiet (pers. comm.) and Perret (1984) suggest that this species does not belong in the genus Petropedetes.
Bibliography: Perret, J.-L. (1984), Rödel, M.-O. (2003), Rödel, M.-O. and Bangoura, M.A. (2004), Schiøtz, A. (1964a)
Data Providers: Mark-Oliver Rödel

Phrynobatrachus alleni Parker, 1936

This species ranges from Sierra Leone, through southern Guinea, Liberia, southern Côte d'Ivoire and southern Ghana to south-western Nigeria. It has not been recorded from Togo and Benin, and its absence from these countries might be genuine, owing to lack of suitable habitat. It is a very common species in suitable habitats. It inhabits primary lowland rainforest, and can survive in small forest fragments, though at lower population densities (and it might

not be able to persist for long in such situations). Breeding takes place in very small temporary puddles. The major threat to this species is the loss of forest habitat due to agricultural development, logging and expanding human settlements. It probably occurs in all of the forested protected areas within its range.

Bibliography: Guibé, J. and Lamotte, M. (1963), Hughes, B. (1988), Rödel, M.-O. (2000b), Rödel, M.-O. (2003), Rödel, M.-O. *et al.* (2005), Rödel, M.-O. and Bangoura, M.A. (2004), Rödel, M.-O. and Branch, W.R. (2002), Rödel, M.-O. and Ernst, R. (2002a), Rödel, M.-O. and Ernst, R. (2003), Schiøtz, A. (1963), Schiøtz, A. (1964a)

Data Providers: Mark-Oliver Rödel, Arne Schiøtz

Phrynobatrachus guineensis Guibé and Lamotte, 1962

This species occurs in the western Upper Guinea forest zone of West Africa, in Sierra Leone, southern Guinea, Liberia, and western Côte d'Ivoire, up to approximately 1,000m asl. It is a common species in suitable habitats. It is restricted to the drier parts of primary rainforest, where it is an arboreal species usually found low in the trees. It breeds by larval development in tree holes, and also in empty nuts, snail shells, and other tiny waterbodies. Eggs are attached to the bark of the tree or the top of a shell or similar, above the water, and they then hatch four to five days later and the larvae drop into the water below where they complete their development. This species is adversely affected by the loss of forest habitat due to agricultural development, logging and expanding human settlements. Some populations might also be affected by mining activities. It occurs in Taï National Park (Côte d'Ivoire) and the Mount Nimba World Heritage Site (Guinea, Liberia, Côte d'Ivoire).

Taxonomy: This form consists of two separate species (M.-O. Rödel pers. comm.).

Bibliography: Guibé, J. and Lamotte, M. (1961), Guibé, J. and Lamotte, M. (1963), Lamotte, M. (1971), Rödel, M.-O. (1998), Rödel, M.-O. (2000b), Rödel, M.-O. and Branch, W.R. (2002), Rödel, M.-O. and Ernst, R. (2002a), Rödel, M.-O. and Ernst, R. (2002b), Rudolf, V.H.W. and Rödel, M.-O. (2005), Schiøtz, A. (1964a), Schiøtz, A. (1964b)

Data Providers: Mark-Oliver Rödel, Arne Schiøtz

Phrynobatrachus liberiensis (Barbour and Loveridge, 1927)

This species is confined to the upper Guinea forest zone of West Africa in Sierra Leone, southern Guinea, Liberia, Côte d'Ivoire and south-western Ghana. It probably occurs up to at least 1,000m asl, and perhaps even higher. It is a very common species in suitable habitats. It is found only in forest, mostly in primary but sometimes also in secondary forest, and is usually associated with swampy areas, breeding in small forest streams. It is adversely affected by the loss of forest habitat due to agricultural development, logging and expanding human settlements. Some populations might also be affected by mining activities. It occurs in Taï National Park (Côte d'Ivoire), the Mount Nimba World Heritage Site (Guinea, Liberia, Côte d'Ivoire), Kakoum National Park (Ghana), and in several other protected areas.

Taxonomy: This species is sometimes included in the genus Cardioglossa in the family Arthroleptidae, but it apparently belongs in the genus Phrynobatrachus in the family Petropeditidae (M.-O. Rödel pers. comm.).

Bibliography: Guibé, J. and Lamotte, M. (1963), Rödel, M.-O. (2000b), Rödel, M.-O. (2003), Rödel, M.-O. *et al.* (2005), Rödel, M.-O. and Bangoura, M.A. (2004), Rödel, M.-O. and Branch, W.R. (2002), Rödel, M.-O. and Ernst, R. (2002a), Rödel, M.-O. and Ernst, R. (2003), Schiøtz, A. (1964a), Schiøtz, A. (1964b)

Data Providers: Mark-Oliver Rödel, Arne Schiøtz

Phrynobatrachus phyllophilus Rödel and Ernst, 2002

This species ranges from central Sierra Leone, through Liberia and southern Guinea, to south-western Côte d'Ivoire. It probably occurs up to at least 1,000m asl, and perhaps even higher. It is a very common species, more so than *Phrynobatrachus guineensis* with which it has been confused. It lives in swampy parts of primary rainforest, and does not survive in secondary habitats. It deposits its eggs terrestrially close to water, and the larvae develop in extremely small puddles. It is adversely affected by the loss of forest habitat due to agricultural development, logging and expanding human settlements. Some populations might also be affected by mining activities. It occurs in several protected areas, including Taï National Park and Mont Péko National Park (Côte d'Ivoire), and Mount Nimba World Heritage Site (Guinea, Liberia, Côte d'Ivoire).

Bibliography: Rödel, M.-O. and Bangoura, M.A. (2004), Rödel, M.-O. and Ernst, R. (2002a), Rödel, M.-O. and Ernst, R. (2003)

Data Providers: Mark-Oliver Rödel

Poyntonia paludicola Channing and Boycott, 1989

This species occurs only in the southern part of the Hottentots Holland and Kogelberg Mountains complex, and the Klein River Mountains, in the south-western part of Western Cape Province, South Africa, from 200-1,800m asl. It is a common species. It inhabits mountain fynbos heathland, and is restricted to areas with high rainfall (2,000-3,000mm of rain per year). It breeds in shallow streams and seepages. The main threats to this species are the spread of alien species (pines in particular), afforestation, construction of dams, and too frequent fires. However, these threats are believed to be relatively minor. All populations recorded to date have been found in protected areas.

Bibliography: Channing, A. (2001), Channing, A. and Boycott, R.C. (1989), Minter, L.R. *et al.* (2004)

Data Providers: Leslie Minter, Alan Channing, James Harrison

PIPIDAE

Xenopus amieti VOLCANO CLAWED FROG
Kobel, du Pasquier, Fischberg and Gloor, 1980

This species is known only from highland areas of western Cameroon, in particular from Mount Manenguba and the Bamileke and Bamenda Plateaus. Specific localities include Mount Manenguba (1,900m asl), the Mifi-Noun River near Galim (1,100m asl), Mbouda (1,400m asl), Tadu (near Mount Oku), Ber, Nkoutoupi, Nchoupa, and Bangourain. It is probable that specimens from Manengole (600-700m asl) and Bangwa (1,400-1,500m asl) belong to this species. It is a poorly known species, but it has been found to be abundant at least on Mount Manenguba and at Galim. It is probably generally abundant in the Cameroonian highlands. It is water-dependent and has been found in a shallow crater lake overgrown with grass, in a swamp, and in artificial fishponds, generally in areas of montane grassland and pastureland. It breeds in still water, and migrates for short distances over land outside the breeding season. It is harvested locally, and some of its habitats might be under threat from expanding agriculture, overgrazing by livestock, and human settlements. However, it does appear to be capable of colonising artificial habitats, and it can co-exist with at least some introduced fish species. It is not known to occur in any protected areas.

Taxonomy: This species is a tetraploid species (Kobel et al. 1980).

Bibliography: Amiet, J.-L. (1975), Böhme, W. and Schneider, B. (1987), Joger, U. (1982), Kobel, H.R. *et al.* (1980), Kobel, H.R., Barundun, B. and Thiebaud, C.H. (1998), Loumont, C. and Kobel, H.R. (1991), Mann, M. *et al.* (1982), Tinsley, R.C. and Kobel, H.R. (1996)

Data Providers: Richard Tinsley, John Measey

RANIDAE

Amolops chapaensis (Bourret, 1937)

This species is known from Hekou and Luchun Counties in south Yunnan Province, China (where Zhao and Adler (1993) referred to it under its *Amolops macrorhynchus* synonym), from Sa Pa in extreme northern Viet Nam (Bourret 1942), and from the extreme northern Annamite Mountains (S. Swan pers. comm.) of Viet Nam. It is likely that this species occurs more widely than current records suggest. It has been recorded from 800-1,700m asl. In China this species is considered to be rare, but in Viet Nam it has been observed to be abundant during the breeding season (S. Swan pers. comm.). It is found in clear, swift-moving streams, and on the ground in closed-canopy primary forest up to four metres from water. It inhabits waterfalls during breeding. The integrity of the type locality, Sa Pa, is under some threat from forest clearance and tourist infrastructure development (BirdLife International 2001). Within its range in China there is very little habitat destruction and degradation, which is now only taking place in the reserve buffer zones. Its range includes three protected areas in Viet Nam, and in China it occurs in Huangliangshan and Daweishan National Nature Reserves. Ensuring that socio-economic and tourist developments at Sa Pa do not impact the ecological viability of the area would be a primary conservation objective.

Taxonomy: This species was placed in the genus Amolops by Dubois (1986).

Bibliography: Birdlife International (2001), Bourret, R. (1942), Dubois, A. (1987), Dubois, A. (1992), MacKinnon, J. *et al.* (1996), Ohler, A. *et al.* (2000), Yang, D.-T. (1991b)

Data Providers: Peter Paul van Dijk, Nguyen Quang Truong, Annemarie Ohler, Lu Shunqing, Yang Datong

Amolops cremnobatus Inger and Kottelat, 1998

This species is known from three localities in north-central Lao People's Democratic Republic (Inger and Kottelat 1998; B. Stuart pers. comm.), and from four localities in Viet Nam: Huong Son in Ha Tinh Province, Cha Lo in Quang Binh Province, and Pu Hoat and Pu Mat, both in Nghe An Province. It has been recorded from 200-1,300m asl. It is common in suitable habitat. It lives on boulders and rock faces along stream cascades and waterfalls in evergreen forest and tolerates some degree of habitat disturbance (Inger and Kottelat 1998; Stuart 1999). This is a stream-breeding species that might be threatened by habitat loss due to logging and infrastructure development, but is particularly sensitive to changes in water quality and flow. The range of this species in Viet Nam includes Nakai-Nam Theun National Biodiversity Conservation Area.

Bibliography: Inger, R.F. and Kottelat, M. (1998), Stuart, B.L. (1999)

Data Providers: Nguyen Quang Truong, Raoul Bain, Bryan Stuart

Amolops hongkongensis (Pope and Romer, 1951)

This species is known from coastal southern China including Fujian, Guangdong and Hong Kong, from 150-700m asl, though it probably occurs more widely. It is a common species. It is an inhabitant of forest-fringed, small hill streams, particularly those with cascades. The major threats to this species are habitat destruction and degradation caused by agriculture, clear cutting, and the construction of hydroelectric plants. Most of the range of the Hong Kong population is within protected areas, and it is also protected in Hong Kong under the Wild Animals Protection Ordinance. At least one population in mainland China occurs in Neilingdinghu Nature Reserve.

Taxonomy: Amolops daiyunensis is considered a synonym here following the taxonomy of Yang (1991a), rather than Fei (1999).

Bibliography: Fei, L. *et al.* (1999), Karsen, S.J., Lau, M.W.-N. and Bogadek, A. (1998), Lau, M.W.N. (1997), Lau, M.W.N. (1998), MacKinnon, J. *et al.* (1996), Yang, D.-T. (1991a)

Data Providers: Geng Baorong, Bosco Chan

Amolops lifanensis (Liu, 1945)

This species is confined to Li County and Maoxian County, and might also occur in Wenchuan County, in central Sichuan Province, China, from 1,300-2,350m asl. It is a common species with a stable population within its small range. It lives in and along streams in forests, and breeds in streams. This species is locally threatened by dam construction. Part of its range might fall within Wolong Biosphere Reserve.

Bibliography: Fei, L. *et al.* (1999), Liu, C.C. (1950), MacKinnon, J. *et al.* (1996)

Data Providers: Fei Liang, Li Cheng

Amolops viridimaculatus (Jiang, 1983)

This species is known from western Yunnan Province in the Gaoligongshan area, and Wuliangshan in central Yunnan Province, China, and from one location (Fan Si Pan Mountain) in northern Viet Nam (Ohler 2000). It has also recently been recorded from Dzuna, in Nagaland, India. It is also likely to occur in Myanmar but there are as yet no confirmed records. It is likely to occur a little more widely than current records suggest. In China it has been recorded from 1,400-2,350m asl, and the one known locality in Viet Nam is at 1,750m asl. In China this species is uncommon, while in Viet Nam only one specimen was collected in 1997 and no other individuals were sighted at the time (S. Swan pers. comm.). In China this species is known from hill streams in forest, and in Viet Nam the only record is from a large stream with boulders in montane forest. Breeding takes place in streams. This species is threatened by small-scale agricultural development, and dam construction. In China this species occurs in Gaoligongshan National Nature Reserve (which is not well protected), and Wuliangshan National Nature Reserve (which is well protected). In Viet Nam it occurs in Hoang Lien Son National Park. It is protected by national legislation in India.

Bibliography: Ao, J.M., Bordoloi, S. and Ohler, A. (2003), Fei, L. *et al.* (1999), MacKinnon, J. *et al.* (1996), Ohler, A. *et al.* (2000), Yang, D.-T. (1991a)

Data Providers: Annemarie Ohler, Steven Swan, Lu Shunqing, Yang Datong

Chaparana quadranus (Liu, Hu and Yang, 1960)

This species is endemic to central China, and has been recorded from 500-2,000m asl. It is a common species although some populations have experienced declines. It is an inhabitant of forest and shrubland, and breeds in hill streams by larval development. The most important threat to this species is over-collecting for food, although water pollution caused by the mining industry is also a threat. There are many protected areas within the range of this species. It is necessary to ensure that the offtake of this species from the wild is managed sustainably.

Bibliography: Chen, B. *et al.* (1991), Fei, L. *et al.* (1999), Liu, C.-C., Hu, S.-Q. and Yang, F.H. (1960), MacKinnon, J. *et al.* (1996), Ye, C.-Y, Fei, L. and Hu, S.Q. (1993)

Data Providers: Li Pipeng, Zhao Wenge

Lanzarana largeni (Lanza, 1978)

This species is endemic to Somalia. Most records are from the south of the country in Bakool and Bay Provinces. It has also been recorded near the coast, north of Mogadishu, at Bud Bud in Galguduud Province, and near Garoowe

in Nugaal Province. Recorded localities are the general vicinity of Garoowe, Bud Bud, El Ure (Uegit), Sciù Manàs (Baidoa), Dinsor, Rahole, Afgoi, and Showli Berdi (Bardera). It has been recorded up to 500m asl. It is a fairly common species. Its habitat preferences when it is not breeding are not well known, though it is presumably a species of dry savannahs and semi-arid habitats. It breeds in temporary pools and small reservoirs. There is little information on threats to this species. It might be affected by livestock grazing, and perhaps fire and droughts, but otherwise it does not appear to be significantly threatened at present. It does not occur in any protected areas.

Bibliography: Lanza, B. (1978), Lanza, B. (1981), Lanza, B. (1990)

Data Providers: Emilio Balletto, Benedetto Lanza, Annamaria Nistri

Limnonectes asperatus (Inger, Boeadi and Taufik, 1996)

This species has been found only in central and southern Kalimantan in Borneo, Indonesia, below 300m asl. It is likely to occur more widely than current records suggest. There is no information on its population status. It is known only from the floor of lowland rainforests, where it is associated with slow-flowing streams in which it is likely to breed by larval development. The major threat to this species is habitat loss due to logging. It has not been recorded from any protected areas. Effective preservation of lowland forest in Kalimantan is essential for the conservation of this species.

Bibliography: Inger, R.F., Boeadi and Taufik, A. (1996)

Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Limnonectes blythii (Boulenger, 1920) BLYTH'S RIVER FROG

This species ranges widely in south-east Asia, from Viet Nam and the Lao People's Democratic Republic, to Thailand and Peninsular Malaysia, Singapore and Sumatra, the Anambas Islands and the Natuna Islands (Indonesia). It is also present on the islands of Phuket, Langkawi, Penang and Tioman. It has not been recorded from the Cardamom Mountains in Cambodia. It occurs up to 1,200m asl. The population status of this species is locally variable, ranging from uncommon in western Thailand to very common in areas where harvesting does not occur in Peninsular Malaysia. It is generally less common in easily accessible areas near human habitation than in similar inaccessible areas, indicative of depleted populations due to harvesting. Cessation of harvesting leads to population recovery in five to 10 years (P. van Dijk pers. comm.). It inhabits streams with gravel and boulders in primary and secondary evergreen forest. Males build a nesting hollow in a sandy streambed area, and the larvae develop in streams. The major threat to this species is intensive collection for consumption at subsistence levels, and for local, national and international trade. Some populations have also probably been eliminated locally due to forest clearance. This species inhabits a great number of protected areas throughout much of its range, and is protected by the Wild Animals Reservation and Protection Act (WARPA), 1992, in Thailand. There is a need to ensure that the harvesting of this species from the wild is managed in a sustainable manner (this species could benefit from commercial farming). Clarification of the taxonomy of the *blythii* complex is necessary to identify cryptic species of conservation concern.

Taxonomy: This form is undoubtedly a complex of many species.

Bibliography: Boulenger, G.A. (1920), Dring, J.C.M. (1979), Frith, D.W. (1977), Inger, R.F. (1966), Inger, R.F. and Stuebing, R.B. (1997), Inger, R.F., Orlov, N. and Darevsky, I.S. (1999), Iskandar, D.T. and Prasetyo, A.H. (1996), Iskandar, D.T. and Setyantyo, D.Y. (1996), Kiew, B.H. (1978), Kiew, B.H. (1984c), Leong, T.M. (2000), Leong, T.M. and Lim, K.K.P. (2003), Leong, T.M., Grismer, L. and Mumpuni (2002), Lim, K.P. and Lim, F.L.K. (1992), Orlov, N.L. (1997a), Smith, M.A. (1930), Stuart, B.L. (1999), Taylor, E.H. (1962)

Data Providers: Peter Paul van Dijk, Djoko Iskandar

Limnonectes dammermani (Mertens, 1927)

This species is known only from Lombok, Sumbawa and Flores in the Lesser Sunda Islands, Indonesia, where it occurs up to at least 1,200m asl. There is little recent information on this species generally due to the lack of research in the area over the last 30 years. It probably occurs more widely than current records suggest. It is believed to be a common species. It is thought to live near forested streams like other members of the genus, and the larvae presumably develop in streams. There is no information available on threats to this species, although forest loss might be a problem. It presumably lives in Gunung Rinjani Nature Reserve on Lombok, but there is probably less protection for the populations on Sumbawa and Flores. Surveys are needed to collect up-to-date information regarding the species' range, population status, habitat requirements, and threats.

Bibliography: Iskandar, D.T. and Colijn, E. (2000)

Data Providers: Djoko Iskandar, Mumpuni

Limnonectes ibanorum (Inger, 1964)

This species is known only from the central hilly regions of Borneo, below 500m asl. It is likely to occur more widely than currently recorded. It is considered to be locally abundant. A density of 20-60 individuals per 600m of stream length was estimated at one site in Sarawak surveyed in 1962-63. It is known only from the banks of clear, rocky streams in hilly lowland primary rainforest. Juveniles and adults do not disperse from the immediate vicinity of such streams and the larvae develop in pools along those streams. The main threat to this species is deforestation arising from clear-cutting. As it is quite large, local people often hunt this species for food, and its long life cycle and small clutch size make it particularly vulnerable to overharvesting. It is present in at least three protected areas, although more effective protection of areas of hilly, lowland rainforest in Sarawak and Kalimantan is needed.

Bibliography: Inger, R.F. and Greenberg, B. (1966), Inger, R.F. and Stuebing, R.B. (1997)

Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Limnonectes ingeri (Kiew, 1978)

This species has been found at a number of scattered locations in the northern half of Borneo, below 300m asl. It is likely to occur a little more widely than current records suggest. Its overall population status is unknown, but a density of 20-50 individuals per 600m of rainforest stream was estimated at one site surveyed. It is usually seen along slow-flowing, sandy-bottomed or slightly silty streams in primary or disturbed lowland rainforest. It sometimes also occurs in swampy areas. Adults feed on large prey, including other frogs and small reptiles. Larvae develop in quiet side pools of streams. This species is probably being seriously affected by the extensive logging that is taking place within much of its range. Localized over-harvesting for food might also be impacting some populations. The species has been recorded from Danum Valley National Park. Survival of this species will depend on the preservation of areas of lowland rainforest.

Bibliography: Inger, R.F. and Stuebing, R.B. (1997)

Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Limnonectes macrocephalus (Inger, 1954) LUZON FANGED FROG

This species has been recorded from many localities on Luzon, Catanduanes, Marinduque and Polillo Islands, in the northern Philippines. It is common in appropriate habitats, but has declined in places due to over-harvesting. This species inhabits streams and rivers in lower montane and lowland forests, and is also found in forest edge and agricultural areas near intact natural forests. The major threats to this species include habitat loss, due to expanding agriculture, logging and human settlements, and the pollution of streams and rivers. Harvesting by local people is also a threat. The range of this species includes a few protected areas. Conservation measures must include the regulation and proper disposal of pesticides and herbicides, and the protection of the remaining rainforest, especially riverine habitats and gallery forests. Levels of human exploitation of this species need to be investigated to determine if harvesting from the wild needs to be managed more sustainably.

Bibliography: Alcala, A.C. and Brown, W.C. (1985), Dubois, A. (1992), Emerson, S.E., Inger, R.F. and Iskandar, D. (2000), Frost, D.R. (1985), Inger, R.F. (1966), Inger, R.F. (1999)

Data Providers: Arvin Diesmos, Angel Alcala, Rafe Brown, Leticia Afuang, Genevieve Gee, Katie Hampson, Mae Leonida Diesmos, Aldrin Mallari, Perry Ong, Marisol Pedregosa, Dondi Ubaldo, Baldwin Gutierrez

Limnonectes magnus (Stejneger, 1909) MINDANAO FANGED FROG

This species complex is found on Mindanao, Basilan, Bohol, Camiguin, Samar and Leyte Islands in the Philippines, from 1,200-1,800m asl, as well as on Sulawesi, Indonesia. It is common to very common where its habitat remains intact, although some populations are in decline because of over-exploitation. It inhabits undisturbed and disturbed streams and rivers in lower montane and lowland forests. It breeds and deposits egg clutches in quiet side pools of forested riverine habitats. On Sulawesi, the major threat to the populations of this species is human exploitation for both local consumption and international trade. In the Philippines, threats include habitat loss due to agriculture and logging, and pollution of streams and rivers from agricultural pesticides, herbicides, and mine-tailings, as well as harvesting for human subsistence and for international export. The range of this species includes a few protected areas. It apparently coexists parapatrically with its sibling species in Lore Lindu National Park, and it extends to Poso and Tanah Toraja. Conservation measures for this species must include the protection of remaining rainforest, especially riverine habitats and gallery forests. Levels of human exploitation need to be investigated to determine if this needs to be managed more sustainably.

Taxonomy: The use of the name Limnonectes magnus as applied to both Philippine and Sulawesi taxa is a taxonomic arrangement in need of revision. The Sulawesi populations referred to this species have already been shown to be distinct species based on molecular analysis, but have not yet been named.

Bibliography: Alcala, A.C. and Brown, W.C. (1985), Dubois, A. (1992), Emerson, S.E., Inger, R.F. and Iskandar, D. (2000), Frost, D.R. (1985), Inger, R.F. (1966), Inger, R.F. (1999)

Data Providers: Arvin Diesmos, Angel Alcala, Rafe Brown, Leticia Afuang, Genevieve Gee, Djoko Iskandar

Limnonectes malesianus (Kiew, 1984) MALESIAN FROG

This species is known from extreme southern Peninsular Thailand, peninsular Malaysia (and Sarawak) and Singapore to Indonesia (including Sumatra and Kalimantan), up to 150m asl. It is likely to occur a little more widely than current records suggest. It is generally not rare, but it is also not an abundant frog (Lim and Lim 1992); it is considered rare in Thailand. It inhabits shallow, gentle streams and nearby swampy areas including peat swamps, very flat alluvial forests (both primary forest and mature secondary growth), and overgrown plantations. The eggs are laid in sandy streambeds but no nest is constructed (Kiew 1984c). The major threat to this species is deforestation. It is also collected for subsistence use and trade (Lim and Lim 1992; P. van Dijk pers. comm.), but most collection pressure is deflected from it by the sympatric occurrence of the larger and more common *Limnonectes blythii*. It occurs in several protected areas, although more effective conservation of peat swamps and low alluvial rainforests is needed.

Taxonomy: This species was previously hidden within the Limnonectes blythii-macrodon complex.

Bibliography: Inger, R.F. and Stuebing, R.B. (1997), Kiew, B.H. (1984c), Kiew, B.H. (1990), Leong, T.M. (2000), Leong, T.M. (2001b), Lim, K.P. and Lim, F.L.K. (1992), Manthey, U. and Grossmann, W. (1997)

Data Providers: Peter Paul van Dijk, Djoko Iskandar, Robert Inger

Limnonectes paramacrodon (Inger, 1966)

This species is known from scattered localities in Peninsular Malaysia (Berry 1975; Dring 1979) and Borneo, and it has been recorded from Singapore (Lim and Lim 1992), southern Thailand (T. Chan-ard pers. comm.) and Natuna Besar and Sumatra, Indonesia. It probably occurs more widely than current records suggest. It occurs at altitudes below 200m asl. There is no information on its population status. It generally inhabits lowland swamp forest areas with small rivers and streams. Adults are found along clay and gravel stream banks, and breeding takes place in these streams. It appears to be able to tolerate selective logging, but does not adapt to more heavily modified habitats. The principal threats to this species are destruction of forests through clear-cutting, conversion to non-timber plantations, urbanization, fire and water extraction. It is present in protected areas in Borneo and the Malay Peninsula (such as Pasoh Forest Reserve and Tasek Bera). Effective preservation of the remaining lowland swamp forest is the main conservation measure recommended for this species.

Bibliography: Berry, P.Y. (1975), Dring, J.C.M. (1979), Inger, R.F. and Stuebing, R.B. (1997), Leong, T.M., Grismer, L. and Mumpuni (2002), Lim, K.P. and Lim, F.L.K. (1992), OEPP - Office of Environmental Planning and Policy [of Thailand] (1997)

Data Providers: Peter Paul van Dijk, Djoko Iskandar, Robert Inger, Norsham Yaakob, Leong Tzi Ming, Yodchaiy Chuaynkern

Limnonectes rhacoda (Inger, Boeadi and Taufik, 1996)

This species has been seen at localities in northern and central Kalimantan, Borneo. It is likely to occur more widely than current records suggest. Its altitudinal range is unclear, but it is believed that this species only occurs below 500m asl. There is no information on the current population status of this species. It lives in primary lowland rainforest. Very little is known of the ecology of this species, although it is known to have a very small clutch size, and it presumably breeds by larval development in water. The greatest threat to this species is presumably deforestation. It is present in Kayanmantran Protected Area. More effective preservation of areas of lowland rainforest in Kalimantan is essential for the conservation of this species.

Bibliography: Inger, R.F., Boeadi and Taufik, A. (1996)

Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Limnonectes tweediei (Smith, 1935)

This species is known from Kedah, Perak, Selangor, Trengganu and Pahang States in Peninsular Malaysia, from 200-900m asl (Dring 1979; Berry 1975; Y. Norsham pers. comm.). A population occurring in one tributary in western Sumatra, Indonesia, has been provisionally assigned to this species. Its reported occurrence on Tioman Island, Malaysia, was probably based on a misidentification (Leong Tzi Ming pers. comm.). In appropriate habitat in Malaysia this species is fairly common. In Sumatra it is considered to be rare. This species is known from muddy pools in rainforest near small streams and seepages in which it makes holes for breeding. It appears not to occur in disturbed areas. The most likely significant threats to this species are pollution, and extensive habitat degradation through clear cutting and conversion of forest to plantations. It occurs in Templer's Park and a number of forest reserves and watershed protection areas (Berry 1975; P. van Dijk pers. comm.; D. Iskandar pers. comm.), but no population appears to be entirely secure. Surveys of existing protected areas might be appropriate, as would improved protection measures to safeguard the ecological integrity of Templer's Park and the Gombak Valley in Malaysia and Lembah Anai Natural Reserve in Sumatra.

Taxonomy: This species is considered by Kiew (1975) to be a synonym of Rana nitida.

Bibliography: Berry, P.Y. (1975), Dring, J.C.M. (1979), Grandison, A.C.G. (1972a), Iskandar, D.T. and Setyantyo, D.Y. (1996), Kiew, B.H. (1975), Leong, T.M. and Norsham, Y. (2002)

Data Providers: Norsham Yaakob, Leong Tzi Ming, Djoko Iskandar

Meristogenys kinabaluensis (Inger, 1966)

This species is known only from mountainous areas of northern Borneo, in Sabah and north-eastern Sarawak (Malaysia), and north-eastern Kalimantan (Indonesia), from 750-1,700m asl. It is a locally abundant species. It has been found only in submontane and montane forests, where it breeds in small, clear, rocky streams. The larvae cling to the rocks in strong currents and probably feed on lithophytic algae. It does not adapt to modified habitats. The major threat to this species' habitat is clear-cutting. It has been recorded from the protected areas of Gunung Kinabalu National Park, Gunung Mulu and the Crocker Range.

Bibliography: Inger, R.F. and Stuebing, R.B. (1997), Malkmus, R. *et al.* (2002)

Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Meristogenys phaeomerus (Inger and Gritis, 1983)

This species is known from central Sarawak and adjacent Kalimantan, Borneo, below 300m asl. It is likely to occur a little more widely than current records suggest. It is a locally abundant species. It lives in hilly lowland rainforest and breeds along small, clear, rocky streams. Larvae cling to the rocks in strong currents and feed on lithophytic algae. It appears to be unable to adapt to modified habitats. The principal threat to this species is habitat loss due to clear-cutting. This species has been recorded from several protected areas, but more effective protection of lowland rainforest is needed.

Bibliography: Inger, R.F. and Gritis, P.A. (1983), Inger, R.F. and Stuebing, R.B. (1997)

Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Meristogenys poecilus (Inger and Gritis, 1983)

This species is known from central Sarawak (Malaysia) and central Kalimantan (Indonesia), Borneo. It probably occurs more widely than current records suggest. It is a locally abundant species. It lives in hilly lowland rainforest and breeds along small, clear, rocky streams. Larvae cling to the rocks in strong currents and feed on lithophytic algae. The principal threat to this species is habitat loss due to clear-cutting. It has been recorded from Lanjak Entimau Wildlife Sanctuary and Betung-Kerikum National Park. More effective protection of large areas of rainforest is needed.

Bibliography: Inger, R.F. and Gritis, P.A. (1983)

Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Meristogenys whiteheadi (Boulenger, 1887)

This species is known only from western Sabah (Malaysia) and north-eastern Kalimantan (Indonesia), Borneo, below 1,300m asl. The population status of this species is unknown. It has been found only in hilly rainforests. Breeding occurs in clear, rocky streams, and larvae cling to the rocks in strong currents and feed on lithophytic algae. The principal threat to this species is habitat loss due to clear-cutting. It has been recorded from the protected areas of Gunung Kinabalu, the Crocker Range and Kayanmantaran National Park.

Bibliography: Inger, R.F. and Stuebing, R.B. (1997), Malkmus, R. *et al.* (2002)

Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Micrixalus fuscus (Boulenger, 1882)

This is a species complex endemic to the southern Western Ghats of India, where it occurs from 200-1,000m asl. It is common. This species complex is associated with hill streams and riparian habitats in moist tropical evergreen forest, and is commonly found at the forest edge, but not outside the forest. Breeding takes place in streams. The major threats to its habitat are the conversion of forest to cultivated areas (including coffee and tea plantations), subsistence harvesting of wood and timber, modification of waterways (through dam construction), and infrastructure development. This species complex has been recorded from many protected areas and is protected by national legislation. Given that this is a species complex further research is required to resolve its taxonomy.

Taxonomy: This form is a complex of more than one species. Myers (1942b) described Micrixalus herrei, which was subsequently synonymized with this species by Inger et al. (1984). It is possible that M. herrei is a valid species within the M. fuscus complex (S.D. Biju pers. comm.).

Bibliography: Biju, S.D. (2001), Boulenger, G.A. (1882a), Dutta, S.K. (1997), Inger, R.F. *et al.* (1984), Myers, G.S. (1942b), Ravichandran, M.S. (1996a)

Data Providers: S.D. Biju, Sushil Dutta, Karthikeyan Vasudevan, S.P. Vijayakumar, M.S. Ravichandran

Nanorana pleskei Günther, 1896

This species is known from Qinghai, Gansu and Sichuan Provinces in China, from 3,300-4,500m asl. Specimens originally reported from Pakistan and the Kashmir region have been allocated to other taxa. It is thought to be quite common, although one population has undergone a decline over the past five years in apparently suitable habitat. It lives and breeds in alpine marshes, pools, ponds and streams in open high-altitude habitats. A major threat to this species is habitat destruction and degradation caused by over-grazing by livestock. The reasons for the recent rapid decline of one population in an apparently suitable habitat are not known. Climate change might be a factor and can be considered a threat now and in the future. Several protected areas are present within the range of this species. Chytridiomycosis cannot be ruled out as a cause of the recent decline, and this should be investigated.

Taxonomy: Specimens collected in Pakistan by Annandale (1917) and assigned to Rana pleskei (= Nanorana pleskei) were allocated to Scutiger occidentalis (= S. nyingchiensis) by Dubois (1978, 1987). The Kashmir specimen reported by Mertens (1969), is referable to R. vicina (= Paa vicina) (Dubois and Khan 1979). Other reports of N. pleskei in Pakistan and Kashmir are references to the above collections that have now been allocated to other species.

Bibliography: Annandale, N. (1917), Dubois, A. (1978), Dubois, A. (1987), Dutta, S.K. (1997), Fei, L. *et al.* (1999), Inger, R.F. and Dutta, S.K. (1986), Khan, M.S. (1976), Khan, M.S. (1979), Khan, M.S. (1996), Khan, M.S. (2002), Liu, C.-C. and Hu, S.-Q. (1961), MacKinnon, J. *et al.* (1996), Mertens, R. (1969), Sahi, D.N. and Duda, P.L. (1986), Ye, C.-Y, Fei, L. and Hu, S.Q. (1993), Zhao, E.-M. and Adler, K. (1993)

Data Providers: Wang Yuezhao, Annemarie Ohler, Muhammad Sharif Khan, Xie Feng

Occidozyga baluensis (Boulenger, 1896) **SEEP FROG**

This species has been found at many localities in north-western Borneo, from 65-1,200m asl. It was also recorded once in Lampung, Sumatra, but its distribution here is still questionable. It is likely to occur a little more widely than current records suggest. The population status of this species is unknown. This is a largely aquatic species, most often seen in seepage areas in primary lowland rainforest. Larvae also develop in these thin films of water. This species appears to be unable to adapt to modified habitats. The major threat is habitat loss due to clear-cutting. It is present in a number of protected areas in Borneo, and the Sumatran specimens were collected in a protected area. The preservation of lowland tropical moist forest in Borneo is recommended as a conservation measure for this species.

Taxonomy: A taxonomic review of the specimens assigned to this taxon (especially those of Sumatran origin) is recommended.

Bibliography: Inger, R.F. and Stuebing, R.B. (1997), Malkmus, R. *et al.* (2002)

Data Providers: Robert Inger, Robert Stuebing, Djoko Iskandar, Mumpuni

Paa annandalii (Boulenger, 1920)

This species is present in north-eastern India (West Bengal, Sikkim and Arunachal Pradesh), eastern Nepal, and possibly Bhutan (although this requires confirmation). It is found from 1,500-3,000m asl. The population status of this species is unknown. It is associated with snow-fed rocky streams in montane forests. There is little known about its breeding biology or larval ecology. It is generally threatened by habitat destruction as a result of localized deforestation and changes in waterway management (such as dam construction). It is not known whether or not it occurs in any protected areas, although it is protected by national legislation in India. Recent field studies have been undertaken by Bordoloi (2001) and Shresthra (2001).

Bibliography: Bordoloi, S. *et al.* (2001), Chanda, S.K. (2002), Dutta, S.K. (1997), Schleich, H.H. (1993)

Data Providers: Sabitry Bordoloi, Annemarie Ohler, Tej Kumar Shrestha

Paa arnoldi (Dubois, 1975)

This species is known from the type locality, Pangnamdim, in northern Myanmar, which is 910m asl (Dubois 1975), and from adjacent Xizang Autonomous Region and north-western Yunnan Province, China, from 1,000-2,080m asl. It probably ranges slightly more widely, especially in Myanmar. This species is considered uncommon in China. In Myanmar, it has not been collected again since the type series was collected in the 1930s. Results from recent surveys of the area are not yet available (G. Wogan pers. comm.). In China this species is known from medium and small streams in forested areas, and sometimes also from springs near paddy fields. It breeds in streams, the eggs being laid in water under stones. There is no information on its recorded habitat in Myanmar. The main threat in Myanmar to this species and most of the species in its genus is local consumption. In China it is threatened by habitat destruction and degradation, in particular due to agricultural development and the subsistence collection of wood. A few protected areas are present within the range of this species, including Hkakabo Razi National Park in Myanmar (which is the type locality), and Gaoligongshan National Nature Reserve in China. Further herpetological surveys of northern Myanmar are needed to determine the range of this species in this country. Further research is also needed to resolve the confusion relating to the nomenclature and taxonomy of this species.

Taxonomy: Paa chayunensis is considered here to be a synonym of this species, following Zhao and Adler (1993), until the taxonomic confusion surrounding this species is resolved. There is much confusion relating to the nomenclature and taxonomy of this species. Taxonomic revision should include P. mokokchungensis from India and P. maculosa chayuensis from China.

Bibliography: Dubois, A. (1975), Fei, L. *et al.* (1999), MacKinnon, J. (1997), MacKinnon, J. *et al.* (1996), Smith, M.A. (1940b), The Comprehensive Scientific Expedition to the Qinghai-Xizang Plateau (1997), Ye, C.-Y, Fei, L. and Hu, S.Q. (1993)

Data Providers: Fei Liang, Annemarie Ohler, Yang Datong, Peter Paul van Dijk, Guinevere Wogan

Paa ercepeae (Dubois, 1974)

This species is known only from western Nepal, from 2,200-2,600m asl. It has a restricted range and is considered to be rare. It is associated with stream habitats in upland temperate rainforests. There is little information on larval habitats, although it is presumed that larvae also occur in stream habitats. The main threats to this species are the degradation and destruction of its habitat as a result of small-scale agricultural development, and wood extraction. It has been recorded from Suklaphanta Wildlife Reserve and Royal Chitwan National Park.

Bibliography: Dubois, A. (1974), Dubois, A. (1975), Schleich, H.H. (1993)

Data Providers: Annemarie Ohler, Tej Kumar Shrestha, Sushil Dutta

Paa verrucospinosa (Bourret, 1937)

Allowing for the uncertainty associated with the attribution of various *Paa* populations to various names, this appears to be a taxon ranging from south of the Chinese border through the Annamite Mountains to southern Lao People's Democratic Republic (Bourret 1942; Inger, Orlov and Darevsky 1999; Ohler et. al. 2000; B. Stuart pers. comm.), and has been recorded from 500-1,700m asl. It is thought to be common throughout most of its range. It has been recorded in and around streams, in which it breeds, in hill and lower montane evergreen forest. The major threat is collection for consumption, and presumably also degradation of forest habitat and stream sedimentation, as a result of logging. Significant areas of appropriate habitat appear to be covered by the collective protected areas of Viet Nam and the Lao People's Democratic Republic, but harvesting is still a problem in these areas (BirdLife International 2001), and so needs to be managed more sustainably. Clarification of the taxonomic identity and the distribution of *Paa* frogs in this region is also necessary.

Bibliography: Birdlife International (2001), Bourret, R. (1942), Inger, R.F., Orlov, N. and Darevsky, I.S. (1999), Ohler, A. *et al.* (2000)

Data Providers: Peter Paul van Dijk, Steven Swan

Platymantis luzonensis Brown, Alcala, Diesmos and Alcala, 1997

This species occurs in the rainforests of south-eastern Luzon Island, in the Philippines, at around 600m asl. It is common in forested areas and disturbed areas adjacent to forests. It inhabits arboreal microhabitats in lower montane and lowland forests, where it deposits its eggs (which undergo direct development) in tree holes, pandans and tree ferns. This species also lives in disturbed, secondary habitats. Its habitat is threatened due to shifting agriculture and logging, but not to a significant degree at present. This species is known to occur in four generally well-protected localities on Luzon Island, and so the most important conservation measure is the continued designation of three of these (Mount Banahaw, Mount Makiling and Mount Bulusan) as protected areas. This species is also very common on Mount Malinao, which is not a formally protected area.

Bibliography: Alcala, A.C. and Brown, W.C. (1985), Alcala, A.C. and Brown, W.C. (1999), Brown, R.M., Diesmos, A.C. and Alcala, A.C. (2001), Brown, W.C. *et al.* (1997), Diesmos, A.C. (1998)

Data Providers: Arvin Diesmos, Angel Alcala, Rafe Brown, Leticia Afuang, Genevieve Gee, Katie Hampson, Mae Leonida Diesmos, Aldrin Mallari, Perry Ong, Dondi Ubaldo, Baldwin Gutierrez

Platymantis mimula Brown, Alcala and Diesmos, 1997

This species is known from Mount Makiling and its immediate vicinity, on southern Luzon Island, in the Philippines, at around 400m asl. It is common to very common in forest and disturbed areas. It inhabits the forest floor stratum in undisturbed and disturbed lower montane and lowland forests, and is occasionally found in anthropogenic habitats beside the forest. It deposits its eggs in leaf-litter nests and breeds by direct development. Its habitat is threatened due to shifting agriculture and logging, but not to a significant degree at present. This species is known to occur in several well-protected areas on Luzon Island, including Mount Makiling National Park.

Bibliography: Alcala, A.C. and Brown, W.C. (1985), Alcala, A.C. and Brown, W.C. (1999), Brown, R.M., Diesmos, A.C. and Alcala, A.C. (2001), Brown, W.C., Alcala, A.C. and Diesmos, A.C. (1997), Diesmos, A.C. (1998)

Data Providers: Arvin Diesmos, Angel Alcala, Rafe Brown, Leticia Afuang, Genevieve Gee, Katie Hampson, Mae Leonida Diesmos, Aldrin Mallari, Perry Ong, Dondi Ubaldo, Baldwin Gutierrez

Platymantis vitiensis (Girard, 1853) **FIJI TREEFROG**

This species is widespread in Fiji on the islands of Viti Levu, Vanua Levu, Ovalau and Taveuni, occurring at approximately 50-800m asl. It can be locally common in suitable areas, in particular in mature, wet forest along streams, but is much

less common in secondary and degraded habitats. It is naturally a forest species, living especially along streams in giant *Pandanus*, bird's nest ferns and the common lily (*Colospermum montanum*). It is also found, though at much lower densities, in rural gardens, plantations, and in pandans in pastureland. It breeds by direct development, the eggs being laid in leaf axils. The clutch size is less than 30 eggs. The main threat to this species is probably forest loss due to small-scale subsistence wood extraction, and logging. It has been confirmed as occurring in Tomaniivi Nature Reserve, Colo-I-Suva Forest Park, Garrick Memorial Park, Bouma Forest Reserve, and Savura Forest Reserve. The main priority conservation measure for this species is the conservation of mature forest, especially along streams.

Bibliography: Boistel, R. and Sueur, J. (1997), Gibbons, J.R.H. and Guinea, M.L. (1983), Gorham, S.W. (1965), Gorham, S.W. (1968), Gorham, S.W. (1971), Ryan, P. (2000), Watling, D. and Zug, G.R. (1998)

Data Providers: George Zug, Dick Watling, Clare Morrison

Ptychadena erlangeri (Ahl, 1924)

This species occurs in the Rift Valley in Ethiopia, and in the highlands on both sides of the Rift Valley. It is generally found at 1,500-2,500m asl, though it possibly extends as low as 1,300m asl near the shore of Lake Abaya (the type locality). Its distribution is severely fragmented although it probably occurs more widely than current records show. It appears to be a rather rare species (though this might be due in part to the difficulty in distinguishing between this species and *Ptychadena neumanni*). It seems to be particularly associated with long grasses and similar coarse herbaceous vegetation in forest clearings, not necessarily very close to permanent water. Its breeding behaviour is unknown, but it presumably takes place in pools in forest clearings and at forest margins. The main threats to this species are related to environmental degradation resulting from encroaching human settlements, with the consequent exploitation of forest resources for both subsistence and commercial purposes, including activities such as logging and agricultural development. The best-known population of this species is found in Bale Mountains National Park. Conservation of montane forests is the highest priority conservation measure for this species.

Bibliography: Largen, M.J. (1997), Largen, M.J. (2001), Perret, J.-L. (1980)

Data Providers: Malcolm Largen

Ptychadena superciliaris (Günther, 1858)

This species ranges from Sierra Leone, through southern Guinea and Liberia, to southern Côte d'Ivoire and south-western Ghana. It is rare in Taï National Park (south-western Côte d'Ivoire), but perhaps more common in coastal forest in Côte d'Ivoire; it is locally common in Sierra Leone. This is a lowland rainforest species, and its adaptability to altered habitats is not known. The details of its breeding biology are also unknown, but if it is similar to other members of its genus then it probably breeds in temporary pools. The major threats to this species are the loss and degradation of forest due to agricultural development, logging and expanding human settlements. It occurs in Mount Nimba World Heritage Site (Guinea, Liberia, Côte d'Ivoire), Taï National Park (Côte d'Ivoire), and possibly also other protected areas.

Bibliography: Guibé, J. and Lamotte, M. (1957), Herrmann, H.-W. *et al.* (2005), Perret, J.-L. (1976b), Rödel, M.-O. (2000b), Schiøtz, A. (1964a)

Data Providers: Mark-Oliver Rödel, Arne Schiøtz

Rana areolata Baird and Girard, 1852 — CRAWFISH FROG

This species is known from northern and central Mississippi, north-central Louisiana, and eastern Texas north through eastern Oklahoma, north-central Arkansas, western Tennessee, and western Kentucky through southern Indiana and Illinois, across Missouri, northern Iowa, and eastern Kansas, USA (Altig and Lohoefener 1983; Conant and Collins 1991). It can be locally common in remnant habitat patches, but much of its native habitat has been lost. It is secretive but not uncommon in Texas (Bartlett and Bartlett 1999). In Illinois, it is uncommon and declining in some areas where breeding habitats have been drained or stocked with predatory fish (Phillips, Brandon and Moll 1999). The species was locally plentiful in western Indiana until about 1970, when it declined markedly and disappeared from many sites for reasons that are not well understood, including some in which the habitat did not change in any obvious way (Minton 2001). It might no longer occur in southern Iowa (Johnson 2000). It has been found repeatedly and in large numbers in the Ouachita River bottomlands in Louisiana (Dundee and Rossman 1989). This species inhabits moist meadows, pasturelands, river flood plains, pine scrub, and golf courses. It hides in crayfish, reptile, or rodent burrows when inactive, and also under logs and in sewers. Eggs are laid and larvae usually develop in temporary water such as in flooded fields, ditches, farm ponds, and small lakes. The major threats to this species are habitat loss and degradation particularly through drainage of its breeding habitat. It is also threatened by the stocking of breeding waters with predatory fish (Phillips, Brandon and Moll 1999). It occurs in many protected areas. Better information on current population status and trends is needed to aid its conservation.

Taxonomy: Rana capito and R. sevosa were formerly included in this species, but were removed from its synonymy by Young and Crother (2001).

Bibliography: Altig, R. and Lohoefener, R. (1983), Bailey, M.A. (1991), Barbour, R.W. (1971), Bartlett, R.D. and Bartlett, P.P. (1999), Blackburn, L., Nanjappa, P. and Lannoo, M.J. (2001), Bragg, A.N. (1953), Busby, W.H., and Brecheisen, W.R. (1997), Case, S.M. (1978), Christiansen, J.L. and Bailey, R.M. (1991), Collins, J.T. (1982), Collins, J.T. (1990), Collins, J.T. (1993), Conant, R. and Collins, J.T. (1991), Dundee, H.A. and Rossman, D.A. (1989), Frost, D.R. (1985), Johnson, T.R. (1977), Johnson, T.R. (2000), Minton Jr, S.A. (1972), Minton Jr, S.A. (2001), Phillips, C.A., Brandon, R.A. and Moll, E.O. (1999), Redmond, W.H. and Scott, A.F. (1996), Smith, P.W. (1961), Young, J.E. and Crother, B.I. (2001)

Data Providers: Geoffrey Hammerson, Matthew Parris

Rana aurora Baird and Girard, 1852 — RED-LEGGED FROG

The subspecies *Rana aurora aurora* occurs from south-western British Columbia, including Vancouver Island in Canada, south along the coast of the USA (primarily west of the Cascade-Sierran crest), to Mendecino County, just north of San Francisco, California. It is usually found below 1,200m asl. *Rana aurora draytonii* occurs from Mendecino County, just north of San Francisco, California, south to north-western Baja California, Mexico. It was introduced in Nye County, Nevada, probably between 1940 and 1950. It might now be extinct in the southern Sierra Nevada, and is apparently now absent from Great Valley, California. The Sierra Nevada populations are small and highly localized. It occurs from sea level up to 1,500m asl in the Sierra Nevada range. *Rana aurora aurora* is relatively widespread in Washington and Oregon, although localized declines have been reported where its habitat has been modified. The range of *R. a. draytonii* has been reduced by 70% (USFWS 1996c, 2002), and it has been extirpated from much of its former range in California (Hayes and Jennings 1988). It occurs in about 256 streams or drainages in 28 counties and is still locally abundant in portions of the San Francisco Bay area and the central coast (USFWS 2002). This species is usually found in or near the quiet permanent waters of streams, marshes, or (less often) ponds and other quiet bodies of water. It is also sometimes found in damp woods and meadows some distance from water. In California, it occurs in sites with dense vegetation such as willows, close to water and some shading. *Rana aurora aurora* can reproduce in waterbodies ranging from large lakes to temporary ponds and ditches (Nussbaum, Brodie and Storm 1983). *Rana aurora aurora* also breeds in man-made ponds, but it might not persist over time when these are permanent and are invaded by non-native predators (Adams 1999, 2000; Kiesecker and Blaustein 1998; Kiesecker, Blaustein and Miller 2001a). It can occupy ephemeral pools if the water remains until late spring or early summer (Biosystems Analysis 1989), and it aestivates in small mammal burrows and moist leaf-litter in dense riparian vegetation (Rathbun *et al.* 1993, cited by USFWS 1994b). It disperses from water in wet weather but can seek refuge in deep water. Breeding usually takes place in permanent water, and the eggs are attached to stiff submerged stems in this subspecies, whereas the egg mass is at the surface in *Rana aurora draytonii*. An important threat to *Rana aurora aurora* is the loss of wetlands in the Willamette Valley (Oregon) and Puget Lowlands (Washington). The increased distribution of warm water fish and bullfrogs is also a threat (Adams 1999, 2000; Kiesecker and Blaustein 1988; Kiesecker, Blaustein and Miller 2001a), and conversion to permanent ponds is an important threat (as this allows breeding waters to be invaded by non-native predators). *R. a. draytonii* is threatened most significantly by habitat loss and alteration, and non-native predators are also likely to be important (Lawler *et al.* 1999; Doubledee, Muller and Nisbet 2003). *R. a. aurora* occurs in several small wildlife refuges in Oregon and Washington managed by the USFWS (US Fish and Wildlife Service), and some state refuges (such as Wilson and Burlington). Most of its range is within actively managed agricultural and forestry matrix (under the control of private owners, the Bureau of Land Management, or the US Department of Agriculture Forest Service). Regarding *R. a. draytonii*, the US Geological Survey has developed a conservation plan for this species, and about 1.7 million hectares were designated as critical habitat for it in California (USFWS 2001c). A monitoring and conservation programme must be implemented in the Mexican range of this subspecies, as this does not include any protected areas.

Taxonomy: The two subspecies, Rana aurora aurora and R. a. draytonii, are probably specifically distinct based on genetic data (H.B. Shaffer pers. comm.; G.M. Fellers pers. comm.). When separated, the common names become Northern Red-legged Frog and California Red-legged Frog, respectively.

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Data Providers: Georgina Santos-Barrera, Christopher Pearl, Geoffrey Hammerson

Rana banjarana Leong and Lim, 2003

This montane species has been recorded from the Banjaran Bintang mountain range of Peninsular Malaysia and the Banjaran Titi Wangsa mountain range of Thailand and Peninsular Malaysia. It might also be present in the mountain ranges of Banjaran Benom, Banjaran Gunong Tahan and Banjaran Timur, all in Peninsular Malaysia, and might also occur in the highlands of the island of Sumatra, Indonesia. It has an altitudinal range of at least 700-1,300m asl. The population status of this species is unknown. It does not occur in modified habitats, but it appears to be a strict inhabitant of undisturbed streams in highland and montane tropical forests. Adult males have been observed calling from the sides of forest streams while perched low on fallen branches or live vegetation, or on sandy banks or leaf-litter. The larvae inhabit well-shaded streams with clear, slow-flowing water and a sandy substrate. The habitat of this species is threatened, at least locally, by logging and smallholder agricultural development. It has been recorded in the Hala Bala Wildlife Sanctuary of Thailand, and the Cameron Highlands Wildlife Sanctuary of Peninsular Malaysia. It might also be present in other protected areas of the Banjaran Bintang and the Banjaran Titi Wangsa mountains.

Taxonomy: Adults and larvae of this montane species have previously been misidentified as either Rana signata or R. glanulosa.

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Data Providers: Leong Tzi Ming

Rana boylii Baird, 1854

This species is known from the Pacific drainages from the upper reaches of the Willamette River system, Oregon (west of the Cascades crest), south to the upper San Gabriel River, Los Angeles County, California, including the coastal ranges and Sierra Nevada foothills, in the USA. There is a disjunct population at La Grulla Meadow, Sierra San Pedro Martir, Baja California, Mexico. It has apparently disappeared from portions of its historical range, especially in southern California (see Hayes and Jennings 1988). It occurs from sea level up to 2,040m asl. This species has probably been extirpated from the Tehacahapi Mountains southwards, and there have also been severe declines in the central Sierra foothills of California (Drost and Fellers 1996). It is now rare or absent in Oregon (Leonard *et al.* 1993), moderately common in north-western California and the northern Sierra foothills, and rare or absent in the central and southern Sierra foothills. This species was first recorded in Mexico three decades ago, but almost nothing is known about its biology there. This species inhabits partially shaded, rocky streams at low to moderate altitudes, in areas of chaparral, open woodland, and forest (Nussbaum, Brodie and Storm 1983; Hayes and Jennings 1988). It seeks cover at the bottom of a pool when startled. Its breeding and non-breeding habitats are the following, in order of decreasing favourability: (1) partially shaded, small perennial streams, 30-1,000m asl, with at least some cobble-sized rocks, riffle areas and a stream depth rarely greater than 1m; (2) intermittent, small, partly shaded, rocky streams displaying seasonal riffle habitat; (3) large (consistently greater than 1m in stream depth), partly shaded, perennial streams with rocky or bedrock habitat; and (4) open perennial streams with little or no rocky habitat. Breeding takes place in pools of streams, and eggs are usually attached to gravel or rocks at the edge of pools or streams (Nussbaum, Brodie and Storm 1983). In northern California, eggs were found attached to cobbles and boulders at lower than ambient flow velocities, near confluences of tributary drainages in wide, shallow reaches, and most breeding sites were used repeatedly (Kupferberg 1996). Threats to this species include stream scouring (it may negatively impact frogs in stream bed hibernation sites), introduced aquatic species, non-selective logging practices, and stabilization of historically fluctuating stream flows. However, because causes of declines are uncertain, it is difficult to assess the degree to which this species is threatened. S.J. Kupferberg (pers. comm.) found that bullfrog (*Rana catesbeiana*) larvae perturbed aquatic community structure and exerted detrimental effects on *R. boylii* populations in northern California but had only a slight impact on *Pseudacris regilla*. Some populations of this species occur in national forests in California and Oregon, but this does not necessarily provide adequate protection. It also occurs in a few national, regional and state parks, and on properties owned by The Nature Conservancy. In Mexico it occurs within the San Pedro Martir National Park, which is a relatively well-preserved area. This species is protected by Mexican law under the "Special Protection" category (Pr).

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Data Providers: Georgina Santos-Barrera, Geoffrey Hammerson, Gary Fellers

Rana capito LeConte, 1855 — GOPHER FROG

This species is found in the USA from the Coastal Plain from the southern half of North Carolina (Beaufort County) to southern Florida (Collier County on the west coast, Broward County on the east coast), west to the Tombigbee River of Alabama. There are isolated populations in central Alabama (with a historical record from Shelby County) and central Tennessee (Atlig and Lohoefener 1983; Bailey 1991; Conant and Collins 1991; Godley 1992; Redmond and Scott 1996; Miller and Campbell 1996). Most of its range is contained within the range of the gopher tortoise *Gopherus polyphemus* (Conant and Collins 1991). In Alabama, this frog occurs at six breeding sites (M.A. Bailey pers. comm.). In Florida, it is extant at 79 sites east of the Apalachicola River (R. Franz unpubl.) and it breeds in at least 25 sites west of the Apalachicola River (J.G. Palis pers. comm.). It is known from two specimens in Tennessee (Redmond and Scott 1996; M.A. Bailey pers. comm.), and it is known to occur at seven sites at least in Georgia, including Fort

Benning (where 60-110 breeding adults were recorded in a two acre pond; Andrews pers. comm.), Fort Stewart (18 breeding sites recorded; D.J. Stevenson pers. comm.), McIntosh County, Baker County (at least five sites), Charlton County (C.W. Seyle unpubl.), Taylor County (three breeding sites), and Marion County. It is known from two sites (Savannah River Ecology Lab and Santee Coastal Reserve) in South Carolina. In North Carolina, it breeds at 11 sites (A.L. Braswell unpubl.). Though few data are available concerning changes in the species' population status, much information exists on the reduction of its habitat and breeding sites. The longleaf pine (*Pinus palustris*) community, the ecosystem primarily inhabited by this species, has been reduced to less than 5% of its historical range (Frost 1993; Outcalt and Sheffield 1996). Bailey (1994) reported that eight of 14 known breeding sites in Alabama are considered historic and of the six extant ponds, only three supported substantial populations. However, since that study, one historic site has been reconfirmed as extant, two additional breeding ponds have been discovered, and one previously known breeding site has been extirpated due to the introduction of predatory fish (M.A. Bailey pers. comm.; J.B. Jensen pers. comm.). Although a few new North Carolina sites have been documented in recent years (Beane and Hoffman 1995, 1997), Braswell (1993) found only 11 of 32 previously known breeding sites to be active in North Carolina. Twelve sites are known from South Carolina, though only four remain extant (S.H. Bennett pers. comm.). Of 23 historic breeding sites in Georgia investigated by Seyle (1994) 12 were judged suitable, eight were considered degraded but marginally suitable, and three were judged unsuitable. Only one site was found to contain the frogs during two extensive surveys of Georgia's coastal plain in late winter and early spring of 1995. However, heavy rains during the autumn of the previous year might have contributed to early breeding, and therefore low detectability during the survey period (Moulis 1995a,b). Extensive surveys are lacking for Florida. The total population size of this species is not known but it is apparently declining in many areas. Its primary habitat is native xeric upland habitats, particularly longleaf pine-turkey oak sand hill associations; also xeric to mesic longleaf pine flat woods, sand pine scrub, xeric oak hammocks, and ruderal successional stages of these habitats. It is absent from most coastal islands and dunes (Godley 1992). Burrows of the gopher tortoise or rodents are used for shelter (Gentry and Smith 1968; Lee 1968; Franz 1986), and it also hides under logs and under or in stumps (Wright and Wright 1949). Breeding occurs in ephemeral to semi-permanent graminoid-dominated wetlands that lack large predatory fish (Bailey 1991; Moler and Franz 1987; J.G. Palis unpubl.). This species does not adapt well to habitat degradation or the introduction of predators to its breeding habitat. Threats to this species are many and include loss of longleaf pine habitat through maximum-yield timber management (for example, through establishment of pine monocultures) and decreased frequency of fire; introduction of predatory fish into breeding ponds; road construction near breeding sites; and declining populations of gopher tortoises whose burrows are used extensively by gopher frogs (Bailey 1991; Godley 1992). Mechanical site preparation techniques (such as roller chopping) destroy burrow openings, which may trap inhabitants. Routine pine straw harvest and associated removal of herbaceous vegetation also degrades the habitat quality (A.L. Braswell pers. comm.). Introduction of predatory game fishes (*Lepomis* spp. and *Micropterus* spp.) is detrimental as these species feed upon gopher frog tadpoles and possibly eggs. In some instances, introduction of mosquito fish (*Gambusia* spp.) can also be detrimental to gopher frogs and other larval amphibians (A.L. Braswell pers. comm.). Breeding sites are often degraded by off-road recreational vehicle (ORV) use or by sand roads that pass through or adjacent to the ponds as vehicular traffic disrupts pond floor micro-topography and eliminates herbaceous vegetation (J.G. Palis pers. comm.). More specifically, large tires of ORVs may break the organic hardpan that lies below the pond floor. This hardpan prevents water from draining into the sand below the wetland (LaClaire and Franz 1991), so breaking the hardpan could result in a shorter hydroperiod and thus make some wetlands unsuitable for gopher frog reproduction. Loss of herbaceous vegetation from ORV use could also discourage gopher frog reproduction since egg masses are attached to stems of herbaceous vegetation (Bailey 1990; J.G. Palis pers. comm.). Erosion of unpaved roads lying adjacent to breeding sites may result in sedimentation into the ponds. Introduction of sediment is exacerbated by the placement of wing ditches that divert water from roads into ponds. Heavy grazing by cattle in summer in dried pond basins might reduce or eliminate frog oviposition sites and/or alter pond nutrient cycling. A number of protected areas occur on various public lands throughout the species' range. The most abundant populations are on federal lands, including Conecuh National Forest (Alabama), Eglin Air Force Base (Florida), and Fort Benning (Georgia). These areas receive at least some protection relevant to the needs of this frog. Elsewhere, existing regulatory mechanisms probably are insufficient for adequate protection of breeding and non-breeding habitat. It is listed as a species of special concern in Florida, North Carolina, and South Carolina, and is protected in Alabama. The United States Fish and Wildlife Service is currently evaluating the range-wide status of this frog to determine if it warrants federal recommendation as a threatened species (L.V. LaClaire pers. comm.).

Taxonomy: This species was removed from the synonymy of Rana areolata by Case (1978) and Young and Crother (2001).

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Data Providers: Geoffrey Hammerson, John Jensen

Rana cascadae Slater, 1939 — CASCADES FROG

This species occurs in the Cascade Mountains from northern Washington south to northern California, USA. Populations isolated from the main Cascade Mountains complex occur in the Olympic Mountains, Washington; Mount Shasta and Lassen Peak area, California; and the Trinity Mountains, California (Stebbins 1985b; Nussbaum, Brodie and Storm 1983; Pearl and Adams 2005). Its range is generally between 665 and 2,450m asl, although some Washington populations might occur at lower altitudes. Its prehistoric range might have included much lower altitudes (Leonard *et al.* 1993). In Washington State, hundreds of populations have been identified, but some of these are likely to be no longer extant, and others might be continuous with adjacent populations (Dvornich, McAllister and Aubry 1997). This species is very rare and possibly extirpated from the Mount Lassen area, California (Fellers and Drost 1993). However, a population persists at Trinity Alps, California (Bury 1973a; Jennings and Hayes 1994). Some declines might have occurred in the Oregon Cascades (Olson 2001), but there have been no declines documented in Olympic (Adams, Schindler and Bury 2001) and Mount Rainier National Parks in Washington State. This species inhabits wet mountain meadows, sphagnum bogs, ponds, lakes, and streams, in open coniferous forests. It hibernates in mud at the bottom of ponds and in spring-water saturated ground up to at least 75m from ponds (Briggs 1987). It prefers quiet ponds for breeding and usually lays eggs in shallow open water. Non-breeding habitats are often more than 100m from breeding sites, sometimes substantially more. Non-breeding habitats can be streams in lower altitudes. It is not clear how adaptable this species is to habitat degradation. Observed declines in Lassen Volcanic National Park are apparently due to a combination of local factors, including (1) the presence of non-native predatory fish that have restricted available habitat and limited dispersal of frogs; (2) gradual loss of open meadows and associated aquatic habitats; and (3) loss of breeding habitat due to a five-year drought (Fellers and Drost 1993). Pesticide drift via prevailing winds might also have contributed to losses in California (Davidson, Shaffer and Jennings 2002). Introduced fish are implicated as limiting distribution in montane areas (Hayes and Jennings 1986; Jennings and Hayes 1994; Adams, Schindler and Bury 2001). UV radiation shows negative effects in experimental settings, but effects at landscape scale are unclear (Adams, Schindler and Bury 2001; Palen *et al.* 2002). Eggs are highly susceptible to the pathogenic fungus *Saprolegnia ferax*, which might be introduced during fish stocking (Kiesecker and Blaustein 1997). Some populations are within protected national park and wilderness areas in Oregon (such as Crater Lake National Park, and the Three Sisters wilderness area), Washington (Olympic and Mount Rainier National Parks), and California (Mount Lassen and Trinity Alps). However, factors such as pesticide drift, UV radiation, and fish introductions are prominent threats even in montane protected areas.

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Data Providers: Geoffrey Hammerson, Christopher Pearl

Rana chitwanensis Das, 1998

This species is endemic to Nepal. Reports from north-east India reflect a misidentification with *Rana danielii*. It is a lowland species occurring below 500m asl in the foothills of the Himalayan range. It probably occurs a little more widely, and can be expected to occur in India. The population status of this species is unknown. It is associated with terai grasslands, bushes and tropical *Shorea* forest in hilly areas. Specimens were collected by Das (1998) under logs in *Shorea* forest with scattered patches of short grass and bare earth. There is little information available concerning details of reproduction or larval habitat. The main threat to this species is habitat loss as a result of selective logging of forests and changes in water management regimes (such as dam construction). The original collection of this species occurred in Royal Chitwan National Park (Das 1998).

Bibliography: Das, I. (1998a), Zug, G.R. and Mitchell, J.C. (1995)

Data Providers: Sushil Dutta, Tej Kumar Shrestha, Annemarie Ohler

Rana curtipes Jerdon, 1853

This species is widely distributed in the Western Ghats of India, from 500-2,000m asl. It probably occurs more widely than current records suggest. This is a locally abundant species. It is a terrestrial leaf-litter frog, found in a number of tropical forest types (evergreen to semi-evergreen moist forest, and into dry deciduous forest). It is also found in lightly degraded areas. It breeds in natural and artificial waterbodies (in both ponds and large lakes). The major threat to this species is general habitat loss through conversion to agricultural land and plantations (including eucalyptus, coffee and tea), and exploitation of its habitat for timber and wood by local people. Road kill during migration to breeding habitats is also a problem. The larvae of this species are collected for local consumption. It has been recorded from many protected areas in Kerala, Karnataka, Tamil Nadu, Maharashtra and Goa, and it is protected by national legislation.

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Data Providers: S.D. Biju, Sushil Dutta, Robert Inger

Rana grafi Crochet, Dubois, Ohler and Tunner, 1995

This species is present in southern France and north-eastern Spain (Catalonia, Aragon, Navarra and the Basque Country) (Crochet *et al.* 1995; Dubois and Ohler 1994). It is also present in the southern Rhone Valley (Pagano, Joly and Hotz 1997). The species' population has been greatly affected by the introduction of *Rana ridibunda*, and in many areas where it was previously found only the invasive species remains. *Rana grafi* occurs in mixed colonies with *R. perezi*, and lives in similar habitat, being found in a wide variety of temporary and permanent waterbodies (such as pools, streams, ditches, and irrigation canals), where it breeds. Terrestrial habitats include forests, scrubland, agricultural areas and coastal marshes. The major threat to this species is displacement by the invasive species *Rana ridibunda*. It is possibly also threatened by the drainage of suitable wetlands for agricultural, urban and tourism development. Agrochemical pollution of breeding waterbodies is also presumed to be a threat. This species occurs in a number of protected areas, and is listed on Appendix III of the Berne Convention. Monitoring of the population is necessary to determine the degree of decline as a result of invasive species.

Taxonomy: Rana grafi is a kleptospecies (hybridogenetic hemilineage) associated with R. perezi and R. ridibunda (Crochet et al. 1995).

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Data Providers: Miguel Tejedo, Iñigo Martínez-Solano, Alfredo Salvador, Mario García-París, Ernesto Recuero Gil, Pierre-André Crochet

Rana grahami Boulenger, 1917

This species is known from hilly areas in south-western China in Sichuan, Yunnan, Guizhou, and possibly Hunan Provinces, and from one location, Hoang Lien Son National Park, in northern Viet Nam (Ohler *et al.* 2000). It has been recorded from 1,150-3,200m asl. In China this species was formerly common, but it is now uncommon. In Viet Nam it was found to be relatively common in appropriate habitat (S. Swan pers. comm.) It inhabits medium and small hill streams in montane forest, and sometimes also occurs near still-water pools. It may on occasion leave water to live in forest, shrubland and grassland, but it returns to breed in streams. The main threats to this species in China are over-collecting for local consumption, and habitat destruction and degradation due to shifting agriculture and smallholder farming (which might also be a threat in Viet Nam). Some protected areas are present within the range of this species in China. The one known location in Viet Nam is within Hoang Lien Son National Park.

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Data Providers: Yang Datong, Lu Shunqing, Annemarie Ohler, Steven Swan

Rana iberica Boulenger, 1879 — IBERIAN FROG

This species is endemic to Portugal and north-western and central Spain. It mostly occurs in montane areas up to 2,425m asl (such as the Sierra de Béjar, central Spain). Isolated populations of this species are present in the Basque Country, Central System Mountains, Extremadura in Spain and Marinha Grande and Serra de Sao Mamede in Portugal. It is reasonably common in northern Portugal and north-western Spain. Populations in the Central System Mountains and Extremadura of Spain are declining very seriously. There is also evidence of population declines in the Sierra de Guadarrama (Madrid, Spain). This is an aquatic species usually found in shady habitats (with abundant vegetation) close to rivers, streams, lakes and marshes. The species' terrestrial habitats include woods, moors, meadows and areas of low scrub. In the north of its range it can occur down to sea level along slower flowing rivers. Breeding and larval development takes place within various shallow stagnant waterbodies. Threats to this species include pressure from tourism development, urbanization of the lowland range, habitat loss through intensification of agriculture and deforestation and re-afforestation with non-native monocultures, introduction of non-native predatory fishes (salmonids) and mammals such as *Mustela vison* (American mink), desertification in southern Portugal, and habitat loss through hydroelectric projects. It is present in Parque Natural del Gorbea and Parque Natural de Izki in Spain, where it is also protected by national legislation and listed in the national Red Data Book as vulnerable. This species is listed on Appendix II of the Berne Convention and on Annex IV of the EU Natural Habitats Directive.

Bibliography: Arano, B., Esteban, M. and Herrero, P. (1993), Arnold, E.N. (2003), Dubois, A. (1982), Esteban, M. and Sanchiz, B. (2000), Galán, P. (1989), Galán, P. (1999), García-París, M. and Martín, C. (1987), Gasc, J.-P. *et al.* (eds.) (1997), Godinho, R. *et al.* (1999), Lizana, M., Pérez-Mellado, V. and Ciudad, M.J. (1990), Malkmus, R. (2004), Martínez-Solano, I., Bosch, J. and García-París, M. (2003), Mensi, P. *et al.* (1992), Paulo, O. (1997), Pleguezuelos, J.M. (1997), Pleguezuelos, J.M., Márquez, R. and Lizana, M. (2002), Sociedad para la Conservación de los Vertebrados (SCV) (2001)
Data Providers: Miguel Tejedo, Jaime Bosch, Iñigo Martínez-Solano, Alfredo Salvador, Mario García-París, Ernesto Recuero Gil

Rana juliani Hillis and de Sa, 1988

This species is known only from the Mayan Mountains in Belize from 100-600m asl. It is common in suitable habitat. It lives in lowland primary wet forest and open parkland pine forest and savannah, and is not found in disturbed habitats. It is associated with streams, in which it breeds. The main threat to this species is habitat loss, although at present this is not serious. Much of this species' range is afforded a degree of protection, and it is found in Columbia River Forest Reserve, the Reserva Natural Bladen, and the Reserva de la Biósfera Montañas Mayas Chiquibul.
Bibliography: Campbell, J.A. (1998), Hillis, D.M. and de Sá, R. (1988), Lee, J.C. (1996), Lee, J.C. (2000)
Data Providers: Julian Lee, Paul Walker

Rana lungshengensis Liu and Hu, 1962

This species is endemic to eastern Guizhou, southern Hunan and northern Guangxi Provinces in central China, from 900-1,500m asl. It appears to be generally uncommon. This species inhabits hill streams in broadleaf forests, and presumably breeds in streams. The major threats to this species are habitat destruction and degradation due mainly to agriculture. Several protected areas are within its range.
Bibliography: Fei, L. *et al.* (1999), Liu, C.-C., Hu, S.-Q. and Yang, F.H. (1962), MacKinnon, J. *et al.* (1996), Wu, L., Dong, Q. and Xu, R.-H. (1987), Zhang, Y. and Wen, Y. (2000)
Data Providers: Michael Wai Neng Lau, Zhao Ermi

Rana luzonensis Boulenger, 1896

This species is known from many parts of Luzon Island, in the Philippines, and probably occurs a little more widely than current records suggest. It is very common in many localities, especially in and around forested habitats, including secondary forest and forest edges. It inhabits swift-flowing, cool mountain streams and rivers in montane rainforest. Eggs are laid in streams, where the larvae develop. Some populations in the lowland rainforests are threatened by deforestation, due to processes such as agricultural development, logging, and infrastructure development for human settlements. Parts of this species' range are protected in national parks although more protected areas need to be established on Luzon to protect the remaining forest on these islands.
Taxonomy: Rana igorota was removed from the synonymy of this species by Brown et al. (2000).
Bibliography: Alcala, A.C. and Brown, W.C. (1985), Brown, R.M., McGuire, J.A. and Diesmos, A.C. (2000), Dubois, A. (1992), Frost, D.R. (1985), Inger, R.F. (1999)
Data Providers: Arvin Diesmos, Angel Alcala, Rafe Brown, Leticia Afuang, Cynthia Dolino, Genevieve Gee, Katie Hampson, Mae Leonida Diesmos, Aldrin Mallari, Perry Ong, Liza Paguntalan, Marisol Pedregosa, Dondi Ubaldo, Baldwin Gutierrez

Rana macrops Boulenger, 1897

This species is known from central and northern Sulawesi, Indonesia. It is a lowland species, found from 900-1,000m asl, but probably occurs more widely than current records suggest. It is an uncommon species and only a few specimens have been collected in recent years. It lives along streams, in which it presumably breeds, in primary and secondary forests with a canopy. The main threat to this species is the loss of its forest habitat due to smallholder farming. Water pollution due to agriculture is also a threat. Much of its habitat is protected, and it occurs in Lore Lindu and Bogani-Nani-Wartabone National Parks.
Bibliography: Iskandar, D.T. and Tjan, K.N. (1985)
Data Providers: Djoko Iskandar, Mumpuni

Rana moellendorffi Boettger, 1893

This species only occurs in the Palawan Island group, in the western Philippines, including Palawan, Culion and Busuanga, but is likely to occur more widely than current records suggest. It is a very common species. It inhabits undisturbed and disturbed streams and rivers in lower montane and lowland forests, where it breeds and lays its eggs. The larvae develop in quiet side pools in clean rivers. Important threats to this species might include the loss of lowland rainforest due to forest clearance, and pollution of mountain streams and rivers especially due to agricultural effluents. The range of this species includes several protected areas. The most important conservation measure is to designate the remaining tracts of intact lowland rainforest on Palawan as protected areas.
Bibliography: Alcala, A.C. and Brown, W.C. (1985), Brown, R.M. and Guttman, S.I. (Rev.), Dubois, A. (1992), Frost, D.R. (1985), Inger, R.F. (1999)
Data Providers: Arvin Diesmos, Angel Alcala, Rafe Brown, Leticia Afuang, Cynthia Dolino, Genevieve Gee, Katie Hampson, Mae Leonida Diesmos, Aldrin Mallari, Perry Ong, Liza Paguntalan, Marisol Pedregosa, Dondi Ubaldo, Baldwin Gutierrez

Rana mortenseni Boulenger, 1903

This species is known from the type locality, the island of Koh Chang, Trat Province, in south-east Thailand, and is also found in the Cardamom Mountains of Cambodia (Ohler, Swan and Daltry 2002). It has been recorded below 800m asl. It is common in Koh Chang (T. Chan-ard pers. comm.) and also in the Cardamom Mountains at lower altitudes (S. Swan pers. comm.). This species is known from evergreen forest on the lower slopes of the mountains as well as in gallery forest, and also heavily disturbed areas and forest edge habitat. Males were heard calling from near streams where they were concealed in undergrowth. The exact breeding habits are unknown. A threat to this species is probably the clear-cutting of forests although it appears to also inhabit disturbed areas. Its range includes Ko Chang National Park, and several protected areas within the Cardamom Mountains of Cambodia. Surveys to determine the species' range, habitat requirements and population status are needed.
Taxonomy: This species was removed from synonymy of Rana nigrovitatta without comment by Dubois (1992), and treated as a valid species by Inger, Orlov and Darevsky (1999). It was regarded as a synonym of R. nigrovittata by Matsui et al. (2001) but treated as a valid species by Ohler, Swan and Daltry (2002) and hence here also.
Bibliography: Dubois, A. (1992), Inger, R.F., Orlov, N. and Darevsky, I.S. (1999), Matsui, M. *et al.* (2001a), Ohler, A., Swan, S.R. and Daltry, J.C. (2002)
Data Providers: Peter Paul van Dijk, Steven Swan

Rana neovolcanica Hillis and Frost, 1985 — TRANSVERSE VOLCANIC LEOPARD FROG

This species occurs on the southern edge of the Mexican Plateau in south-eastern Jalisco, northern Michoacán and southern Guanajuato. It is known from 1,500-2,500m asl. This species is relatively common. It inhabits pine-oak forests and mesquite grasslands, and requires the presence of lakes, pools or slow-flowing streams. The main factors affecting populations of this frog are general habitat loss (arising from shifting agriculture and clear-cutting), and alteration and desiccation of waterways. There is also disturbance of some populations, caused by poachers of the monarch butterfly (*Danaus plexippus*). The range of this species includes a few protected areas. It is listed as "threatened" (Amenazada) by the Mexican government.
Bibliography: Hillis, D.M. and Frost, J.S. (1985)
Data Providers: Georgina Santos-Barrera, Oscar Flores-Villela

Rana nigromaculata Hallowell, 1861 "1860" — BLACK-SPOTTED POND FROG

This species is known from the Russian Far East (from Evreiskaya Autonomous Province to the lower reaches of the Amur River), central, northern and north-eastern China, the Democratic People's Republic of Korea, the Republic of Korea, and Japan. In Japan this species is distributed in Honshu (except Sendai Plan, Kanto District and the area along Shinano River), Shikoku and Kyushu. There is a problem with the potential introduction of this species to other areas through the live animal trade. The small distribution in southern Yunnan probably represents an introduced population. This species occurs below 2,200m asl. It is widespread and common in the Far East of Russia (with some localized declines), but it is declining in China (although it remains a common species). The decline is not considered to be so severe in the Democratic People's Republic of Korea and the Republic of Korea. In Japan the population is decreasing but it is not in significant decline, and is considered a common species. The terrestrial habitats of this species include meadows, leafy and mixed pine and broadleaved forests, bush lands and desert (in Turkmenistan). The species is also present in suitable modified habitats. Within these habitats it inhabits various types of stagnant waterbodies, including river pools, channels, lakes, reservoirs, ponds, swamps, ditches and paddy fields. The female deposits 1,800-3,000 eggs in shallow water. The larvae hatch in five to seven days and usually begin metamorphosis about 45 days later. They reach sexual maturity at three years of age. The threats to this species are not well known. In some parts of Asia it has declined seriously because of over-exploitation in the live animal trade, water pollution, and changes in land management use from paddy fields to other crops. It is present in many protected areas.
Bibliography: Adnagulov, E.V., Tarasov, I.G. and Gorobeiko, V.V. (2000), Bannikov, A.G. *et al.* (1977), Chen, B. *et al.* (1991), Emelianov, A.A. (1944), Fei, L. *et al.* (1999), Kuzmin, S.L. (1995), Kuzmin, S.L. (1996), Kuzmin, S.L. (1999), Kuzmin, S.L., Dodd Jr, C.K. and Pikulik, M.M. (1995), MacKinnon, J. *et al.* (1996), Maeda, N. and Matsui, M. (1999), Maslova, I.V. (2001), Sengoku, S. *et al.* (1996), Szyndlar, Z. (1984), Tagirova, V.T. (2000), Yang, S.-Y. and Yu, C.H. (1978), Ye, C.-Y, Fei, L. and Hu, S.Q. (1993)
Data Providers: Sergius Kuzmin, Irina Maslova, Boris Tuniyev, Masafumi Matsui, Li Pipeng, Yoshio Kaneko

Rana similis (Günther, 1873)

This species is found in many parts of Luzon including the adjacent smaller islands of Polillo, Palaui, Catanduanes, and Marinduque, in the Philippines. It probably occurs a little more widely than current records suggest, especially in areas between known sites. It is common in forested areas and disturbed areas near forest. This species inhabits undisturbed and disturbed streams and rivers in lower montane and lowland forests. It breeds and lays its eggs in clean streams and rivers, and the larvae develop in quiet side pools. Important threats to this species are the loss of lowland rainforest (due to agricultural development and logging) and the pollution of mountain streams and rivers, especially due to agricultural effluents. Its range includes a few protected areas. The most important conservation measure needed is to designate the remaining tracts of intact lowland rainforest on Luzon as protected areas.
Bibliography: Alcala, A.C. and Brown, W.C. (1985), Brown, R.M. and Guttman, S.I. (Rev.), Dubois, A. (1992), Frost, D.R. (1985), Inger, R.F. (1999)
Data Providers: Arvin Diesmos, Angel Alcala, Rafe Brown, Leticia Afuang, Cynthia Dolino, Genevieve Gee, Katie Hampson, Mae Leonida Diesmos, Aldrin Mallari, Perry Ong, Lisa Marie Paguntalan, Marisol Pedregosa, Dondi Ubaldo, Baldwin Gutierrez

Rana temporalis (Günther, 1864)

Specimens currently assigned to this species have been collected in Sri Lanka and the Western Ghats of India. It has an altitudinal range of 60-1,830m asl in Sri Lanka and 200-1,800m asl in the Western Ghats. It is locally abundant. It is a largely terrestrial species (although males can be seen in low vegetation) associated with shaded hill streams and riparian vegetation in semi-evergreen moist tropical forest. It is not found in modified (agricultural) habitats. Adults are often encountered on wet boulders in streams, and breeding takes place in these streams. The main threats to this species are the conversion of forested land for agricultural use (for tea, cardamom, and rubber plantations), subsistence harvesting of wood and timber, the development of mining and roads (in India), agrochemical pollution and (again in India) the construction of dams. It has been recorded from many protected areas in Sri Lanka, and in India (where it is protected by national legislation) it has been recorded from Konya Wild Life Sanctuary in Maharashtra, Kudremukh National Park in Karnataka, and Kalakad-Mundanthurai Tiger Reserve in Tamil Nadu. It is included as part of ongoing studies by Biju (1998 and onwards) and Addoor (1992 and onwards).
Taxonomy: The population in the Western Ghats assigned to Rana temporalis probably belongs to an undescribed species (S.D. Biju and K. Manamendra-Arachchi pers. comm.). Pending taxonomic revision, R. temporalis is treated here as a single species.
Bibliography: Biju, S.D. (2001), Dutta, S.K. (1997), Dutta, S.K. and Manamendra-Arachchi, K. (1996), Günther, A. (1864), Inger, R.F. *et al.* (1984), Vasudevan, K., Kumar, A. and Chellam, R. (2001)
Data Providers: S.D. Biju, Kelum Manamendra-Arachchi, Sushil Dutta, Robert Inger, Anslem de Silva

Rana tiannanensis Yang and Li, 1980

This species is known from southern Yunnan (Mangla, Pingbian and Hekou Counties) and Hainan (Bawangling, Jianfengling, Diaoluoshan and Limushan) in China. It probably occurs more widely than current records suggest, especially in areas between known sites, and in particular in northern Lao People's Democratic Republic and Viet Nam. It has been recorded from 120-1,000m asl. It is uncommon and appears to be in decline. This species inhabits hill streams and the surrounding forests, and probably breeds in streams. On Hainan this species is threatened by local people collecting it for consumption. Its habitats are also under threat from deforestation and the construction of hydroelectric power plants. The range of this species overlaps with several protected areas.
Taxonomy: The Hainan subpopulation might be a different species from the Yunnan population.
Bibliography: Fei, L. *et al.* (1999), MacKinnon, J. *et al.* (1996), Yang, D.-T. (1991b), Yang, D.-T. and Li, S.M. (1980)
Data Providers: Michael Wai Neng Lau, Zhao Ermi

Rana tientaiensis Chang, 1933

This species is endemic to south-eastern Anhui and Zhejiang Provinces in central China, where it has been recorded from 100-700m asl. It is an uncommon species. It inhabits open, low-gradient large streams and small rivers, and sometimes also occurs in still-water pools close to streams. The major threats to this species are habitat destruction and degradation caused by infrastructure development and water pollution. A number of protected areas are present within its range.
Bibliography: Fei, L. *et al.* (1999), Huang, M.-H., Cai, C.-M., Jin, Y.-L., Gu, H.-Q., Zhang, S.-D., *et al.* (1990), MacKinnon, J. *et al.* (1996)
Data Providers: Michael Wai Neng Lau, Gu Huiqing

Rana warszewitschii (Schmidt, 1857)

This species is found in humid lowlands on the Atlantic versant from north-eastern Honduras to central Panama, both slopes of the cordilleras of Costa Rica and western Panama, the lowlands of south-western Costa Rica and eastern Panama, and gallery forests in non-peninsular north-western Costa Rica, from sea level up to 1,740m asl (Savage 2002). Once a common species, it has declined in montane areas although it persists in many areas. It disappeared from Tapantí and the higher regions of Monteverde by the late 1980s, and disappeared at the same time from San Ramon Reserve but reappeared in 1994. It is still abundant in Tinamascas (along the road from San Isidro to Dominical), Parque Nacional Corcovado, and Ciudad Colon. It is still generally common at low elevations. This is a diurnal species associated with small streams in humid lowland, montane and gallery forest. It is found wherever patches of forest remain, even within urban areas. Larvae are found in small streams. It is generally threatened by habitat loss (deforestation) resulting from agricultural development, logging, and development of human infrastructure. The disappearances at higher altitudes are probably due to chytridiomycosis. While there are no specific conservation measures in place, this species has been recorded from many protected areas. It should be monitored carefully to establish whether or not the disappearances at higher altitudes are due to chytridiomycosis.

Bibliography: Ibáñez, R. *et al.* (2000), Ibañez, R., Rand, A.S. and Jaramillo, C.A. (1999), Pounds, J.A. *et al.* (1997), Savage, J.M. (2002), Young, B. *et al.* (1999)

Data Providers: Frank Solís, Roberto Ibáñez, Gerardo Chaves, Jay Savage, César Jaramillo, Querube Fuenmayor

Staurois tuberilinguis Boulenger, 1918

This Bornean endemic is known from most of the hilly forests of Sabah (Malaysia) and Sarawak (Malaysia), Brunei Darussalam, and from north-eastern Kalimantan (Indonesia). It is likely to occur a little more widely than current records suggest. It has been recorded from 150-1,800m asl, but it is rare below 500m asl. This species can be very common along some rocky streams. It lives along the banks of clear, small, rocky streams in primary forests, and can be found perching on rocks either along banks or mid-stream, usually near rapids. Breeding takes place in streams, but the larvae have yet to be recorded. Deforestation caused by logging is the principal threat to this species. It is present in at least four protected areas, including Kinabalu and Gunung Mulu National Parks. Improved protection of hilly forests in Kalimantan is needed.

Bibliography: Inger, R.F. and Stuebing, R.B. (1997), Malkmus, R. *et al.* (2002)

Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Strongylopus wageri (Wager, 1961) WAGER'S STREAM FROG

This species ranges from the Weza Forest in KwaZulu-Natal northwards along the foothills of the Drakensberg mountain range in South Africa. Isolated populations exist further to the east in Qudeni Forest, Entumeni Nature Reserve, and Ngome Forest Reserve, and along the southern boundary of Mpumalanga Province. It occurs from low altitudes up to 2,000m asl. It might occur in Lesotho, but it has not so far been found there. It is a rare species, which appears to be in decline in some regions. At lower altitudes it inhabits mist-belt forest, and at higher altitudes up to 2,000m asl it occurs in montane grassland. This species appears to be quite sensitive to habitat degradation. It breeds in quiet pools in clear streams. The eggs are laid on vegetation dangling into the water or on rocks, and the larvae develop in the water. This species is threatened by afforestation, and by the introduction of exotic trout that prey on the larvae. There has also been some loss of the indigenous forest for agricultural development. This species does occurs in a few protected areas (such as Entumeni Nature Reserve and Ngome Forest Reserve).

Bibliography: Bates, M.F. and Haacke, W.D. (2003), Boycott, R.C. (1987), Channing, A. (1979), Channing, A. (1981), Channing, A. (2001), Lambiris, A.J.L. (1989a), Minter, L.R. *et al.* (2004), Passmore, N.I. and Carruthers, V.C. (1995), Wager, V.A. (1986)

Data Providers: Leslie Minter, Alan Channing, James Harrison

RHACOPHORIDAE

Chirixalus palpebralis (Smith, 1924)

This species is known from Hekou and Pingbian in Yunnan, China, from Tam Dao in northern Viet Nam (Nguyen Quong Truong pers. comm.), and from the higher altitudes of the Lang Bian plateau of southern Viet Nam (Bourret 1942; Inger, Orlov and Darevsky 1999). It probably occurs more widely than current records suggest. It has been recorded from 700-2,000m asl. It is considered common in China. In Viet Nam it is known from a single specimen collected in 1918, and then large series were collected from 1993 to 1995 (Inger, Orlov and Darevsky 1999). It was also recorded from a few specimens in Tam Dao in 2000. This species is known from pools and swampy riparian areas in forest, although the non-breeding habitat is poorly known. Single eggs are laid on plant stems above water. The principal threats to this species are forest degradation and water pollution arising from agricultural activities. It occurs in Daweishan National Nature Reserve in China, and in Kon Cha Ran Nature Reserve and Tam Dao National Park in Viet Nam (Inger, Orlov and Darevsky 1999). Further efforts are needed to establish protected areas at Buon Luoi and elsewhere in the An Khe District, Gia Lai Province, Viet Nam.

Taxonomy: This species is sometimes included in the genus Philautus. Its taxonomy requires further study.

Bibliography: Birdlife International (2001), Bourret, R. (1942), Darevsky, I.S. and Orlov, N.L. (1997), Fei, L. *et al.* (1999), Inger, R.F., Orlov, N. and Darevsky, I.S. (1999), MacKinnon, J. *et al.* (1996), Yang, D.-T. (1991b)

Data Providers: Peter Paul van Dijk, Nguyen Quang Truong, Lu Shunqing, Yang Datong

Nyctixalus pictus (Peters, 1871)

This species is found from Yala in extreme southern Thailand (Taylor 1962) through Peninsular Malaysia (Berry 1975), Singapore (Lim and Lim 1992), Sumatra (including Siberut in the Mentawai Islands) in Indonesia, northern parts of Borneo (both Malaysia and Indonesia), and Palawan in the Philippines. It is likely to occur a little more widely than current records suggest. It has been recorded from 50-700m asl. It is widespread but nowhere is it common. Adults live in the shrub and lower tree strata in primary and secondary forests. This species breeds by larval development in arboreal water-filled cavities and in rotting logs. The major threat is forest clearance due to agriculture and logging. Its range includes several protected areas, but more effective protection of lowland rainforest is critical to ensure the persistence of this species.

Bibliography: Alcala, A.C. and Brown, W.C. (1985), Berry, P.Y. (1975), Frost, D.R. (1985), Inger, R.F. (1999), Inger, R.F. and Stuebing, R.B. (1997), Lim, K.P. and Lim, F.L.K. (1992), OEPP - Office of Environmental Planning and Policy [of Thailand] (1997), Taylor, E.H. (1962)

Data Providers: Arvin Diesmos, Angel Alcala, Rafe Brown, Leticia Afuang, Genevieve Gee, Jeet Sukumaran, Norsham Yaakob, Leong Tzi Ming, Yodchaiy Chuaynkern, Kumthorn Thirakhupt, Indraneil Das, Djoko Iskandar, Mumpuni, Robert Inger, Robert Stuebing, Paul Yambun, Maklarin Lakim

Philautus beddomii (Günther, 1876)

This species is restricted to the tropical forests of Agasthyamala Hills in the southern Western Ghats of India. Specimens previously reported from northern Kerala belong to *Philautus glandulosus* (S.D. Biju pers. comm.). The type specimen was collected at Athirimala at around 1,250m asl. This species is common where it occurs. It is associated with the understorey of undisturbed tropical moist evergreen forest, and is believed to reproduce by direct development. This species occurs in a remote area, which is not presently threatened by habitat modification, although this could possibly change in the future. It has been recorded in the Agasthyamala Hills of the Neyar Wildlife Sanctuary in Kerala. Recent field studies including this species have been undertaken by S.D. Biju (from 1998 to 2001).

Bibliography: Biju, S.D. (2001), Bossuyt, F. and Dubois, A. (2001), Dutta, S.K. (1997), Günther, A. (1876), Ravichandran, M.S. (1996b)

Data Providers: S.D. Biju, Sushil Dutta, Karthikeyan Vasudevan, S.P. Vijayakumar, Chelmala Srinivasulu, S. Bhupathy

Philautus hosii (Boulenger, 1895)

This species has been found in southern Sabah (Malaysia), central Sarawak (Malaysia), and western Kalimantan (Indonesia), on Borneo. It is a lowland species found up to 350m asl. It is assumed to be relatively abundant. This species has not been found outside lowland rainforests, where males call from small trees along riverbanks. Its breeding details are not known, but it is presumed to breed by direct development. Clear-cutting of the forest is a major threat to this species. It is present in several protected areas, but more effective preservation of lowland forests is necessary.

Bibliography: Inger, R.F. (1966), Inger, R.F. and Stuebing, R.B. (1997)

Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Philautus longicrus (Boulenger, 1894)

This species is known from central and northern Borneo (both Malaysia and Indonesia), and the islands of Balabac and Palawan in the Philippines. In Borneo it has been recorded from 700-2,900m asl, but in the Philippines it is known from much lower altitudes of 30-1,000m asl. It probably occurs more widely than current records suggest. Large sample sizes at one locality in central Palawan indicate that this species might have been common at the time. It occurs in submontane and montane forests, where it is usually seen in the low shrub layer, and has not been found outside forests. It breeds by direct development. In the Philippines some populations of this species are threatened by habitat conversion to agricultural land. In Borneo, deforestation is a major threat. Some of the remaining patches of this species' habitat are currently within protected areas.

Taxonomy: Taxonomic studies are needed to clarify the status of the Palawan populations compared with the Bornean populations of this species.

Bibliography: Alcala, A.C. and Brown, W.C. (1985), Dring, J.C.M. (1987), Frost, D.R. (1985), Inger, R.F. (1999), Inger, R.F. and Stuebing, R.B. (1997)

Data Providers: Arvin Diesmos, Angel Alcala, Rafe Brown, Leticia Afuang, Genevieve Gee, Robert Inger, Robert Stuebing, Indraneil Das, Paul Yambun, Maklarin Lakim

Philautus mjobergi Smith, 1925

This species is known from montane forests in north-western Borneo, from 1,500-3,000m asl. It is likely to occur a little more widely than current records suggest. Estimates of the population from the calls of isolated males suggest that it is locally abundant. It is a montane species of oak-chestnut forest. Males call from the shrub layer 0.5-3m above the ground. It breeds by direct development and eggs may be deposited in pitcher plants (Malkmus *et al.* 2002). There are no threats to the species at present as most of the logging in Borneo is occurring at lower altitudes. It occurs in at least three national parks, including Gunung Kinabalu and Gunung Mulu National Parks.

Bibliography: Dring, J.C.M. (1987), Malkmus, R. *et al.* (2002)

Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Philautus rhododiscus Liu and Hu, 1962

This species is known from 830-1,350m asl in Guangxi (Nanning, Dayaoshan and Huaping), Guangdong (Nanling) and Fujian (Chongan) Provinces in central China, as well as one record at 1,400m asl on Mount Tay Con Linh II, Cao Bo Commune, Vi Xuyen District, north-eastern Viet Nam (Bain and Truong 2004). There is no information available about the population status of this species. It inhabits forests, and breeds in tree holes, bamboo stems, small pools and ponds. The major threats to this species' habitat are agricultural development and logging. Several protected areas are present within the range of this species.

Bibliography: Bain, R.H. and Truong, N.Q. (2004), Fei, L. *et al.* (1999), Liu, C.-C. and Hu, S.-Q. (1962), MacKinnon, J. *et al.* (1996)

Data Providers: Michael Wai Neng Lau, Geng Baorong, Yang Datong

Philautus rus Manamendra-Arachchi and Pethiyagoda, 2005

This species is known only from the vicinity of Kandy and Peredeniya, from 500-800m asl, in central Sri Lanka, although it might occur more widely (Manamendra-Arachchi and Pethiyagoda 2005). It is very common in a variety of habitats. It lives up to two metres above the ground on leaves in the understorey of moist evergreen forest; it also occurs in heavily degraded forest and even in rural gardens in the suburbs of Kandy. This species breeds by direct development. It is potentially at risk from agro-chemical pollution, and perhaps also very severe habitat clearance. It is not known to occur in any protected areas.

Bibliography: Bahir, M.M. *et al.* (2005), Manamendra-Arachchi, K. and Pethiyagoda, R. (2005)

Data Providers: Kelum Manamendra-Arachchi, Rohan Pethiyagoda

Philautus sordidus Manamendra-Arachchi and Pethiyagoda, 2005

This species is widespread in south-western and central Sri Lanka, and has been recorded from 80-1,060m asl (Manamendra-Arachchi and Pethiyagoda 2005). It is a common species. It lives in lowland rainforest up to three metres above the ground in vegetation, on wet rocks in cascades, leaves and tree trunks. It can also be found on wet rocks in streams in home gardens, among cardamom, in rubber plantations and along the edge of tea estates, providing that the area around the stream remains well vegetated. It is a species that breeds by direct development. The major threats to this species are the clearing of the forest and other vegetation around streams for cultivation of tea and other crops, the collection of wood, expanding human settlements and agro-chemical pollution. However, it is very common and adaptable, and so is not currently considered to be seriously threatened. It is found in many protected areas including Hiniduma Forest Reserve, Sinharaja Forest Reserve (World Heritage Site), Labugama Forest Reserve, Kanneliya Forest Reserve, and Haycock Forest Reserve. There is an ongoing captive-breeding programme for this species.

Bibliography: Manamendra-Arachchi, K. and Pethiyagoda, R. (2005)

Data Providers: Kelum Manamendra-Arachchi, Rohan Pethiyagoda

Philautus stictomerus (Günther, 1875)

This species is endemic to the lowland wet zone of south-western Sri Lanka, occurring from 60-515m asl. There are records from Kottawa, Kanneliya, Sinharaja and Kosmulla (Manamendra-Arachchi and Pethiyagoda 2005). This is a common species. It is a habitat generalist, living both in closed-canopy rainforest, and in open, anthropogenic, habitats. It is typically found in shrubs about one metre above the ground, and presumably breeds by direct development. This

species is potentially threatened by agro-chemical pollution, and also very severe habitat clearance for cultivation of tea, cardamom and other crops, leading to large-scale opening up of the vegetation. It occurs in the Sinharaja Forest Reserve (World Heritage Site), Kanneliya Forest Reserve and Kottawa Forest Reserve.
Bibliography: Bossuyt, F. and Dubois, A. (2001), Günther, A. (1876), Manamendra-Arachchi, K. and Pethiyagoda, R. (2005)
Data Providers: Kelum Manamendra-Arachchi, Rohan Pethiyagoda, Sushil Dutta, Anslem de Silva

Polypedates gongshanensis (Yang and Su, 1984)

This species is known from the western slope and southern part of Gaoligongshan (Gongshan, Tengchong and Baoshan Counties), in western Yunnan Province, China, and it has also recently been recorded from Puliebadze, in Nagaland, India. It is also likely to occur in Myanmar, but it has not yet been recorded from there. It is a common species. It inhabits agricultural land in hilly areas, and often occurs near streams, ponds and pools, and in the surrounding bamboo clumps, trees, shrubs and grasses. It lays eggs on leaves above water, and the larvae then develop in the water below. The major threat to this species is habitat loss due to agricultural development and subsistence wood collecting. Gaoligongshan National Nature Reserve is within the range of this species.
Taxonomy: This species was previously placed in the genus Rhacophorus.
Bibliography: Ao, J.M., Bordoloi, S. and Ohler, A. (2003), Fei, L. *et al.* (1999), MacKinnon, J. *et al.* (1996), Yang, D.-T. (1991b), Yang, D.-T. and Su, C.Y. (1984)
Data Providers: Yang Datong, Lu Shunqing

Polypedates nigropunctatus (Liu, Hu and Yang, 1962)

This species occurs in several widely scattered subpopulations in central and south-western China: Yuexi County in Anhui Province; Longling and Pingbian Counties in Yunnan Province; Weining and Leishan Counties in Guizhou Province; and Sangzhi and Chengbu Counties in Hunan Province. It probably occurs a little more widely than current records suggest. It has been recorded from 600-2,100m asl. It is very rare. It inhabits forest edges, shrubland, paddy fields, stream banks and creeks in hilly areas, and breeds in pools, ponds and ditches near paddy fields. The major threat to this species' habitat is the development of human settlements and associated infrastructure. Its range includes several protected areas.
Taxonomy: This species is sometimes placed in the genus Rhacophorus. Its taxonomic status requires further investigation.
Bibliography: Chen, B. *et al.* (1991), Fei, L. *et al.* (1999), Liu, C.-C., Hu, S.-Q. and Yang, F.H. (1962), MacKinnon, J. *et al.* (1996), Wu, L., Dong, Q. and Xu, R.-H. (1987), Yang, D.-T. (1991b)
Data Providers: Michael Wai Neng Lau, Yang Datong

Polypedates zhaojuensis Wu and Zheng, 1994

This species is endemic to southern Sichuan Province and Lichuan County in Hubei Province, China. It is likely to occur more widely than current records suggest. It has been recorded from 2,000-3,150m asl. It is a very common species within its restricted range. It inhabits hilly areas, and probably lives in forests and breeds in still water habitats such as pools and ponds. The main threat to this species is habitat loss and degradation, in particular due to farming of livestock. It is not known if it occurs in any protected areas.
Bibliography: MacKinnon, J. *et al.* (1996), Wu, G. and Zheng, X. (1994)
Data Providers: Wu Guanfu, Zheng Zhong Hua

Rhacophorus baluensis Inger, 1954

This species ranges along the mountainous ridge of north-western Borneo, Malaysia, from 1,200-2,200m asl. It can be locally abundant. It has been seen only in submontane and montane forests. Males gather at small ponds in which the larvae develop, in or at the edge of these forests. A possible future threat to the species' habitat is logging of upland forests, although at the moment its forest habitat is well protected in its only known localities. It has been recorded from Kinabalu and Gunung Mulu National Parks and the Crocker Range. Preservation of montane forests is the main conservation measure needed for this species.
Bibliography: Inger, R.F. (1954), Inger, R.F. and Stuebing, R.B. (1997), Malkmus, R. *et al.* (2002)
Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Rhacophorus bifasciatus van Kampen, 1923

This species is known from Mount Kerinci, Barisan-Selatan, Bengkulu, Jambi and Aceh in Sumatra, Indonesia. It probably occurs more widely than current records suggest. It seems to be uncommon. This species occurs in lowland and submontane forest, and presumably breeds in water, probably in streams. The main threat is localized forest loss due to agricultural development (including for non-timber plantations). It occurs in Barisan-Selatan, Kerinci-Seblat and Gunung Leuser National Parks.
Bibliography: van Kampen, P.N. (1923)
Data Providers: Djoko Iskandar, Mumpuni

Rhacophorus calcaneus Smith, 1924

This species is known from the Kon Tum Plateau of southern and central Viet Nam, the limestone region of central Lao People's Democratic Republic, and the Annamite mountain region and Tam Dao (from referred juveniles), northern Viet Nam (Inger, Orlov and Darevsky 1999; Stuart 1999). It is unclear whether or not the patchy distribution represents actual patchy occurrence, habitat specialization or limited survey effort. It has been recorded at altitudes between 700 and 1,200m asl in southern Viet Nam, and from 220-600m asl in the Lao People's Democratic Republic (Stuart 1999). This is a localized but presumably relatively common species in appropriate habitat, as evidenced by fairly large series in museums (Inger, Orlov and Darevsky 1999). It is restricted to undisturbed evergreen rainforest, and is generally observed on streamside vegetation (Inger, Orlov and Darevsky 1999). The major threat to this species is habitat loss due to smallholder and shifting agriculture, fires, and wood collection from the forest. Its range includes a number of protected areas.
Bibliography: Bourret, R. (1942), Inger, R.F., Orlov, N. and Darevsky, I.S. (1999), Smith, M.A. (1924), Stuart, B.L. (1999)
Data Providers: Peter Paul van Dijk, Nguyen Quang Truong

Rhacophorus dulitensis Boulenger, 1892

This species has been recorded from the northern half of Borneo, including Sabah (Malaysia), Sarawak (Malaysia), Kalimantan (Indonesia), and Brunei Darussalam. It probably occurs more widely than current records suggest, especially in areas between known sites. It has been recorded below 250m asl. This species forms rather large breeding aggregations, suggesting that it is locally abundant. It occurs in flat or hilly rainforests, and forms breeding aggregations around forest rain pools and swampy ground. Spawning sites are on the forest floor (Malkmus *et al.* 2002). The major threat to this species is clear-cutting of lowland forest. It is known from a number of protected areas in Borneo, but more effective protection of lowland forests in other parts of Borneo is necessary.
Taxonomy: Specimens of Rhacophorus dulitensis previously reported from Sumatra are now assigned to R. prominanus (Smith 1924, following Harvey, Pemberton and Smith (2002)).
Bibliography: Harvey, M.B., Pemberton, A.J. and Smith, E.N. (2002), Inger, R.F. and Stuebing, R.B. (1997), Malkmus, R. *et al.* (2002)
Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Rhacophorus everetti Boulenger, 1894

This species has been recorded in Borneo in the mountainous area from Gunung Kinabalu National Park in Sabah to Gunung Mulu National Park in Sarawak, Malaysia, including Brunei. In the Philippines, it occurs only on the island of Palawan. It has mainly been recorded from 750-1,800m asl, although in the Philippines several records have come from lowland forests at 300m asl. In Borneo, the fact that it has been seen at almost every submontane site where sampling has been intense, despite its cryptic form, suggests that it is common. It inhabits arboreal microhabitats, usually beside water (such as streams, ponds and rivers) in lower montane and lowland forests. Most individuals have been seen perched on moss-covered logs. The major threat to this species in Borneo is deforestation by clear-cutting; in the Philippines, some populations of this species are also threatened by habitat loss. In Borneo and Palawan, several totally protected areas provide refuge for this species.
Taxonomy: Taxonomic clarification of the status of the Palawan population in relation to the Bornean population is necessary.
Bibliography: Alcala, A.C. and Brown, W.C. (1985), Brown, W.C. and Alcala, A.C. (1994), Frost, D.R. (1985), Inger, R.F. (1999), Inger, R.F. and Stuebing, R.B. (1997)
Data Providers: Arvin Diesmos, Angel Alcala, Rafe Brown, Leticia Afuang, Genevieve Gee, Robert Inger, Robert Stuebing, Indraneil Das, Paul Yambun, Maklarin Lakim

Rhacophorus gauni (Inger, 1966)

This species is known from across Sabah (Malaysia), central Sarawak (Malaysia), and western and north-eastern Kalimantan (Indonesia) in Borneo, from 750-980m asl. It probably occurs more widely than current records suggest. In some areas it appears to be locally abundant. This species is confined to primary and old secondary hilly rainforests, where it lives in the vegetation lining the banks of small, clear, rocky streams. Foam nests are placed in branches overhanging these streams and the larvae live in the rocky bottoms of riffles. The major threats to this species are deforestation through clear-cutting and the resulting stream siltation (which deprives larvae of feeding sites). It is present in many protected areas. Preservation of lowland forest is the main conservation measure required for this species.
Bibliography: Inger, R.F. and Stuebing, R.B. (1997), Malkmus, R. *et al.* (2002)
Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Rhacophorus harrissoni Inger and Haile, 1959

This species has been recorded from numerous localities in northern Borneo, below 250m asl. It is likely to occur more widely than current records suggest. It is a common species in suitable habitat. It lives in primary or secondary lowland rainforests, in flat and hilly terrain. Males call singly at breeding sites, which are water-containing holes in the trunks of very large trees. The major threat to the species' habitat is the rapid pace of clear-cutting of the forest. It has been reported from many protected areas including Kinabalu, Tawau Hills, Lanjak Entimau and Gunung Mulu National Parks.
Bibliography: Inger, R.F. and Stuebing, R.B. (1997), Malkmus, R. *et al.* (2002)
Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Rhacophorus kajau Dring, 1984 "1983"

This species has been found below 700m asl in northern and western Borneo, where there are records from Sabah (Malaysia), Sarawak (Malaysia) and Kalimantan (Indonesia). There is no information on current population status. It has been found in primary and slightly disturbed lowland rainforests in flat and hilly terrain, where it perches on low vegetation overhanging small, rocky streams or swampy pools, in which it is presumed that the larvae also develop. The major threat to the species is habitat loss as a result of logging. It has been recorded from a number of isolated protected areas including Tawau Hills and Gunung Mulu National Park. Expansion of effective preservation of lowland forest in central Sarawak and Kalimantan is recommended.
Bibliography: Inger, R.F. and Stuebing, R.B. (1997)
Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Rhacophorus monticola Boulenger, 1896

This species is known only from south-western and central Sulawesi, in Indonesia, where it is found above 1,000m asl. It probably occurs more widely than current records suggest. It is relatively common. It lives in montane forest, including disturbed forest, and breeds in streams. The principal threat to its habitat is encroaching smallholder farming. This species occurs in Gunung Lombobatang Natural Reserve.
Bibliography: Iskandar, D.T. and Tjan, K.N. (1985)
Data Providers: Djoko Iskandar, Mumpuni

Rhacophorus prasinatus Mou, Risch and Lue, 1983

This species is known from Taipei, Ilan and Taoyuan in northern Taiwan, Province of China, from 400-600m asl. It is a common species. It inhabits orchards, tea plantations, bamboo forests, shrublands and forests in hilly areas, where these habitats are stable. It breeds in tree holes or, in marginal habitats, in cisterns, buckets or water tanks in orchards. The principal threats to this species are habitat destruction and degradation arising from the creation of plantations and the development of infrastructure for human settlement. Some populations have also disappeared because orchards were changed to tea plantations, which generally need frequent pesticide application. Several protected areas occur within the range of this species, and it is also a nationally protected species.
Bibliography: Chou, W.-H. and Lin, J.-Y. (1997b), Fei, L. *et al.* (1999), Lue, K.-Y., Tu, M.-C. and Hsiang, G. (1999), MacKinnon, J. *et al.* (1996), Mou, Y.P., Risch, J.P. and Lue, K.Y. (1983), Yang, Y.-J. (1998)
Data Providers: Lue Kuangyang, Chou Wenhao

Rhacophorus rufipes Inger, 1966

This species is known from scattered localities across Borneo in Sabah (Malaysia), Sarawak (Malaysia), and Kalimantan (Indonesia), below 250m asl. It is locally abundant at some sites. It has been seen only in primary lowland rainforest. The breeding habitat has yet to be recorded, though it presumably breeds in water by larval development. The major threat to the species' habitat is clear-cutting logging of the rainforest. It has been reported from three protected areas including Danum Conservation Area and Lanjak Entimau Wildlife Sanctuary. Expansion of effective preservation of lowland rainforest is essential for the conservation of this species.
Bibliography: Inger, R.F. and Stuebing, R.B. (1997)
Data Providers: Robert Inger, Djoko Iskandar, Indraneil Das, Robert Stuebing, Maklarin Lakim, Paul Yambun, Mumpuni

Rhacophorus taipeianus Liang and Wang, 1978

This species is endemic to Nantou County, northern Taiwan, Province of China, where it has been recorded below 1,500m asl. It is a common species. It inhabits orchards, forests and arable lands in hilly areas. It breeds in still-water habitats such as blocked ditches, rain pools, paddy fields, ponds and marshes. Paddy fields in the hilly areas are its major breeding habitat. The main threat to this species is the decreasing area of paddy fields for breeding in as a result of market-based decisions on what crops will be cultivated in the fields. Several protected areas are present within its range and it is also a nationally protected species.
Bibliography: Chou, W.-H. and Lin, J.-Y. (1997b), Fei, L. *et al.* (1999), Liang, Y.S. and Wang, C.S. (1978), Lue, K.-Y., Tu, M.-C. and Hsiang, G. (1999), MacKinnon, J. *et al.* (1996), Yang, Y.-J. (1998)
Data Providers: Lue Kuangyang, Chou Wenhao

Theloderma stellatum Taylor, 1962

This species is known from south-eastern Thailand (Taylor 1962) with certainty, and there are referred populations from southern Viet Nam (Orlov 1997b; Inger, Orlov and Darevsky 1999). It probably occurs more widely than current records suggest, especially in areas between known sites, and it is expected to occur in Cambodia. It has been recorded at altitudes between 50 and 1,200m asl. It is generally a rare or uncommon species, and only small series have been collected. It is known from evergreen forest, and has also been recorded from a rubber plantation. It has been heard calling from high in the canopy, and it breeds in water-filled tree holes, particularly in fallen rotting tree trunks. The main threat to this species is clearance or damage to remaining evergreen forests in its range due to smallholder farming and selective logging. It occurs in protected areas in Thailand and Viet Nam (in Khao Sebab and Cat Tien National Parks, respectively), but ensuring that suitable habitat in Gia Lai Province, southern Viet Nam, becomes effectively protected would benefit this species.
Bibliography: Inger, R.F., Orlov, N. and Darevsky, I.S. (1999), Murphy, R.W. (n.d.), Orlov, N.L. (1997b), Taylor, E.H. (1962)
Data Providers: Peter Paul van Dijk, Tanya Chan-ard

SCAPHIOPODIDAE

Spea hammondii (Baird, 1859) WESTERN SPADEFOOT

This species occurs in the Central Valley and bordering foothills of California and along the Coast Ranges (south of San Francisco Bay) in the USA, southward into north-western Baja California, Mexico. It is found from near sea level to 1,363m asl (Zeiner *et al.* (eds.) 1988, cited by Jennings and Hayes 1994), but usually below 910m asl (Stebbins 1985b). Jennings and Hayes (1994) mapped several dozen localities with extant populations. The total adult population size is unknown but is likely to be at least many thousands. Since the 1950s, substantial declines have been noted in the Central Valley and southern California. In southern California, more than 80% of the previously occupied habitat has been developed or converted to incompatible uses; more than 30% has been similarly affected in northern and central California (Jennings and Hayes 1994). In both the US and Mexican portions of its range, this species is still common where appropriate habitat exists. It lives in a wide range of habitats, from lowlands to foothills, in grasslands, open chaparral and pine-oak woodlands. It is fossorial, and breeds in temporary rain pools and slow-moving streams (for example, in areas flooded by intermittent streams). It also breeds in stock tanks and other artificial water bodies as long as the surrounding habitat is not developed for human settlement or irrigated agriculture. The main threat to this species is the development and conversion of habitat to incompatible uses such as human settlement and irrigated agriculture, which destroy the terrestrial habitat and change the hydroperiod of temporary pools. Recruitment may be unsuccessful in pools with bullfrogs (*Rana catesbeiana*) or introduced fish (for example, at least historically, those containing mosquitofish (*Gambusia*) used for mosquito abatement). This species is protected in a few small Nature Conservancy preserves, some US Department of Defence, Department of Energy, and Bureau of Land Management lands, some National Monuments, and some National Wildlife Refuges. It also occurs within the University of California's Natural Reserve System. This species is also covered in some US federal Habitat Conservation Plans, but is is not listed by US state or federal agencies.
Taxonomy: Spea multiplicata formerly was included in this species, which is frequently considered a synonym of S. multiplicata.
Bibliography: Behler, J.L. and King, F.W. (1979), Blackburn, L., Nanjappa, P. and Lannoo, M.J. (2001), Bragg, A.N. (1965), Brown, H.A. (1976), Ervin, E.L. *et al.* (2001), Hall, J.A. (1998), Jennings, M.R. and Hayes, M.P. (1994), Morey, S. and Reznick, D. (2004), Stebbins, R.C. (1954), Stebbins, R.C. (1985a), Tanner, W.W. (1989), Wiens, J.J. and Titus, T.A. (1991)
Data Providers: Georgina Santos-Barrera, Geoffrey Hammerson, Steven Morey

CAUDATA

AMBYSTOMATIDAE

Ambystoma barbouri Kraus and Petranka, 1989 STREAMSIDE SALAMANDER

This species occurs in the USA in central Kentucky, south-western Ohio, south-eastern Indiana, and also Tennessee (Scott *et al.* 1997). There are isolated populations in Livingston County, Kentucky, and westernmost West Virginia. Kraus and Petranka (1989) and Kraus (1996) provide further information on this species' range. Its total adult population size is unknown. This species can be found in upland deciduous forest in regions of undulating topography, mostly in areas with limestone bedrock, although some are found in non-calcareous regions with sandstone and shale (Kraus and Petranka 1989). Adults are usually found underground, under rocks, leaves, and logs. This species breeds most frequently in first and second order streams, and typically deposits eggs singly on undersides of flat rocks in pools and (less often) in faster-flowing regions. It less frequently breeds in ponds. Its breeding is most successful in streams that are seasonally ephemeral, have natural barriers (such as cascades and waterfalls) that prevent the upstream movement of predatory fish, and that have large flat rocks for oviposition (Kraus and Petranka 1989). This species might be restricted to upper portions of breeding streams because of fish predation (Petranka 1983). Larvae in stream pools in Kentucky were most abundant among filamentous green alga (*Cladophora*), which provides protection from predators and supports prey organisms (Holomuzki 1989). The main threats to this species have been destruction of native forests and their replacement with pastureland or residential areas (Petranka 1998). Stream drying, flooding, and predation were observed to be important sources of mortality in Kentucky by Petranka (1984b). Additional protection of forested ravines is needed as a conservation measure for this species in the Bluegrass region of Kentucky, which is undergoing rapid urbanization.
Taxonomy: This species was formerly included in Ambystoma texanum (Kraus and Petranka 1989).
Bibliography: Anderson, J.D. (1967), Barbour, R.W. (1971), Blackburn, L., Nanjappa, P. and Lannoo, M.J. (2001), Collins, J.T. (1990), Green, N.B. and Pauley, T.K. (1987), Holomuzki, J.R. (1989), Jones, T.R., Kluge, A.G. and Wolf, A.J. (1993), Kraus, F. (1985), Kraus, F. (1988), Kraus, F. (1996), Kraus, F. and Petranka, J.W. (1989), Minton Jr, S.A. (1972), Minton Jr, S.A. (2001), Petranka, J.W. (1983), Petranka, J.W. (1984a), Petranka, J.W. (1984b), Pfingsten, R.A. and Downs, F.L. (1989), Scott, A.F. *et al.* (1997), Shaffer, H.B., Clark, J.M. and Kraus, F. (1991), Storfer, A. (1999)
Data Providers: Geoffrey Hammerson

AMPHIUMIDAE

Amphiuma pholeter Neill, 1964 ONE-TOED AMPHIUMA

This species can be found in the lower Gulf coastal plain of Alabama, Florida, and Georgia, USA. It is nearly endemic to the Florida panhandle and adjacent Alabama (west to the western side of Mobile Bay) and Georgia (with two known localities), but with occurrences extending southward along the Gulf Coast of peninsular Florida to Levy and Hernando Counties. It appears not to range more than 80-120km inland from the coast (Means 1996). The total adult population size is unknown. This species is found in deep, organic, liquid muck in alluvial swamps of low-gradient second or third order streams, spring runs, and occasionally swampy terrace streams in floodplains. It is very habitat-dependent, so maintenance of non-polluted muck is essential for its survival. Potential threats to this species include exploitation and degradation of surrounding habitat (for logging and mining activities, and for the disposal of power plant sludge, for example). Stream pollution (for example by agricultural runoff), and groundwater disturbance are also potential threats. It occurs in very few protected areas, so its habitats are at significant risk. To assist its conservation, further work is needed to verify extant occurrences and field-check the type locality (Levy County). Surveys for this species in managed areas within its range need to be conducted, and potential sites should be identified from topographic maps. Entire drainage basins (including uplands) need to be preserved, and occurrences in at least 10 different drainages, preferably including at least one occurrence each in Georgia and Alabama, should be protected. Direct exploitation of this species needs to be monitored, and state limits on collecting should be established if exploitation is extensive. Pollution of its habitat also needs to be prevented.
Bibliography: Bartlett, R.D. and Bartlett, P.P. (1999), Behler, J.L. and King, F.W. (1979), Blackburn, L., Nanjappa, P. and Lannoo, M.J. (2001), Bury, R.B., Dodd, Jr., C.K. and Fellers, G.M. (1980), Conant R. (1975), Frost, D.R. (1985), Karlin, A.A. and Means, D.B. (1994), Means, D.B. (1992), Means, D.B. (1996), Moler, P.E. (1992b)
Data Providers: Geoffrey Hammerson, Dale Jackson

CRYPTOBRANCHIDAE

Andrias japonicus (Temminck, 1836) JAPANESE GIANT SALAMANDER

This species is endemic to Japan and is distributed in western Honshu, Shikoku and Kyusyu. It is an uncommon species. It lives and breeds in small to large rivers, preferring clear water, usually in forested areas. It has occasionally been found in rivers in urban areas. The adults can tolerate a wide variety of habitats, but are not necessarily able to breed in these habitats. Females lay their eggs in a string underwater and the larvae then develop in the streams. It is estimated to take at least five years for the young to reach maturity. This species is threatened by dam construction, the construction of artificial concrete riverbanks, and the alteration of river courses. Suitable habitats are therefore becoming increasingly fragmented. It might also be facing competition from the introduced Chinese Giant Salamander (*Andrias davidianus*). Genetic uniformity in this species is high, which increases its vulnerability to threatening processes. It has been designated as a special natural monument in Japan and is totally protected, and its habitats are protected in some areas. Asa Zoo has been breeding this species in captivity since 1979 (although no re-introductions have been performed), and it also rescues individuals from degraded habitats. CITES Appendix I.
Bibliography: Environment Agency (2000), Matsui, M. (2000e), Sengoku, S. *et al.* (1996), Zippel, K. (2005)
Data Providers: Yoshio Kaneko, Masafumi Matsui

Cryptobranchus alleganiensis (Daudin, 1803) HELLBENDER

This species occurs in the USA from southern Illinois (with a recent record from Wabash River; Smith 1961; Brandon and Ballard 1994; Phillips, Brandon and Moll 1999), southern Indiana (Minton 1972), Ohio (Pfingsten and Downs 1989), Pennsylvania (McCoy 1982), and south-western and south-central New York (Bishop 1941), to central and south-central Missouri (Johnson 1987), northern Arkansas (the Black River system and north fork of White River, and Eleven Point River, Randolph County; Trauth, Wilhide and Daniel 1992), northern Mississippi, Alabama (Tennessee River drainage; Mount 1975), northern Georgia, the western Carolinas (Martof *et al.* 1980), western Virginia (Tobey 1985), West Virginia (throughout, west of the Allegheny Front; Green and Pauley 1987), and extreme western Maryland. In Kentucky, near the centre of the range, Barbour (1971) regarded the species "most common in the upper reaches of the Cumberland, Kentucky, and Licking river systems". In Tennessee, no records exist for locations west of the Tennessee River (Redmond and Scott 1996). Collections are known from south-eastern Kansas (Neosha River), but these are likely to have been from introduced individuals and not from a naturally occurring population (Collins 1982, 1993; W.H. Busby pers. comm.). There are early reports, of uncertain validity, of Hellbenders in Iowa (Nickerson and Mays 1973b). Old records from the Great Lakes (Lake Erie) drainage, New Jersey, and Louisiana are probably erroneous (Pfingsten and Downs 1989; Harding 1997). The total adult population size is unknown, but the population is in overall decline (although there are secure populations in many areas). It can be found in rocky, clear creeks and rivers, usually where there are large rocks for shelter. It usually avoids water warmer than 20°C. Males prepare nests and attend eggs beneath large flat rocks or submerged logs. The principal threat to this species is degradation of habitat, since it is a habitat specialist with little tolerance of environmental change (Williams *et al.* 1981). It breathes primarily (approximately 90%) through the skin (Guimond 1970) and is therefore dependent on cool, well-oxygenated, flowing water. Construction of dams stops swift water flow and submerges riffles. Logging, mining, road construction and maintenance, and other activities, can cause extensive sedimentation that covers the loose rock and gravel important as nest sites, and for shelter and food production. In Illinois, "most former rocky habitat has been buried under silt" (Phillips, Brandon and Moll 1999). Chemical pollutants and acid mine drainage are probably destructive, especially to eggs and larvae. Thermal pollution of water with a consequent oxygen loss would also be detrimental. Several streams in Alabama "have been polluted, impounded, or otherwise modified to the extent that they are, from all indications, incapable of supporting hellbender populations" (Mount 1975). Injuries and deaths sometimes also result when the

salamanders are hooked by anglers, and some fishermen still believe that Hellbenders are dangerously poisonous and also destroy game fish and their eggs (both beliefs are false), and therefore kill them at every opportunity. In the past, there were even attempts by organized sportsmen's groups in West Virginia to eradicate them. There is some collecting of Hellbenders for sale as live animals or as preserved specimens. Over-collecting has been considered a serious threat in some parts; a decline was noted in the early 1990s, apparently due to collecting. Nickerson and Mays (1973b) noted additional factors they suspected might affect local populations, such as gigging (hunting of the species at night), heavy canoe traffic, dynamiting of large boulders to enhance commercial canoe traffic, and riverside cattle and pig pens. Hellbenders generally are intolerant of heavy recreational use of habitat. Many of the presently known populations are in national or state forests, national parks, and other public lands, where there is good potential for protecting habitat. The St. Louis Zoo maintains a captive-breeding programme for this species.

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Data Providers: Geoffrey Hammerson, Christopher Phillips

DICAMPTODONTIDAE

Dicamptodon ensatus (Eschscholtz, 1833) — CALIFORNIA GIANT SALAMANDER

This species can be found in west-central California, USA (Good 1989). It also occurs from Sonoma and Napa Counties south to Santa Cruz County and to Monterey County (Petranka 1998). It is found from 0-900m asl. The total adult population size is unknown but is likely to be at least several thousand. It is locally abundant (J.W. Petranka pers. comm.), but terrestrial adults are far less abundant than the aquatic larvae (Petranka 1998). No population data are available to determine trends in its population status (D.B. Wake pers. comm.). Larvae of this species usually inhabit clear, cold streams, but are also found in mountain lakes and ponds. Adults are found in humid forests under rocks and logs, for example, near mountain streams or rocky shores of mountain lakes (Stebbins 1985b). Eggs are usually laid in the headwaters of mountain streams. Breeding typically occurs in water-filled nest chambers under logs and rocks or in rock crevices. The greatest threats to this species are stream siltation and urban development (Petranka 1998; D.B. Wake pers. comm.), and it is also threatened by habitat fragmentation due to land use changes, including urbanization, agricultural development, and logging (H.H. Welsh pers. comm.). In the related Pacific giant salamander (*D. tenebrosus*), larvae may be reduced in numbers where there has been clear-cut logging (Corn and Bury 1989) or siltation from roads (Welsh and Ollivier 1998). However, opening of forest canopies over streams might lead temporarily to higher primary productivity that in turn increases the body sizes of larval *D. tenebrosus* (Murphy and Hall 1981). *Dicamptodon ensatus* occurs in numerous protected areas, and is therefore probably only moderately threatened, even though its range is small and close to urban areas.

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Data Providers: Geoffrey Hammerson, Bruce Bury

HYNOBIIDAE

Batrachuperus persicus Eiselt and Steiner, 1970 — PERSIAN MOUNTAIN SALAMANDER

This species is found on the Caspian slope of the Talesh and Alborz Mountains of Iran, from 0-1,500m asl. It is locally common to rare. This is an aquatic species known only from mountain streams surrounded by a few trees, in high rainfall Hyrcanian-type forest. The adults are rarely seen, but have been found in holes under rocks. The caves where the adults are presumed to occur have yet to be found, and the stream-dwelling larvae are more frequently encountered. It is believed to be very susceptible to habitat change (for example, stream pollution). This species is threatened by habitat loss arising from urban sprawl along the Caspian coast and foothills, agricultural development (rice cultivation), and logging (with associated siltation of streams), and also by aquatic pollution and in some parts of its range by increasing light pollution. Some populations might also be affected by extended periods of drought. This species occurs in the protected Hyrcanian forest region.

Bibliography: Baloutchi, M. and Kami, H.G. (1995), Kami, H.G. (1999), Schmidtler, J.J. and Schmidtler, J.F. (1971), Stöck, M. (1999), Thorn, R. (1968)

Data Providers: Theodore Papenfuss, Steven Anderson, Sergius Kuzmin, Nasrullah Rastegar-Pouyani

Ranodon shihi (Liu, 1950) — WUSHAN SALAMANDER

This species is known from central China including Henan, Shaanxi, Sichuan and Hubei Provinces, from 900-2,350m asl. It is common within its range. It is an aquatic species that inhabits small, low-gradient streams in forested areas. Eggs are laid in sacs that are then attached to the underside of rocks in the streams. The most significant threat to this species is over-exploitation as a food source, although habitat destruction and degradation (including for the construction of dams) are also affecting its habitat. Its range overlaps with several protected areas.

Taxonomy: We follow Kuzmin and Thiesmeier (2001), and include this species in Ranodon. Huang, Fei and Ye (1992) suggested moving this species to the genus Ranodon from Liua.

Bibliography: Fei, L. *et al.* (1999), Huang, Y.-Z., Fei, L. and Ye, C.-Y. (1992), Kuzmin, S. and Thiesmeier, B. (2001), Liu, C.C. (1950), MacKinnon, J. *et al.* (1996), Ye, C.-Y, Fei, L. and Hu, S.Q. (1993)

Data Providers: Wu Guanfu, Fei Liang

PLETHODONTIDAE

Aneides aeneus (Cope and Packard, 1881) — GREEN SALAMANDER

This species can be found from 140-1,350m asl in the Appalachian region, USA. Its range therefore includes extreme south-western Pennsylvania, extreme western Maryland, and southern Ohio to northern Alabama and extreme north-eastern Mississippi, with a disjunctive area in south-western North Carolina and adjacent South Carolina and Georgia, and additional isolated populations in central Tennessee and north-eastern West Virginia (Conant and Collins 1991). It was recently also recorded in Crawford County, Indiana (Madej 1998). It is patchily distributed and generally uncommon throughout most of the range (Petranka 1998). The disjunctive Blue Ridge Escarpment populations exhibited dramatic declines in abundance after the early 1970s (Corser 2001). Snyder (1991) reported that these populations appeared to be recovering, but Corser (2001) determined that three out of six populations first discovered in 1991 crashed in 1996-1997. Populations in the main range appear to have remained stable (Snyder 1991). This species can be found in damp (but not wet) crevices in shaded rock outcrops and ledges, or beneath loose bark and in cracks of standing or fallen trees (in cove hardwoods, for example). It can sometimes also be found in or under logs on the ground. It sometimes reaches high population densities in logged areas where the tree canopies are left. Eggs are laid in rock crevices, rotting stumps, or similar dark, damp places. The threats to this species that have caused it to decline in some areas are habitat loss (arising from development of the land and watershed areas) and possibly over-collecting and epidemic disease (Corser 2001). Severe drought might exacerbate other threats or cause temporary declines. To assist its conservation, better information on its current status is needed, as is information on the threats that it faces. The extent to which logging of old growth forest has reduced gene flow among rock outcrop populations should be studied (Petranka 1998), and whenever feasible a forested buffer of at least 100m should be left around occupied rock outcrops (Petranka 1998).

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Data Providers: Geoffrey Hammerson

Aneides ferreus Cope, 1869 — CLOUDED SALAMANDER

This species has a patchy distribution from Del Norte and Siskiyou Counties, California, north through western Oregon to the Columbia River, USA (Jackman 1998). It is generally scarce, but locally common. However, current forest management practices are causing declines. This species inhabits moist coniferous forests (such as redwood, Douglas fir, western hemlock, and Port Orford cedar forests), in forest edges, forest clearings, talus, and burned-over areas. It is usually found under bark, in rotten logs, or in rock crevices, and it may aggregate in decayed logs in summer. The downed logs that it inhabits are large (greater than 50cm in diameter), and of mid-decay classes with sloughing bark (Thomas *et al.* 1993). This species also sometimes climbs high into trees. It lays its direct-developing eggs in cavities in rotten logs, in rock crevices, under bark, or among vegetation. Welsh and Wilson (1995) reported a clutch of *Aneides ferreus* or *A.vagrans* eggs that had been deposited in a fern clump at the base of a limb 30-40m above the ground in a large redwood tree. This species is threatened by intensive, short-rotation logging practices that result in increasing scarcity of coarse woody debris on the forest floor (Corn and Bury 1991). These salamanders may thrive initially after logging but then decline as stumps and logs decay and critical microhabitats are eliminated (Petranka 1998). Protection of mature and old growth forests is the most important long-term conservation need for this species. The trend for increasing scarcity of required coarse woody debris on the forest floor might be counteracted to some degree by existing and proposed forest management plans for the Spotted Owl (*Strix occidentalis*) and Marbled Murrelet (*Brachyramphus marmoratus*; Thomas *et al.* 1993).

Taxonomy: Aneides vagrans was formerly included in this species.

Bibliography: Behler, J.L. and King, F.W. (1979), Blackburn, L., Nanjappa, P. and Lannoo, M.J. (2001), Corkran, C.C. and Thoms, C. (1996), Corn, P.S. and Bury, R.B. (1991), Frost, D.R. (1985), Jackman, T.R. (1998), Leonard, W.P. *et al.* (1993), Mahoney, M.J. (2001), McKenzie, D.S. and Storm, R.M. (1970), Nussbaum, R.A., Brodie, Jr., E.D. and Storm, R.M. (1983), Petranka, J.W. (1998), Stebbins, R.C. (1985b), Thomas, J.W. *et al.* (1993), Wake, D. (1965), Welsh, H.H., Jr. and Wilson, R.A. (1995)

Data Providers: Geoffrey Hammerson

Aneides flavipunctatus (Strauch, 1870) — BLACK SALAMANDER

This species can be found from extreme south-western Oregon south through north-western California, USA (as far south as central Santa Cruz and western Santa Clara Counties). It occurs from sea level to over 1,700m asl (Stebbins 1985b). No quantitative data are available on the population status of this salamander, but it is uncommon or rare in many areas where formerly it was common (Wake, cited by Petranka 1998). It can be found in forests, woodlands and grasslands. Southern populations prefer moist woodlands along streams and seepages, while northern populations are found in grassy areas, and far northern populations in moss-covered rockslides (Behler and King 1979). It is primarily terrestrial and is found under surface cover. A nest found in Santa Clara County, California, was located about 38cm below the surface of the ground in a soil cavity (Nussbaum, Brodie and Storm 1983). The most well understood threat to this species is habitat destruction (clear-cutting logging), but declines also appear to have taken place as a result of unexplained causes. Better information is needed concerning the threats to this species and its population trends. The unexplained causes of recent declines also need to be determined.

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Data Providers: Geoffrey Hammerson

Aneides vagrans Wake and Jackman, 1998 — WANDERING SALAMANDER

This species occurs in the USA from northern Del Norte and Siskiyou Counties, California, south through extreme western Trinity, Humboldt, and Mendocino Counties in an increasingly narrow, forested coastal strip to the vicinity of Stewart's Point, north-western Sonoma County, California. It is widespread on Vancouver Island and neighbouring islands in British Columbia, Canada, but reports from mainland British Columbia are unreliable. All Canadian populations might be derived from human-mediated introductions that occurred in conjunction with shipments of tan oak bark from California (Wake and Jackman, in Jackman 1998). The type locality in Humbold County is at 500m asl. The total adult population size of this species is unknown but is likely to be at least several thousand. This species occurs in moist coniferous forests, in forest edges, forest clearings, talus, and burned-over areas. It is usually found under bark or in rotten logs (in which it may aggregate in summer), and it requires large (greater than 50cm in diameter) downed logs of mid-decay classes with sloughing bark (Thomas *et al.* 1993). It often occurs high in trees, and some individuals or populations may rarely descend to ground level. It lays its eggs in cavities in rotten logs, under bark, or among vegetation. Welsh and Wilson (1995) reported a clutch of *Aneides vagrans* or *A. ferreus* eggs that had been deposited in a fern clump at the base of a limb 30-40m above the ground in a large redwood tree. This species is threatened by intensive, short-rotation logging practices that result in increasing scarcity of coarse woody debris on the forest floor (Corn and Bury 1991). These salamanders may thrive initially after logging but then decline as stumps and logs decay and critical microhabitats are eliminated (Petranka 1998). Protection of mature and old growth forests is the most important long-term conservation need for this species. The trend for increasing

scarcity of required coarse woody debris on the forest floor may be counteracted to some degree by existing and proposed forest management plans for the Spotted Owl (*Strix occidentalis*) and Marbled Murrelet (*Brachyramphus marmoratus*; Thomas *et al.* 1993).

Taxonomy: This species has been separated from Aneides ferreus (Jackman 1998).

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Data Providers: Geoffrey Hammerson, Kristiina Ovaska

Batrachoseps robustus Wake, Yanev and Hansen, 2002 — KERN PLATEAU SALAMANDER

This species is known from about three dozen sites from 1,615-2,800m asl in the southern Sierra Nevada, California, USA: in Kern Plateau, Tulare County, the western margin of the Owens Valley, Inyo County, and the Scodie Mountains, Kern County (Wake, Yanev and Hansen 2002). The total adult population size is unknown but is likely to be at least several thousand. Extensive fieldwork by Wake, Yanev and Hansen (2002) yielded more than 350 specimens. The habitat is of limited extent, especially the springs of the Kern Plateau and Scodie Mountains. Its population trend is unknown, but very likely to be relatively stable. Wake, Yanev and Hansen (2002) mentioned no evidence of any declines. It can be found along small permanent creeks and springs with riparian vegetation in arid wooded mountains, typically under stones and wood (Wake, Yanev and Hansen 2002). It breeds terrestrially by direct development. This species is vulnerable to habitat degradation through capping of springs by man, or other alterations of spring water habitat. Its habitat is easily altered by intrusion by man. Flash floods also pose a natural threat. These threats tend to be very localized, however, and overall this species is not significantly threatened under current conditions. The Kern Plateau and Scodie Mountain populations are on United States Department of Agriculture Forest Service land, but the level of protection might be inadequate.

Bibliography: Stebbins, R.C. (1985b), Wake, D.B., Yanev, K.P. and Hansen, R.W. (2002)

Data Providers: Geoffrey Hammerson

Bolitoglossa borburata Trapido, 1942

This species is restricted to the central part of the Venezuelan coastal mountain range in Aragua, Carabobo and Yaracuy States, Venezuela, where it has been recorded from 800-1,300m asl. It is naturally rare. It inhabits montane cloud forest and breeds by direct development (the eggs are laid in bromeliads). There are minimal threats to its habitat at present. Its range includes protected areas such as Parque Nacional Henri Pittier and Parque Nacional San Esteban.

Taxonomy: Specimens reported from Sierra San Luis, in the state of Falcón, Venezuela, might represent a different taxon (Mijares-Urrutia and Arends 2000).

Bibliography: Barrio Amorós, C.L. (2004), Brame, A.H. and Wake, D.B. (1963b), La Marca, E. (1994d), Manzanilla, J. (2001), Manzanilla, J. *et al.* (1995), Manzanilla, J. *et al.* (1996), Mijares-Urrutia, A. and Arends, A. (2000), Péfaur, J.E. and Rivero, J.A. (2000), Trapido, H. (1942), Vial, J.L. and Saylor, L. (1993)

Data Providers: Enrique La Marca, Jesús Manzanilla

Bolitoglossa cuchumatana (Stuart, 1943)

This species is restricted to the departments of El Quiché and Huehuetenango, Guatemala, in the Cordillera de los Cuchumatanes at 1,200-2,500m asl. It is quite common but there is little recent information on its population status, although at least eight populations are known. It occurs in cloud forest and can survive in degraded habitats. Individuals have been found on the ground, under bark, and in arboreal bromeliads. Breeding is by direct development. The main threat to this species is loss of its habitat through agricultural encroachment. Although it can tolerate some habitat degradation, it does not live in open agricultural habitats. Much of its range is included in the proposed Parque Nacional Cuchumatán. Surveys are needed to gather more information on its population status, distribution, and threat status.

Bibliography: Campbell, J.A. (2001), Elias, P. (1984), Wake, D.B. (1987), Wake, D.B. and Brame, A.H. (1963)

Data Providers: David Wake, Manuel Acevedo

Bolitoglossa dofleini (Werner, 1903)

This species ranges from extreme northern Alta Verapaz, Guatemala, and Cayo District in southern Belize, to north-central Honduras. In Honduras it is known from Quebrada Grande in Copan Department, Sierra de Merendon west of San Pedro Sula, Cortes Department, and Portillo Grande in Yoro Department. It occurs from 50-1,370m asl, and probably occurs more widely within the general distribution than currently recorded. It is extremely common in some places within its restricted range. It lives in premontane wet forest, and also successfully in disturbed habitats such as cardamom plantations. The females tend to live on the ground under logs, while the males are arboreal. It breeds by direct development. This species is potentially threated by the international pet trade, in which it features significantly, and since this species takes 10-12 years to mature such trade could easily be locally unsustainable. An additional potential threat to this species is chytridiomycosis, which has recently been reported in animals that were imported into Belgium. However, the origin of the infection (whether from the wild, or from other captive animals) is not known. One of the sites in Honduras where this species is found is at the edge of Parque Nacional Cusuco, and in Guatemala it occurs in Parque Nacional Laguna Lachuá and the Reserva de Manantiales Montañas del Mico. Given the potential threat of chytridiomycosis populations of this species should be monitored carefully.

Bibliography: Campbell, J.A. (1998), Campbell, J.A. (2001), Lee, J.C. (1996), Lee, J.C. (2000), McCoy, C.J. (1991), McCranie, J.R. and Wilson, L.D. (2002b), McCranie, J.R., Wake, D.B. and Wilson, L.D. (1996), Meyer, J.R. and Wilson, L.D. (1971), Pasmans, F., Zwart, P. and Hyatt, A.D. (2004), Taylor, E.H. (1944), Wilson, L.D. (1979)

Data Providers: Gustavo Cruz, Larry David Wilson, Randy McCranie, Manuel Acevedo, David Wake, Julian Lee

Bolitoglossa flaviventris (Schmidt, 1936)

This species ranges from the Pacific slopes of southern Chiapas, Mexico, to south-western Guatemala, from sea level to 700m asl. It is likely to occur more widely in Guatemala than has so far been recorded. It is not uncommon, but has probably declined. It occurs in subtropical lowland areas of mixed forest, and also in banana plantations and the edges of cane fields in riparian areas. Breeding is by direct development. This species is threatened by habitat loss arising from increasing urbanization, settlement by refugees, and expanding agricultural cultivation and livestock gazing. Although it is tolerant of modified habitats, the level of habitat disturbance is extremely severe throughout most of its range, and it probably cannot survive in very open areas. It is not known from any protected areas. A survey to evaluate the population status of this species is required.

Bibliography: Campbell, J.A. (2001), García-París, M., Parra-Olea, G. and Wake, D.B. (2000)

Data Providers: Gabriela Parra-Olea, David Wake, Manuel Acevedo

Bolitoglossa hartwegi Wake and Brame, 1969

This species is known from Cerro Zontehuitz, San Cristobal de las Casas, and Chamula Districts, north-central Chiapas, Mexico, and from at least three populations in the Cordillera de los Cuchumatanes and the Sierra Madre, Guatemala, from 1,200-2,500m asl. It is a reasonably common species. It inhabits coniferous and oak forest often associated with limestone outcrops. It is a crevice-dweller sometimes found beneath flakes of rock on ledges, or under the bark of logs on the ground and less frequently in arboreal bromeliads. This species can persist in degraded habitats, and it breeds by direct development. The main threats to this reasonably adaptable species are the alteration and clear-cutting of its habitat due to increasing urbanization, the settlement of refugees, and expanding cultivation and livestock grazing. It occurs in the Reserva Ecológica Huitepec run by Pronatura near San Cristobal, Chiapas, Mexico. It is not known from any protected areas in Guatemala.

Bibliography: Bille, T. (1998), Campbell, J.A. (2001), Elias, P. (1984), Parra-Olea, G. and Garcia-Paris, M. (1998), Parra-Olea, G., García-París, M. and Wake, D.B. (1999), Parra-Olea, G., Garcia-Paris, M. and Wake, D.B. (2004), Wake, D.B. (1987), Wake, D.B. and Brame, A.H. (1969), Wake, D.B. and Lynch, J.F. (1988)

Data Providers: Gabriela Parra-Olea, David Wake, Manuel Acevedo

Bolitoglossa helmrichi (Schmidt, 1936)

This species is known only from the mountainous regions of south-western Alta Verapaz and Baja Verapaz Departments, Guatemala, from 1,000-2,290m asl. It can be locally common. This species lives in cloud forests and also in coffee plantations shaded by bananas. It tends to be arboreal, occurring under bark and in bromeliads, and it breeds by direct development. This species is threatened by changes in agricultural practices since although it can persist in shade-grown coffee plantations, it cannot survive in more open areas (which tend to lose humidity and become too dry), and there is now a tendency to halt coffee farming in favour of other agricultural activities, most of which are resulting in more open situations unsuitable for this species. It occurs in Biotopo del Quetzal and the Reserva de la Biósfera Sierra de las Minas.

Bibliography: Campbell, J.A. (2001), Elias, P. (1984), Wake, D.B. (1987), Wake, D.B. and Brame, A.H. (1963), Wake, D.B. and Brame, A.H. (1969), Wake, D.B. and Lynch, J.F. (1976), Wake, D.B. and Lynch, J.F. (1982)

Data Providers: Manuel Acevedo, David Wake

Bolitoglossa lincolni (Stuart, 1943)

This species occurs on the central plateau of Chiapas, Mexico, and in several mountainous areas in western Guatemala, including the upper slopes of the Guatemalan Plateau close to the Mexican border, Vulcan Tajumulco, Montanas de Quilco, and the south-western and eastern Sierra de los Cuchumatanes. Its altitudinal range is 2,200-3,000m asl. It is locally common, for example at Quilco and San Cristobal. It is expanding on Vulcan Tajumulco downwards into former cloud forest habitat at the expense of *Bolitoglossa hartwegi*. This species is largely terrestrial, living in low vegetation, under bark, and in bromeliads. It seems to be more of a generalist than other nearby congeners, and it can survive to some degree in degraded vegetation. Breeding is by direct development. A serious threat to this species is the complete clearance of forest due to logging, and expanding agricultural cultivation, livestock grazing, and human settlement. Although it is reasonably adaptable, it does not survive when habitats become very open. It has not been recorded from any protected areas.

Bibliography: Campbell, J.A. (2001), Elias, P. (1984), Parra-Olea, G., García-París, M. and Wake, D.B. (1999), Wake, D.B. (1987), Wake, D.B. and Brame, A.H. (1963), Wake, D.B. and Lynch, J.F. (1976), Wake, D.B. and Lynch, J.F. (1982), Wake, D.B. and Lynch, J.F. (1988), Wake, D.B., Yang, S.Y. and Papenfuss, T.J. (1980)

Data Providers: Manuel Acevedo, David Wake

Bolitoglossa platydactyla (Gray, 1831)

This species ranges widely from southern San Luis Potosi southward through southern Veracruz to north-western Chiapas, Mexico, where it occurs below 1,100m asl. It was formerly quite common, but is now hard to find. It lives in tropical forests and savannahs, and can survive in modified habitats such as cities, farmland, banana plantations and areas of coffee cultivation. Breeding is by direct development. Although it is generally adaptable, the transformation of the landscape into very open habitats probably causes a general drying of microhabitats to the detriment of this species. It occurs in several protected areas and is protected by Mexican law under the "Special Protection" category (Pr).

Bibliography: García-París, M., Parra-Olea, G. and Wake, D.B. (2000), Parra-Olea, G., Papenfuss, T.J. and Wake, D.B. (2001), Perez-Higareda, G. (1981a), Wake, D.B. (1987)

Data Providers: Gabriela Parra-Olea, David Wake

Bolitoglossa walkeri Brame and Wake, 1972

This species occurs from the department of Valle del Cauca, extending to the department of Cauca (Munchique), on the Oriental slope of the Cordillera Occidental, in Colombia, from 1,980-2,050m asl. It is a very common species. It occurs on herbaceous vegetation, epiphytes and fallen leaves, inside cloud forests with high humidity, and it has also been recorded from disturbed forest edges such as roadsides in forest. The details of its breeding habits are not known. There are no major threats to this species at present. Some of its populations are within Parque Nacional Natural Munchique and Parque Nacional Natural Farallones de Cali.

Taxonomy: This species is a complex of more than one species.

Bibliography: Acosta-Galvis, A.R. (2000), Brame, A.H. and Wake, D.B. (1972), Ruiz-Carranza, P.M., Ardila-Robayo, M.C. and Lynch, J.D. (1996)

Data Providers: Fernando Castro, Maria Isabel Herrera, John Lynch

Chiropterotriton priscus Rabb, 1956

This species is known from several locations around Cerro Potosi near Ojo de Agua, north-west to Galeana town, Nuevo Leon, north-eastern Mexico, above 3,000m asl. The most recent surveys indicate that this species is still present and abundant. It lives terrestrially in pine and pine-fir forest, and its preferred microhabitats are under fallen logs and under bark. It can also live in somewhat disturbed habitat. Breeding is by direct development. The habitat of this species is probably relatively secure, although it is at risk from logging. This species is not known from any protected areas, although it is protected by Mexican law under the "Special Protection" category (Pr).

Bibliography: Darda, D. (1994), Liner, E.A. (1998a), Parra-Olea, G., García-París, M. and Wake, D.B. (1999), Rabb, G.B. (1956), Wake, D.B. (1987)

Data Providers: Gabriela Parra-Olea, David Wake

Desmognathus abditus Anderson and Tilley, 2003 — CUMBERLAND DUSKY SALAMANDER

This species is restricted to the Cumberland Plateau of Tennessee, USA, at 400-700m asl, from just south of the Cumberland Mountains near Wartburg, Morgan County, south to near Tracy City, Grundy County. There is no information available on the population status of this species. It is found near streams on this forested plateau. Individuals

are most often found on land but within a metre of water, or under rocks along small streams and under moss and debris on vertical rock faces behind cascades. A major threat in this area is habitat loss and degradation due to the building of second and retirement homes. This species is found in two protected areas: Frozen Head State Natural Area Reserve and Obed National Scenic River.
Bibliography: Anderson, J.A. and Tilley, S.G. (2003)
Data Providers: Geoffrey Hammerson

Desmognathus aeneus Brown and Bishop, 1947 — SEEPAGE SALAMANDER

This species occurs in relatively isolated, localized populations in south-western North Carolina, eastern Tennessee, northern Georgia, and north-central Alabama, USA. In Alabama, an apparent hiatus exists between western populations in the Fall Line Hills region and eastern populations in the Blue Ridge and adjacent piedmont regions, and an apparently disjunctive population is also present in the piedmont of north-eastern Georgia (Harrison 1992). This species occurs at up to 210-1,340m asl in the east, and as low as 30m asl in west-central Alabama. A record from Transylvania County, North Carolina, is based on a misidentified *Desmognathus wrighti*. There are an estimated 21-100 extant locations in North Carolina (H.W. LeGrand pers. comm.), while Redmond and Scott (1996) mapped 14 collection sites in Tennessee. Williamson and Moulis (1994) mapped 52 collection locations in Georgia. There are possibly 6-20 extant occurrences in Alabama (J.R. Bailey pers. comm.). It was recently discovered at two locations in South Carolina (Livingston, Spencer and Stuart 1995), where the conditions of the occurrences were considered good, although these occurences have not been extensively surveyed (S.H. Bennett pers. comm.). The total adult population size of this species is unknown. Overall, it is common to sometimes very common in undisturbed, suitable habitat. However, it is sometimes not present in what seems to be suitable habitat. It was not considered rare by the Scientific Council on Reptiles and Amphibians in North Carolina during the late 1980s (H.E. LeGrand pers. comm.). In the southern Appalachians, populations fluctuated over a 20-year period (early 1970s to early 1990s), with no apparent long-term trend (Hairston and Wiley 1993). This species is declining in Alabama (J.R. Bailey pers. comm.), and possibly also in North Carolina (A.L. Braswell pers. comm.). It is listed in Tennessee as in need of management (Redmond and Scott 1996), and is believed to be stable in South Carolina (S.H. Bennett pers. comm.). It can be found beneath leaf-litter or surface debris on the ground in mixed hardwood forests near small creeks, springs, and seepage areas, and also occurs in damp shaded ravines. Females usually oviposit beneath clumps of moss or other objects within or near seepages or in the vicinity of small streams. Development is direct, so there are no aquatic larvae. Outside the breeding season these salamanders are usually found beneath leaf-litter on the banks of small streams or in the vicinity of seepage areas. They are seldom active on the surface and are probably not very adaptable to habitat degradation. A significant threat to this species is logging, which has evidently extirpated some Alabama populations (Folkerts 1968). Southern populations are also vulnerable to intensive forest management practices such as clear-cutting. It is moderately threatened in Alabama by conversion of hardwood forest to pine plantations (J.R. Bailey pers. comm.). This species does occur in several protected areas, but to assist its conservation forest buffers should also be left around seepages and headwater streams in areas scheduled for logging (Petranka 1998).
Bibliography: Behler, J.L. and King, F.W. (1979), Blackburn, L., Nanjappa, P. and Lannoo, M.J. (2001), Folkerts, G.W. (1968), Frost, D.R. (1985), Hairston, N.G., Sr., and Wiley, R.H. (1993), Harrison, J.R. (1992), Livingston, P.G., Spencer, C.C. and Stuart, B.L. (1995), Martof, B.S. *et al.* (1980), Mount, R.H. (1975), Petranka, J.W. (1998), Redmond, W.H. and Scott, A.F. (1996), Williamson, G.K. and Moulis, R.A. (1994)
Data Providers: Geoffrey Hammerson, Julian Harrison

Eurycea tynerensis Moore and Hughes, 1939 — OKLAHOMA SALAMANDER

According to Bury, Dodd and Fellers (1980), the range of this species includes the drainages of the Neosho and Illinois Rivers, the Springfield Plateau section of the Ozark plateaus of south-western Missouri (McDonald County), north-western Arkansas (Benton, Washington, and Carroll Counties), and north-eastern Oklahoma (Adair, Cherokee, Delaware, Mayes, and Ottawa Counties), USA, at elevations below 305m asl. Petranka (1998) also indicated that the range includes eastern Oklahoma, south-western Missouri, and north-western Arkansas (but see Taxonomy). Its total adult population size is unknown, but it has been found at 50 of 213 sites examined in three states. Its habitat is small, clear, spring-fed streams with temperatures normally under 24°C, with a coarse substrate of sand, gravel, or bedrock, where it hides under or among rocks or in submerged vegetation (Bury, Dodd and Fellers 1980). It is most commonly found in shallow (less than 10mm deep), slowly moving water with medium-sized rocks and with high densities of aquatic invertebrates (Tumlison, Cline and Zwank 1990b,c). It lives below the substrate surface during droughts, and it may use karst systems to move within or between stream systems (Tumlison, Cline and Zwank 1990c). Eggs are laid on the undersides of rocks. This species is threatened by direct habitat destruction (for example by flooding by impoundments), and by activities (such as agriculture, urbanization, stream channeling, and gravel removal) that result in silting or pollution of the aquatic habitat (Bury, Dodd and Fellers 1980). This species requires habitat protection and more research on its population status and trends.
Taxonomy: Preliminary electrophoretic data indicate that Eurycea tynerensis is restricted to a few counties in eastern Oklahoma; populations in Arkansas and Missouri are not genetically distinct from E. multiplicata griseogaster (Wilkinson, in Figg 1991). For this assessment, we retain the traditional understanding of E. tynerensis as occurring in Oklahoma, Arkansas and Missouri, pending resolution of this issue.
Bibliography: Behler, J.L. and King, F.W. (1979), Blackburn, L., Nanjappa, P. and Lannoo, M.J. (2001), Bury, R.B., Dodd, Jr., C.K. and Fellers, G.M. (1980), Conant, R. and Collins, J.T. (1991), Dundee, H.A. (1965), Figg, D.E. (1991), Frost, D.R. (1985), Johnson, T.R. (1977), Johnson, T.R. (1987), Petranka, J.W. (1998), Tumlison, R., Cline, G.R. and Zwank, P. (1990a), Tumlison, R., Cline, G.R. and Zwank, P. (1990b), Tumlison, R., Cline, G.R. and Zwank, P. (1990c)
Data Providers: Geoffrey Hammerson

Nototriton abscondens (Taylor, 1948)

This species occurs in the subhumid and humid premontane and montane areas of the Cordillera de Tilaran and the Cordillera Central of Costa Rica, from 1,010-2,500m asl (Savage 2002). It can be locally common, although there are not many recent records. It is found in terrestrial and arboreal moss mats in premontane moist and wet forest and rainforest and lower montane rainforest. It can also survive alongside roads where there are moss mats, but it does not survive in heavily degraded habitats. Breeding is by direct development. The main threat to this species is forest fragmentation leading to open habitats, as a result of encroaching agricultural cultivation and livestock grazing. A significant portion of its range is protected in Parque Nacional Braulio Carrillo.
Bibliography: García-París, M. *et al.* (2000), García-París, M. and Wake, D.B. (2000), Good, D.A. and Wake, D.B. (1993), Jokush, E.L. and Garcia-Paris, M. (1998), Savage, J.M. (2002), Wake, D.B. (1987)
Data Providers: Federico Bolaños, David Wake, Jay Savage

Nototriton picadoi (Stejneger, 1911)

This species is known only from the northern end of the Cordillera de Talamanca, Costa Rica, from 1,200-2,200m asl (Savage 2002). It is not uncommon, and is probably the commonest salamander in Parque Nacional Tapantí. It lives in moss mats and bromeliads in premontane rainforest and lower montane wet forest, and is not found in degraded habitats. Breeding is by direct development. The main threat to this species is forest loss and fragmentation, as a result of encroaching agricultural cultivation and livestock grazing. Part of its range is protected in Parque Nacional Tapantí.
Bibliography: Bruce, R.C. (1998), Bruce, R.C. (1999), García-París, M. *et al.* (2000), García-París, M. and Wake, D.B. (2000), Good, D.A. and Wake, D.B. (1993), Savage, J.M. (2002), Wake, D.B. (1987)
Data Providers: Federico Bolaños, David Wake, Jay Savage

Nototriton richardi (Taylor, 1949)

This species occurs on the Atlantic slopes of the Cordillera Central of Costa Rica, from 1,370-1,800m asl (Savage 2002). It has been found to be more common than was once thought, but there are still few records. It lives in leaf-litter and moss banks in lower montane rainforest and marginally in higher altitude portions of premontane rainforest. It is not found in degraded habitats. Breeding is by direct development. The main threat to this species is forest loss and fragmentation, as a result of encroaching agricultural cultivation and livestock grazing. Much of the range of this species is protected in Parque Nacional Braulio Carrillo.
Bibliography: García-París, M. *et al.* (2000), García-París, M. and Wake, D.B. (2000), Good, D.A. and Wake, D.B. (1993), Savage, J.M. (2002), Wake, D.B. (1987), Wake, D.B. and Elias, P. (1983)
Data Providers: Federico Bolaños, David Wake, Jay Savage

Plethodon caddoensis Pope and Pope, 1951 — CADDO MOUNTAIN SALAMANDER

This species can be found in the Caddo Mountains, Ouachita Mountains region, south-western Arkansas, USA (Conant and Collins 1991; Petranka 1998), from 275-655m asl. It is locally common (Saugey, Height and Heath 1985; Petranka 1998). As of 2004, the Arkansas Natural Heritage Commission had recorded about 20 occurrences. Several of these were regarded as having good to excellent viability at the time of last visitation, but most of the occurrences did not have recent information. It is recorded as being "locally abundant in or near talus slopes or other rocky sites, particularly on north-facing slopes that support mature, mesic forests" (Petranka 1998). It moves into underground retreats under shaded talus or in abandoned mine shafts during hot, dry weather (Petranka 1998), during which large numbers have been found in abandoned mines on rock walls near water in summer (Saugey, Height and Heath 1985). It has also been found in secondary growth, mixed deciduous woods with some pine (Pope 1964). Eggs clusters have been found in mine shafts (Heath, Saugey and Heidt 1986). Habitat loss and degradation represents a localized threat, and timber management activities and conversion of land to pine plantations probably also reduced suitable habitat for this species in the past (Warriner 2002). Most populations are in the Ouachita National Forest, which affords this species some level of protection (Warriner 2002), and it is also state-listed as being a species of special concern.
Bibliography: Behler, J.L. and King, F.W. (1979), Blackburn, L., Nanjappa, P. and Lannoo, M.J. (2001), Blair, A.P. (1957), Conant, R. and Collins, J.T. (1991), Dowling, H.G. (1956), Dowling, H.G. (1957), Duncan, R. and Highton, R. (1979), Frost, D.R. (1985), Heath, D.R., Saugey, D.A. and Heidt, G.A. (1986), Highton, R. (1962), Mahoney, M.J. (2001), Petranka, J.W. (1998), Pope, C.H. (1964), Pope, C.H. and Pope, S.H. (1951), Robison, H.W. and Allen, R.T. (1995), Saugey, D.A., Height, G.A. and Heath, D.R. (1985), Spotila, J.R. (1972), Taylor, C.L., Wilkinson, Jr., R.F., and Peterson, C.L. (1990), Trauth, S.E., Robison, H.W. and Plummer, M.V. (2004), Warriner, M.D. (2002a)
Data Providers: Geoffrey Hammerson

Plethodon elongatus Van Denburgh, 1916 — DEL NORTE SALAMANDER

This species can be found in the vicinity of Port Orford, south-western Oregon, south to central Humboldt County, north-western California, USA (Petranka 1998). It occurs from sea level up to about 1,600m asl (Ollivier and Welsh 1999). The total adult population size is unknown but it is locally abundant in appropriate habitat. It is strongly associated with moist talus and rocky substrates in redwood or Douglas fir forests, including in riparian zones. It is usually found among moss-covered rocks, under associated bark and other forest litter, but usually not in seeps or other very wet areas. It is associated with older forests with closed, multi-storied canopy (composed of both conifers and hardwoods), with a cool, moist microclimate, and rocky substrates dominated by cobble-sized fragments, and these conditions may be optimal throughout most of the range (Welsh 1990; Welsh and Lind 1995). In coastal regions it may be common in recently harvested forest areas with no associated older forests (Diller and Wallace 1994). The eggs are laid in concealed terrestrial sites where they develop directly without a larval stage. It is declining due to clear-cutting logging of old-growth forest habitat, especially in drier inland locations. It occurs in Redwood National Park and associated state redwood parks in Humboldt and Del Norte Counties, California.
Taxonomy: Mahoney (2004) decribes high genetic diversity within the Plethodon elongatus complex with two highly diferentiated evolutionarily significant units in the central to southern portion of the range in Humboldt County, California.
Bibliography: Behler, J.L. and King, F.W. (1979), Blackburn, L., Nanjappa, P. and Lannoo, M.J. (2001), Brodie, E.D., Jr. and Storm, R.M. (1971), Clayton, D.R., Ollivier, L.M. and Welsh, H.H. Jr. (1998), Diller, L.V. and Wallace, R.L. (1994), Frost, D.R. (1985), Jennings, M.R. and Hayes, M.P. (1994), Mahoney, M.J. (2001), Mahoney, M.J. (2004), Nussbaum, R.A., Brodie, Jr., E.D. and Storm, R.M. (1983), Ollivier, L.M. and Welsh, H.H. (1999), Petranka, J.W. (1998), Stebbins, R.C. (1972), Stebbins, R.C. (1985b), Thomas, J.W. *et al.* (1993), Welsh Jr, H.H. (1990), Welsh Jr, H.H. and Lind, A.J. (1995), Welsh, H.H. and Lind, A.J. (1992), Welsh, H.H. and Lind, A.L. (1988)
Data Providers: Geoffrey Hammerson, Hartwell Welsh

Plethodon jordani Blatchley, 1901 — RED-CHEEKED SALAMANDER

This species can be found in Gregory Bald and Great Smoky isolates, and the extreme northern part of the Balsam isolate, in North Carolina and Tennessee, USA, from 768-1,780m asl (Highton and Peabody 2000). Dodd (2004) mapped more than 100 collection or observation sites in the Great Smokies, and reported that this species is generally abundant. This species inhabits moist dense hardwood, coniferous, and mixed forests with mossy logs and slabs of rock. It is found in burrows, leaf-litter, or in spaces under rocks and logs during the day. It tolerates some level of disturbance, and much of its range occurs in secondary growth forest. Breeding is by direct development, and the eggs are probably laid in underground cavities. Potential threats to this species are factors that negatively affect spruce fir forests such as global warming, acid rain, and balsam woolly adelgid (*Adelges piceae*) infestations. This species is protected from the detrimental effects of clear-cutting (Ash 1997, Petranka, Eldridge and Haley 1993, Petranka 1998, Ash and Pollock 1999) by occurring completely within the Great Smoky Mountains National Park. It does not appear on any state or federal list of endangered species.
Taxonomy: Highton and Peabody (2000) recently separated Plethdon jordani into multiple species: P. montanus, P. metcalfi, P. amplus, P. meridianus, P. jordani, P. shermani and P. cheoah.
Bibliography: Ash, A.N. (1997), Ash, A.N., and Pollock, K.H. (1999), Behler, J.L. and King, F.W. (1979), Conant, R. and Collins, J.T. (1991), Crother, B.I. *et al.* (2000), Dawson, W.R., Ligon, J.D. and Murphy, J.R. (1987), Dodd, Jr, C.K. (2004), Hairston, N.G. (1983), Hairston, N.G., Sr. *et al.* (1992), Hairston, N.G., Sr., and Wiley, R.H. (1993), Highton, R. (1973), Highton, R. (1983), Highton, R. (1998), Highton, R. and Peabody, R.B. (2000), Mahoney, M.J. (2001), Martof, B.S. *et al.* (1980), Mitchell, J.C. and Taylor, J.A. (1986), Nishikawa, K.C. (1990), Petranka, J.W. (1998), Petranka, J.W. and Murray, S.S. (2001), Petranka, J.W., Eldridge, M.E. and Haley, K.E. (1993), Pope, C.H. (1928)
Data Providers: Geoffrey Hammerson, David Beamer

Plethodon larselli Burns, 1953 — LARCH MOUNTAIN SALAMANDER

This species can be found in the USA along the Columbia River Gorge in the Washington and Oregon Cascades, and as four populations near Mount Saint Helens and just south of Mount Rainier. It is found at altitudes up to 1,036m asl (Leonard *et al.* 1993). It can be common in optimal microhabitats. Washington State's Department of Fish and Wildlife had 67 unique records for this species as of 1997 (Dvornich, McAllister and Aubry 1997). Most of these sites are expected to be extant, though some of them might represent single populations. There are approximately

15 populations in Oregon. The total adult population size is unknown, but populations are small. Populations appear stable, and new populations are being discovered in Washington State (L.A. Hallock pers. comm.). This species inhabits lava talus slopes in Douglas fir stands, and is typically found under canopy cover in talus of suitable size that has accumulated considerable amounts of humus. It rests under rocks and bark and in rotten wood (Stebbins 1985b), and moves deep under talus in cold weather or when it is dry or hot. Breeding occurs in the same habitats in late autumn or spring on warm rainy nights. This species does not tolerate the loss of canopy cover, which appears to allow congeners to out-compete it (Herrington 1985). It is threatened in some areas by logging (which changes the microclimate and composition of the talus slopes) and by the use of taluses for road construction (Herrington 1988; Pfrender 1993). Many populations are protected within the Columbia River National Scenic Area (Leonard *et al.* 1993), but populations on national forest and private land might not be adequately protected.

Bibliography: Aubry, K.B., Senger, C.M. and Crawford, R.L. (1987), Behler, J.L. and King, F.W. (1979), Blackburn, L., Nanjappa, P. and Lannoo, M.J. (2001), Burns, D. (1964), Bury, R.B., Dodd, Jr., C.K. and Fellers, G.M. (1980), Dvornich, K.M., McAllister, K.R. and Aubry, K.B. (1997), Frost, D.R. (1985), Herrington, R.E. (1985), Herrington, R.E. (1988), Herrington, R.E. and Larsen, J.H. (1983), Herrington, R.E. and Larsen, Jr, J.H. (1985), Herrington, R.E. and Larsen, Jr, J.H. (1987), Howard, J.H., Wallace, R.L. and Larsen, J.H. Jr. (1983), Leonard, W.P. *et al.* (1993), Mahoney, M.J. (2001), Nussbaum, R.A., Brodie, Jr., E.D. and Storm, R.M. (1983), Olson, D.H. editor (1999), Pfrender, M. (1993), Stebbins, R.C. (1985b), Thomas, J.W. *et al.* (1993), Washington Department of Wildlife (1993)

Data Providers: Geoffrey Hammerson, Robert Herrington

Plethodon neomexicanus Stebbins and Riemer, 1950 — JEMEZ MOUNTAINS SALAMANDER

This species is restricted to the Jemez Mountains in Sandoval, Los Alamos, and Río Arriba Counties, New Mexico, USA, from 2,130-3,435m asl (Stebbins 1985b; Degenhardt, Painter and Price 1996; Petranka 1998). It exists as fragmented populations in six major zones of distribution within an area of approximately 650-780km² (New Mexico Department of Game and Fish 1994). It is rare to common in suitable habitat, which is fragmented due to subsurface geology. It can be found in moss-covered talus and under bark and beneath logs and rocks in and near mixed forests of fir, spruce, and aspen (Stebbins 1985b). It occurs underground except during periods of warm seasonal rains. It is assumed to lay its eggs underground as no egg clutch has ever been found in the wild. Populations decline but persist after clear-cutting and slashing of forest, and it also persists after wildfires but most likely in reduced numbers. The major threats to this species are intensive logging, slash removal, burning, road building, and establishment of tree plantations (Ramotnik and Scott 1988). The build-up of excessive fuel loads and resulting fires is also a threat. However, with recent conservation efforts, threats have been greatly reduced. More than 90% of the populations of this species are believed to occur on lands administered by the Santa Fe National Forest; additional populations are known to occur on Santa Clara Pueblo, in Bandelier National Monument, and in the Valles Caldera National Preserve in Sandoval County (Cummer, Christman and Wright 2003), as well as on private land. Final approval of the Jemez Mountains Salamander Conservation Agreement in 2000 represents a commitment by the US Forest Service, the US Fish and Wildlife Service, and the New Mexico Department of Game and Fish to manage this amphibian in a manner consistent with this agreement, and with each other's policies, in order to reduce threats and ensure that the species is conserved (New Mexico Department of Game and Fish 2000). It is listed as 'threatened' by the State Game Commission of New Mexico, and is protected from harvest by the United States Department of Agriculture Forest Service special order "Animal Possession Restrictions" No. 10-230, 22 November 1999.

Bibliography: Behler, J.L. and King, F.W. (1979), Blackburn, L., Nanjappa, P. and Lannoo, M.J. (2001), Bury, R.B., Dodd, Jr., C.K. and Fellers, G.M. (1980), Cummer, M.R., Christman, B.L. and Wright, M.A. (2003), Degenhardt, W.G., Painter, C.W. and Price, A.H. (1996), Frost, D.R. (1985), Mahoney, M.J. (2001), New Mexico Department of Fish and Game (1985), New Mexico Department of Game and Fish (1994), New Mexico Department of Game and Fish (2000), Petranka, J.W. (1998), Ramotnik, C.A. and N.J. Scott, Jr. (1988), Stebbins, R.C. (1985b), Williams, S.R. (1973)

Data Providers: Geoffrey Hammerson, Charles Painter

Plethodon nettingi Green, 1938 — CHEAT MOUNTAIN SALAMANDER

This species can be found in the Allegheny Mountains from Cheat Mountain north to Back Allegheny and Cabin mountains, in Grant, Tucker, Randolph, Pocahontas, and Pendleton Counties, West Virginia, USA, generally from 908-1,463m asl (Pauley 1993), although one population extends to below 730m asl. Much of the remaining habitat is within Monongahela National Forest (Green and Pauley 1987). Approximately seventy occurrences are known (Pauley 1993; Petranka 1998), but these appear to be very small fragments of once larger populations. Recent surveys yielded some new localities, but the species was absent at some historical sites (USFWS 1990a). There is less than 10,000 acres of known occupied habitat. Populations generally are small (only a few include over a thousand individuals), and the US Fish and Widlife Service (USFWS 1990a) categorized its status as "stable". This species can be found primarily in red spruce, yellow birch or spruce-dominated forests, and has been occasionally collected in mixed deciduous hardwood forests (Brooks 1945, 1948; Clovis 1979; Green and Pauley 1987). Bryophytes and downed logs are usually common in its habitat, and it occurs under rocks and in or under logs during the day, and sometimes among wet leaves. It is active on the forest floor at night and may climb lower portions of tree trunks (Brooks 1945, 1948; Green and Pauley 1987). Eggs have been found in and under rotting logs, and under rocks (Brooks 1948; Green and Pauley 1987), where they develop directly without a larval stage. The main threat to this species is habitat loss and degradation due to logging, mining, recreational development, and road construction. Competition with *Plethodon cinereous* might also be a limiting factor. However, these threats are all minimal and the population is probably stable. It occurs in two national forest wilderness areas and several proposed research natural areas, and also in about 50 United States Department of Agriculture Forest Service sites, but these are not well protected. Monongahela National Forest has a management plan for this species (Bury, Dodd and Fellers 1980). An additional beneficial conservation measure would be the establishment of forested corridors between existing populations.

Taxonomy: Plethodon hubrichti and P. shenandoah formerly were included in this species.

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Data Providers: Geoffrey Hammerson

Plethodon ouachitae Dunn and Heinze, 1933 — RICH MOUNTAIN SALAMANDER

This species can be found in the Ouachita Mountains, in Arkansas and Oklahoma, USA (Duncan and Highton 1979; Conant and Collins 1991). A map in Duncan and Highton (1979) indicates that there might be up to several distinct populations or perhaps just a few, depending on actual distributional discontinuities. It is often abundant in suitable conditions (Black 1974; Blair 1967; Spotila 1972). Duncan and Highton (1979) collected samples of at least a few dozen specimens from each of 10 locations, not including additional locations with *ouachitae-fourchensis* hybrids. It can be found in mesic hardwood forests, usually on a northerly facing slope, where it is generally found under rocks or in or under logs. Breeding takes place terrestrially by direct development. There are no known major threats to this species, although populations might be impacted locally by clear-cutting logging. It occurs in some protected areas, but further research is needed on its threat status and population status and trends.

Taxonomy: Petranka (1998) included Plethodon fourchensis in this species. The two species integrade freely in their narrow zone of contact.

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Data Providers: Geoffrey Hammerson

Plethodon punctatus Highton, 1971 [1972] — WHITE-SPOTTED SALAMANDER

This species can be found in the Shenandoah, North, and Great North mountains, George Washington National Forest, Virginia (Augusta, Rockingham, and Shenandoah Counties) and West Virginia, USA (Green and Pauley 1987; Conant and Collins 1991; Petranka 1998), from 735-1,200m asl (but mainly from 900-1,200m asl). Its total adult population size is unknown but deforestation has probably reduced its distribution and abundance compared with historical levels. This species occurs in ridge and valley areas in mixed deciduous forest interspersed with Virginia pine and hemlock and numerous rock outcrops (Green and Pauley 1987). It is most abundant in old-growth forests with many downed logs and in areas with an abundance of surface rocks (Mitchell 1991), including talus. It tends to be most abundant on north-facing slopes. During the day it is found under rocks and logs or in burrows. Breeding is terrestrial by direct development. The principal threats to this species include deforestation through logging, and defoliation by gypsy moths (Lymantria dispar); the effect of spraying pesticides to control gypsy moths is unknown (Mitchell 1991). Firewood collection and over-collection of individuals are also potential threats. Much of its habitat is now protected, and its populations are likely to be stable. Most occurrences are within George Washington National Forest, where many sites are classified as roadless areas or unforestable. The United States Department of Agriculture Forest Service is aware of the populations of this species and its sensitivity.

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Data Providers: Geoffrey Hammerson, Joseph Mitchell

Plethodon virginia Highton, 1999 — SHENANDOAH MOUNTAIN SALAMANDER

This species can be found in eastern West Virginia and adjacent north-western Virginia, USA, from 1,100-1,200m asl. Highton (1999) mapped 28 collection sites, and six sites where hybrids with *Plethodon hoffmani* occur. This species' population status is not known but it is presumed to be stable. It is often found under objects in wooded areas. Eggs are laid in moist cavities, where they develop directly without a larval stage. It is not known what threats there are to this species, which is unlikely to be seriously threatened, although some populations are probably affected locally by clear-cutting logging. It occurs in some protected areas. Additional research is needed on its population status and the threats that it faces.

Taxonomy: This species was recently separated from Plethodon hoffmani (see Highton 1999).

Bibliography: Behler, J.L. and King, F.W. (1979), Blackburn, L., Nanjappa, P. and Lannoo, M.J. (2001), Green, N.B. and Pauley, T.K. (1987), Highton, R. (1986b), Highton, R. (1999), Mahoney, M.J. (2001), Martof, B.S. *et al.* (1980), Petranka, J.W. (1998)

Data Providers: Geoffrey Hammerson

Pseudoeurycea cephalica (Cope, 1865)

This species can be found in central Mexico in the states of Estado de Mexico, Hidalgo, Veracruz, Puebla and Morelos. It might be more widespread than current records suggest. Its altitudinal range is between 1,100 and 3,000m asl. This species used to be common, although it has undergone declines. The subspecies *Pseudoeurycea cephalica rubrimembris* remains not uncommon in the outskirts of Tianguistengo village in north-eastern Hidalgo State. This species lives in pine, pine-oak, fir, and cloud forests, and in the upper extent of lowland forest. It is commonly found beneath rocks, logs and other debris on the ground. It also occurs in somewhat disturbed habitats, such as forest edges, rural gardens, and small patches of forest in urban areas. Breeding is by direct development. It is probably threatened by agricultural expansion, expanding human settlements, and logging, all of which are taking place extensively within its range. It occurs in several protected areas, and is listed as "threatened" (Amenazada) by the Mexican government.

Taxonomy: This form is a complex of more than one species that needs taxonomic revision (G. Parra-Olea and D.B. Wake pers. comm.). The subspecies Pseudoeurycea cephalica rubrimembris is likely to be a valid species (J. Raffaelli pers. comm.).

Bibliography: Parra-Olea, G., García-París, M. and Wake, D.B. (1999), Parra-Olea, G., Papenfuss, T.J. and Wake, D.B. (2001), Uribe-Peña, Z., Ramírez-Bautista, R. and Cuadernos, G.C.A (2000)

Data Providers: Gabriela Parra-Olea, David Wake, Jean Raffaelli

Pseudoeurycea galeanae (Taylor, 1941)

This species is known from the areas surrounding Galeana and Iturbide towns, in southern Nuevo Leon, Mexico, from 1,800-2,800m asl. It is not common but is still recorded regularly. It inhabits semi-open oak forest with thorny scrub. This terrestrial species can be found under stones, and it can also tolerate considerable habitat modification and has been found in agave plantations and scrubby open country. Breeding is by direct development. The main threat to this species is complete clearance of its habitats, due to clear-cutting and the development of human settlements. It is not known from any protected areas, but it is listed as "threatened" (Amenazada) by the Mexican government.

Taxonomy: This species requires further taxonomic investigation (G. Parra-Olea and D.B. Wake pers. comm.).

Bibliography: Flores-Villela, O. and McCoy, C.J. (1993), Parra-Olea, G., García-París, M. and Wake, D.B. (1999)

Data Providers: Gabriela Parra-Olea, David Wake

Pseudoeurycea papenfussi Parra-Olea, García-París, Hanken and Wake, 2005 — MUSCULAR SALAMANDER

This species is known from the Sierra de Juárez, from the vicinity of Cerro Pelón and Cerro Humo to Cerro Peña Verde and the Pápalo region, northern Oaxaca State, Mexico. It has been recorded only from 2,800-2,900m asl, and possibly as low as 2,650m asl (exact identification is pending on these records). The species is believed to be endemic to the Sierra de Juárez. There is no clear information available on its population status, although it appears never to have been common. It has been found in pine forest and barren rocky slopes at or above the upper limit of cloud forest. It is presumed to breed by direct development. There has been significant deforestation by uncontrolled logging in this area, but the habitat is now recovering and the species is still present. It is known from the Reserva de la Biósfera Tehuacán-Cuicatlán. Further taxonomic work is necessary to resolve the identity of populations found at lower altitudes.

Taxonomy: Specimens of this species have been included in Pseudoeurycea smithi by some previous authors (Parra-Olea et al. 2005a).

Bibliography: Parra-Olea, G. *et al.* (2005a)

Data Providers: James Hanken, David Wake

Speleomantes ambrosii (Lanza, 1954) AMBROSI'S CAVE SALAMANDER

This species is restricted to scattered localities (at least 12 localities are known) in La Spezia Province, north-west Italy. The populations east of the Fiume River around Massa Carrara belong to a recently discovered subspecies, *Speleomantes ambrosii bianchii*. It is found at altitudes ranging from near sea level to around 2,300m asl. It is generally common within its limited range, with no evidence of any decline. It is known from humid rocky outcrops, caves, crevices, and forested areas in the vicinity of streams. Individuals may occasionally be found climbing in vegetation. The species reproduces through the direct development of a few terrestrial eggs. There are no major threats to this species other than a general localized loss of suitable habitat. It is present in Parco Nazionale delle Cinque Terre and Parco Naturale delle Alpi Apuane. The species has a very restricted range and needs further conservation attention. Prior to being considered a separate species *S. ambrosii* was listed on Appendix II of the Berne Convention under *S. italicus*. It is also listed on Annex IV of the EU Natural Habitats Directive.

Bibliography: Anon. (1997), Arnold, E.N. (2003), Böhme, W, Grossenbacher, K. and Thiesmeier, B. (1999), Cimmaruta, R. *et al.* (1999), Cimmaruta, R. *et al.* (2002), Gasc, J.-P. *et al.* (eds.) (1997), Griffiths, R.A. (1996), Lanza, B. (1986), Lanza, B. *et al.* (2005), Lanza, B. and Corti, C. (1993), Lanza, B. and Vanni, S. (1981), Nascetti, G. *et al.* (1996), Noellert, A. and Noellert, C. (1992), Salvidio, S. (1993), Salvidio, S. *et al.* (1994), Thorn, R. (1968)

Data Providers: Franco Andreone, Paul Edgar, Claudia Corti

Speleomantes imperialis (Stefani, 1969 "1968") IMPERIAL CAVE SALAMANDER

This species is endemic to the provinces of Nuoro, Oristano and Cagliari in central and eastern Sardinia, Italy. The populations in the Sette Fratelli Mountains east of Cagliari belong to a separate subspecies, Speleomantes imperialis sarrabusensis. It is found at altitudes between 7 and 1,170m asl. It is common within its limited range (Gasc et al. (eds.) 1997). This species is found in humid rocky outcrops, caves, crevices, and forested areas in the vicinity of streams. It reproduces through the direct development of a few terrestrial eggs. In the recently discovered subspecies, S. i. sarrabusensis, there is some evidence of vivipary. There are no major threats identified other than general localized habitat loss, presumably caused by farming. It has been recorded from Parco Nazionale Gennargentu e Golfo di Orosei and Parco Naturale Regionale del Monte Sette Fratelli, and it is likely to occur in Parco Naturale Regionale della Giara di Gesturi. This species is listed on Appendix II of the Berne Convention and is also listed on Annex IV of the EU Natural Habitats Directive.

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Data Providers: Franco Andreone, Roberta Lecis, Paul Edgar, Claudia Corti

Speleomantes italicus (Dunn, 1923) ITALIAN CAVE SALAMANDER

This species is a northern and central Apennine endemic, ranging from the provinces of Reggio Emilia (Emilia-Romagna) and Lucca (Tuscany) southwards to the province of Pescara (Abruzzi) inclusive (Gasc *et al.* (eds.) 1997). It occurs from sea level up to altitudes approaching 2,430m asl. It is common over much of its range, although it is considered to be less abundant in the southernmost part of its range. There is no evidence of any population decline taking place. This species is known from humid rocky outcrops, caves, crevices, and forested areas in the vicinity of streams, often in limestone areas. It reproduces through the direct development of a few terrestrial eggs. There are no major threats identified other than some localized habitat loss. It is not known if this species is present in any protected areas. It is listed on Appendix II of the Berne Convention and on Annex IV of the EU Natural Habitats Directive.

Bibliography: Anon. (1997), Arnold, E.N. (2003), Böhme, W, Grossenbacher, K. and Thiesmeier, B. (1999), Gasc, J.-P. *et al.* (eds.) (1997), Griffiths, R.A. (1996), Lanza, B. and Corti, C. (1993), Lanza, B. and Vanni, S. (1981), Lanza, B., Nascetti, G. and Bullini, L. (1986), Nardi, I. (1991), Nascetti, G. *et al.* (1996), Thorn, R. (1968)

Data Providers: Franco Andreone, Paul Edgar, Claudia Corti

Speleomantes strinatii (Aellen, 1958) FRENCH CAVE SALAMANDER

This species is restricted to south-eastern France and north-western Italy, from sea level to around 2,500m asl. Although there is little available information on the population status of this species, it is not considered to be declining in Italy. It is found in the vicinity of streams and seepages, and amongst rocky outcrops and caves in mountainous areas. It reproduces through the direct development of a few terrestrial eggs. There are no major threats identified other than localized loss of habitat. It is not known if this species is present in any protected areas. Prior to being considered a separate species *Speleomantes strinatii* was listed on both Appendix II of the Berne Convention, and on Annex IV of the EU Natural Habitats Directive, under *S. italicus*. Although this species is not considered to be declining in Italy, further information is needed on the status of the populations in France.

Bibliography: Anon. (1997), Arnold, E.N. (2003), Böhme, W, Grossenbacher, K. and Thiesmeier, B. (1999), Cimmaruta, R. *et al.* (1999), Gasc, J.-P. *et al.* (eds.) (1997), Griffiths, R.A. (1996), Lanza, B. and Corti, C. (1993), Lanza, B. and Vanni, S. (1981), Lanza, B., Nascetti, G. and Bullini, L. (1986), Nardi, I. (1991), Nascetti, G. *et al.* (1996), Thorn, R. (1968)

Data Providers: Franco Andreone, Paul Edgar, Claudia Corti, Marc Cheylan

PROTEIDAE

Necturus lewisi Brimley, 1924 NEUSE RIVER WATERDOG

This species is found in the Neuse and Tar-Pamlico River basins of the piedmont and Coastal Plain, North Carolina, USA (Petranka 1998). It is known from over 140 locations (Braswell and Ashton 1985), but these are not necessarily all distinct populations (H.E. LeGrand pers. comm.). It occurs from near sea level to about 116m asl. It can be locally common. The healthiest populations in the Neuse system appear to be in the Little River and Trent River. The Tar River system populations appear healthy except for areas impacted by reservoirs and municipal effluents (Braswell and Ashton 1985). It might be declining due to declining water quality, but data are inadequate for quantitative trend estimatation. It occupies most clean, moderate to swift-flowing streams within its range. It is more common in streams greater than 15m wide and 1m deep (Braswell and Ashton 1985). It requires relatively high oxygen levels and water quality (Ashton 1985). Breeding and non-breeding habitats are the same except for late fall and winter when it exploits large accumulations of submerged leaves in eddies, or backwaters of streams. It more frequently occupies burrows and spaces under rocks (Ashton 1985; Braswell and Ashton 1985). Eggs are attached to the underside of objects in low silt moderate-flow areas of streams. No migrations have been documented. Home ranges reported by Ashton (1985) are relatively small (mean 17m² for females and 73m² for males). It is not found in reservoirs and areas below large municipal waste outfalls (Braswell and Ashton 1985). The major threats to this species arise from water development projects (such as construction of impoundments and stream channelization), pollution from agricultural runoff (including pig farm wastes and pesticides), and industrial and urban development (Bury, Dodd and Fellers 1980; Braswell and Ashton 1985; Braswell 1989; H.E. LeGrand pers. comm.). These activities all cause loss of in-stream habitat (for example, due to siltation) and loss of water quality. A significant portion of the habitat in the upper Neuse drainage has been destroyed or degraded (Braswell 1989), and continued development threatens additional habitat. There are no specifically protected populations of this species. It is state-listed as a species of special concern in North Carolina. State water quality designations and permitting systems do address stream conditions (the 'Outstanding Resource Water' designation for Swift Creek in the Tar River basin is the best example of this).

Taxonomy: This form was originally described as Necturus maculosus lewisi. It was elevated to species status by Viosca (1937). It is considered to be the most primitive form of Necturus by Sessions and Wiley (1985).

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Data Providers: Alvin Braswell, Geoffrey Hammerson

RHYACOTRITONIDAE

Rhyacotriton cascadae Good and Wake, 1992 CASCADE TORRENT SALAMANDER

This species can be found on the west slope of the Cascade Mountains from just north of Mount Saint Helens, Skamania County, Washington, south to north-eastern Lane County, Oregon, USA (Good and Wake 1992). McAllister (1995) mapped approximately 53 collections or verified sighting locations in Washington. It is fairly common in appropriate habitat (Leonard *et al.* 1993), and its population is stable in Oregon (E. Gaines pers. comm.). It can be found in coniferous forests in small, cold mountain streams and spring seepages. Larvae often occur under stones in shaded streams. Adults also inhabit these streams or the streamsides in saturated moss-covered talus, or under rocks in the splash zone. This species is found primarily in older forest sites since the required microclimatic and microhabitat conditions generally exist only in older forests (Welsh 1990). Two *Rhyacotriton* nests were found in deep, narrow rock crevices, and the eggs were lying in cold, slow-moving water (Nussbaum *et al.* 1983). This species is sensitive to increased temperature and sedimentation, such as may result from logging or road construction for logging access. Timber harvesting negatively affects *Rhyacotriton* salamanders more than it does other amphibians in the same area (Bury and Corn 1988b; Corn and Bury 1989). Some populations are isolated by intervening areas of unsuitable habitat, and these are then vulnerable to extirpation through natural processes exacerbated by timber harvest (especially of old growth stands on north-facing slopes). This species is moderately threatened in Oregon (E. Gaines pers. comm.). It occurs in some protected areas. Its conservation needs include retention of old-growth forest buffers around headwater streams (Petranka 1998).

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Data Providers: Geoffrey Hammerson

Rhyacotriton kezeri Good and Wake, 1992 COLUMBIA TORRENT SALAMANDER

This species can be found in the Coast Ranges of the western USA from the vicinity of the Chehalis River in Grays Harbor County, Washington, south to the zone of contact with *Rhyacotriton variegatus* along the Little Nestucca River and the Grande Ronde Valley in Polk, Tillamook, and Yamhill Counties, Oregon (Good and Wake 1992). McAllister (1995) mapped approximately 43 collections or verified sighting locations in Washington, and this species is apparently stable in Oregon (E. Gaines pers. comm.). It can be found in coastal coniferous forests in small, cold mountain streams and spring seepages. Larvae often occur under stones in shaded streams. Adults also inhabit these streams or streamsides in saturated moss-covered talus, or under rocks in the splash zone. This species is found primarily in older forest sites since the required microclimatic and microhabitat conditions generally exist only in older forests (Welsh 1990). Two *Rhyacotriton* nests were found in deep, narrow rock crevices, and the eggs were lying in cold, slow-moving water (Nussbaum, Brodie and Storm 1983). Torrent salamanders in general are sensitive to increased temperature and sedimentation, such as may result from logging or road construction for logging access (Bury and Corn 1988b; Corn and Bury 1989). However, preliminary data suggest that *R. kezeri* tolerates habitat alteration better than do other torrent salamander species, and that increases in sedimentation that might be particularly problematic for other *Rhyacotriton* species might be less problematic for this species (Hallock and McAllister 2002). It occurs in some protected areas. Its conservation needs include retention of old-growth forest buffers around headwater streams (Petranka 1998).

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Data Providers: Geoffrey Hammerson

SALAMANDRIDAE

Euproctus asper (Dugès, 1852) PYRENEAN BROOK SALAMANDER

This species is found throughout much of the Pyrenean mountain range of France and Spain, where it occurs at a wide range of altitudes from 175m to over 3,000m asl (on the northern slopes of the Pyrenees), although the average range is 700-2,500m asl. It has recently been found in the Corbieres Mountains, 20km south-east of Carcassonne, in south-eastern France, which represents a range extention northwards. It is abundant or common in parts of its restricted range, although several peripheral populations have disappeared largely through loss of habitat. It is more common in the west of its range. The populations of the Montseny Massif (Barcelona), located at the southern limit of the species' distribution, are considered to be threatened. It is a largely aquatic montane species that inhabits cold mountain lakes, torrents, streams, and occasionally cave systems, that are ice-free for at least four months of the year (Griffiths 1996). The eggs are deposited individually under rocks and stones in well-oxygenated, cold streams with rocky bottoms, and the larvae then develop in these streams. This species has a small clutch size of 20-40 eggs (Griffiths 1996). The main threats to this species are loss and damage of its aquatic habitats. Infrastructure development and tourism lead to over-exploitation of water resources, including from skiing facilities. The introduction of predatory trout (salmonids) and other fish is also a threat, leading to population extinctions, especially in mountain lakes. Pesticides are readily accumulated in the body tissues of this largely insectivorous species, and several populations demonstrate contamination by these chemicals (Gasc *et al.* (eds.) 1997). It has been recorded from Parque Nacional de Ordesa y Monte Perdido and Parque Nacional de Aigües Tortes y Lago San Mauricio, Spain, and presumably occurs in several other protected areas. It is listed on Appendix II of the Berne Convention and on Annex IV of the EU Natural Habitats Directive, and it is protected by national legislation in Spain.

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Notophthalmus perstriatus (Bishop, 1941) STRIPED NEWT

This species can be found in northern Florida, westward to the vicinity of the Ochlocknee River, and northward into southern Georgia, USA. The known Georgia distribution is limited to three widely disjunctive areas (Dodd 1993b; Dodd and LaClaire 1995). In Florida, specimens have been recorded as far south as Hernando and Orange Counties and from the Atlantic coast westward to the west side of Apalachee Bay (Christman and Means 1978; Campbell, Christman and Thompson 1980). In Georgia, specimens have been recorded from as far north as Screven and Jenkins Counties, south-east to Wilcox County (Dodd 1993b) and westward to Baker County (L.V. LaClaire pers. comm.). More than 30 occurrences are known across its range, with the majority from Florida. Further surveys might turn up additional occurrences (Dodd 1993b). It varies from rare to locally common depending on the availability of a breeding pond. The total number of individuals is unknown. It sometimes occurs in very low densities, but some local breeding populations encompass many thousands of individuals (Johnson 2002). Evidence suggests that the total population is declining. This species can be found in sandhill habitat, scrub, scrubby flatwoods, mesic flatwoods, and isolated, ephemeral wetlands within these habitats (for example in sinkhole ponds, depression ponds and marshes, and ditches). It can tolerate selective logging as long as the ground is not roller-chopped or otherwise prepared. The larvae and adults are aquatic, although the adults emigrate to surrounding wooded areas near breeding ponds if the ponds dry up. It breeds in shallow temporary ponds associated with well-drained sands, and the eggs are attached to submerged vegetation. There are many potential threats to this species. For example, conversion of terrestrial habitat for agriculture, silviculture, or commercial or residential development, drainage or enlargement (with subsequent introduction of predatory fish) of aquatic habitat, and loss of aquatic habitat from lowering of the water table as a result of water consumption by humans. Other key threats include habitat alteration resulting from suppression of fire, highway mortality during migration, habitat degradation from off-road vehicle traffic, and collection for the pet trade. Population disjunction might exacerbate existing threats through lack of gene flow, genetic drift, and inbreeding depression. Most of the remaining known populations are on federal, state, or private conservation lands, such as Apalachicola National Forest, Florida; Camp Blanding Military reservation, Florida; Ocala National Forest, Florida; Fort Stewart, Georgia; Ichauway Plantation, Georgia; Okefenokee National Wildlife Refuge; the ITT Rayonier property, Georgia; and the Katharine Ordway Preserve-Swisher Memorial Sanctuary. Surveys at the periphery of its range, and in appropriate habitat between populations, are needed to investigate the perceived decline (R. Franz pers. comm.).

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Data Providers: Geoffrey Hammerson, Kenneth Dodd

Paramesotriton caudopunctatus (Liu and Hu, 1973) SPOT-TAILED WARTY NEWT

This species is known from south-eastern Chongqing, south-western Hunan, eastern Guizhou, and Fuchuan in eastern Guangxi in central China, from 500-1,800m asl. It probably occurs more widely than current records suggest. It is a very common species. It inhabits hill streams of varying sizes and the surrounding habitats in forested areas, and sometimes also occurs in streamside pools. It breeds in streams where the larvae also develop. This species is affected by habitat destruction and degradation for dam construction and subsistence wood collecting, and also by harvesting for use in traditional Chinese medicine. Small numbers are exported for the international pet trade, though probably not at a level to constitute a threat to the species. Several protected areas in the region fall within the species' range.

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Data Providers: Yuan Zhigang, Michael Wai Neng Lau

Paramesotriton hongkongensis (Myers and Leviton, 1962) HONG KONG WARTY NEWT

This species is known from coastal Guangdong, including Hong Kong, in China, from 30-940m asl. It is a very common species. It inhabits low- to medium-gradient hill streams and the surrounding forests. Breeding takes place in slow-flowing stream pools where the larvae also develop. A particular threat to this species is the collection of significant numbers for the pet trade. Its main distribution range falls within protected areas, and the Hong Kong population is protected by local legislation. This species has been widely bred in captivity.

Taxonomy: We follow Thorn and Raffaëlli (2001) in recognizing this as a full species distinct from Paramesotriton chinensis.

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Data Providers: Michael Wai Neng Lau, Bosco Chan

Pleurodeles waltl Michahelles, 1830 SHARP-RIBBED SALAMANDER

This species is distributed in central and southern Iberia, and in the coastal plain of northern Morocco. It is essentially a lowland species becoming rare above 900m asl, although it might be found at 1,565m asl in the Sierra de Loja, Granada, Spain. It is not abundant over most of its distribution, with populations being more scattered and fragmented in the east and north of the Iberian Peninsula. Some population declines in this species have been observed, especially in eastern Spain. It appears to be in decline in Morocco (although it is common in the north), and the southernmost populations in Morocco might be extinct (T. Slimani and El Hassan El Mouden pers. comm.). This is a highly aquatic species of Mediterranean-type habitats including scrub, open woodland and cultivated land. It is generally found in ponds, dayas, wadis, lakes, ditches and slow-moving streams (often temporary in nature) with plenty of vegetation cover. The adults are mostly found under stones or in mud in their aquatic habitats, or sheltering under cover on land if the wetland dries up. It may be present in slightly modified aquatic and terrestrial habitats. The female deposits around 800-1,500 eggs on plants and stones in ponds. This species is generally threatened through loss of aquatic habitats through drainage, agrochemical pollution, the impacts of livestock (in North African dayas), eutrophication, domestic and industrial contamination, and infrastructure development. It has largely disappeared from coastal areas in Iberia and Morocco close to concentrations of tourism and highly populated areas (such as Madrid). Introduced fish and crayfish (*Procambarus clarki*) are known to prey on the eggs and larvae of this species, and are implicated in its decline. Mortality on roads has been reported to be a serious threat to some populations. It occurs in a number of protected areas in Iberia, but there is a need to monitor vulnerable populations in northern and eastern Spain and Portugal. It is listed on Appendix III of the Berne Convention and is protected by national legislation in Spain, where captive breeding of the species and habitat restoration projects are in place in some regions.

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Salamandra infraimmaculata (Mertens, 1948) AROUSS AL AYN

This species is present in south-eastern and eastern parts of Anatolia, Turkey; north-western Iran; northern Iraq; Lebanon; and northern Israel (Tel Dan, upper and western Galilee, and Mount Carmel). There is little information available on the distribution of this species in Syrian Arab Republic and Iraq. The altitudinal range in the south of this species' range is known to be approximately 180-2,000m asl (in the Taurus Mountains). It is generally locally common in suitable habitat. In Iran this species is considered to be rare, and populations in Israel are small but generally stable. In Lebanon it is considered to be widespread, but localized and probably not abundant. The terrestrial habitat of this species varies across its range. In Iran it is known from an area of arid sparse cork forest. In Turkey and Lebanon it has been found to inhabit damp forests and groves in mountainous or hilly regions, and to shelter under leaves, roots or stones not far from water. This species may persist in formerly forested habitats, although further studies are needed. Isolated populations of this salamander are found around pools (often temporary in nature) and slow-flowing spring-fed streams which the adults inhabit during the breeding season (winter through to early spring). It forages nocturnally, but may be seen in the daytime during wet weather. It produces live young (larvae with gills that undergo metamorphosis; Degani 1996). It is threatened in parts of its range, such as Israel and Lebanon (and possibly Syrian Arab Republic), by infrastructure development and aquatic pollution by pesticides. In Lebanon introduced fish are also a problem. In Israel large numbers of this salamander are killed on roads. This species is probably in decline in Turkey (as in other parts of the Middle East) as a result of damming of breeding streams, aquatic pollution, and an increase in ground water abstraction resulting from the rapid expansion of irrigation schemes for agriculture. It is present in the Mount Hermon, Mount Carmel and Tel Dan Natur protected areas in Israel and has been recorded in the Arz El-Shouf, Horj Ehden and Ammiq Marshes protected areas of Lebanon. The active creation of breeding habitat is taking place in the nature reserve within Mount Carmel, Israel. This species is protected by national legislation in Israel. Further fieldwork into its biology, habitat and distribution over much of its range is needed. It is unclear which species of *Salamandra* have been recorded from western Anatolia, and further investigation to identify these populations (which are not included here) is needed.

Taxonomy: This account follows the suggested Salamandra monophyletic Group distribution presented in Steinfartz, Vieth and Tautz (2000).

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Triturus dobrogicus (Kiritzescu, 1903) DANUBE CRESTED NEWT

This species is found in the lowlands of the Tisza and Danube River systems from eastern Austria, extreme southern Czech Republic, Slovakia, Hungary, northern Croatia, extreme northern Bosnia-Herzegovina, northern Serbia and western Romania, eastwards to the Transcarpathian Plain in southern Romania, northern Bulgaria, southern Moldova (the lower reaches of the Prut River), and extreme southern Odesskaya Province (Ukraine). Individuals from north-eastern Slovenia (the Mura River) are hybrid forms with *Triturus carnifex*. It is generally found in lowland areas below 300m asl. In general, populations of this species are rapidly declining as a result of habitat loss. It is found in open habitats with mixed deciduous forests and groves, bushlands, flooded meadows and swamps, and also in agricultural landscapes and villages, and riparian groves in the steppe regions. It might in some instances be strictly aquatic. This species may coexist with fish in oxbow lakes, river margins and other non-temporary waterbodies, and may also occur in disturbed habitats including those close to human settlement (Griffiths 1996). Reproduction takes place in small ponds with stagnant water, or in channels, ditches and flooded quarries. The main threats to this species are rapid anthropogenic habitat destruction (for example, through drainage and damming), and pollution of its wetland habitats (especially floodplains). Hybridization with other crested newt species at the edge of its range is also a threat. In the southern part of its range, there has been loss of breeding habitats in recent years due to decreased spring rains, perhaps as a result of global climate change. It is present in a number of protected areas, and in parts of its range mitigation measures to reduce road kill have been established. It is listed on Appendix II of the Berne Convention and is protected by national legislation in some of the areas where it occurs (for example, in Romania).

Taxonomy: The exact ranges of members of the Triturus cristatus superspecies are unclear in the central Balkans.

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Triturus pygmaeus (Wolterstorff, 1905) SOUTHERN MARBLED NEWT

This species is endemic to the Iberian Peninsula where it is distributed in central and southern Portugal and the southern half of Spain, from sea level to 1,450m asl. It is common in areas where suitable siliceous substrate habitat exists. There has been a significant decline in the populations of southern and eastern Spain (those found on a calcareous substrate). This species inhabits broadleaf (*Quercus* oak) woodland in meso-Mediterranean and thermo-Mediterranean climates. Aquatic habitats used for breeding and larval development include temporary or permanent ponds, lagoons, abandoned quarries and wells, drinking troughs, irrigation ponds, ditches and other areas of stagnant or slow-moving water. It is found in traditional farmland areas and other slightly modified habitats. The most significant threat to this species overall is habitat loss, especially the loss of temporary ponds. In the west of Spain and southern Portugal populations are affected by predation by non-native crayfish and predatory fish. Increasing urbanization surrounding Madrid has also led to the elimination of many populations. In southern and eastern Spain, over-exploitation of groundwater resources, agrochemical pollution, loss of traditional breeding sites and the introduction of predatory non-native fish and crayfish (*Procamabrus clarkii*) has led to a serious population decline. In Portugal this species is also affected by the drainage of temporary ponds, associated with the intensification of agriculture. It is present in Parque Nacional de Cabañeros and Parque Nacional de Doñana, Spain, and is presumed

to occur in some Portuguese protected areas. Re-introductions and/or translocations of this species have been made in the area of Madrid, Spain. This species is listed on Annex III of the Berne Convention, and is protected by national and sub-national legislation in Spain.

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Data Providers: Jan Willem Arntzen, Pedro Beja, Jaime Bosch, Miguel Tejedo, Miguel Lizana, Robert Jehle, Iñigo Martínez-Solano, Alfredo Salvador, Mario García-París, Ernesto Recuero Gil, Rafael Marquez, Paulo Sa-Sousa, Carmen Diaz Paniagua

Tylototriton asperrimus Unterstein, 1930 — **BLACK KNOBBY NEWT**

This species is found on Yen Tu Mountain, Bac Giang Province, and Ha Giang and Cao Bang Provinces, as well as Tam Dao National Park, Vinh Phu Province, in Viet Nam, and in central and southern China (Guangxi, Guangdong, Guizhou, Hunan and Anhui Provinces), from about 400-1,700m asl. This was formerly a common species, but it is now in decline. It inhabits small temporary shallow pools in bamboo and primary forest in hilly areas. Eggs are found in leaf-litter beside the pools, and the larvae develop in the water. The major threat to this species in China is harvesting for its use in traditional medicine (it is a substitute for *Gecko gecko*, which is a widely used medicine). Habitat loss and degradation, arising from smallholder agriculture and subsistence wood collecting, is also a threat to this species. In China the range of this species overlaps with several protected areas. It is listed as a class II protected species under China's wild animal protection law. Determination of the occurrence, distribution and population status of this species in Viet Nam is required, as well as the effective protection of the remaining forest habitat.

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Data Providers: Peter Paul van Dijk, Nguyen Quang Truong, Michael Wai Neng Lau, Zhao Ermi, Lu Shunqing

Tylototriton shanjing Nussbaum, Brodie and Yang, 1995

This species is known from central, western and southern Yunnan, China, from 1,000-2,500m asl. The boundary between this species and *Tylototriton verrucosus* is not clear, and it is possible that *T. shanjing* occurs in Myanmar. It is very common in central, western and southern Yunnan, but is less common in the northern part of its range. It inhabits hill forests and secondary forest, where it breeds by larval development in pools, ponds and ditches, including some artificial waterbodies. The major threat to this species is over-collecting for traditional medicine. Small numbers are also exported for the international pet trade, and its habitats are also being threatened by infrastructure development for human settlement. The range of this species overlaps with a number of protected areas in the region, and it is bred in captivity in Europe and North America.

Taxonomy: There is a nomenclatural problem with this species, and the name might change (A. Ohler pers. comm.).

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Data Providers: Annemarie Ohler, Lu Shunqing, Yang Datong

Tylototriton taliangensis Liu, 1950 — **TALIANG KNOBBY NEWT**

This species is endemic to southern Sichuan, China, from 1,300-2,700m asl. It is a common species within its narrow range. It inhabits densely vegetated forested valleys, where it breeds by larval development in pools, ponds and paddy fields. A major threat to this species is over-collection for traditional Chinese medicine as a substitute for the Sichuan salamander (*Batrachuperus pinchonii*). Small numbers are also exported to supply the international pet trade. The range of this species overlaps with a small number of protected areas in the region. It is listed as a class II protected species under China's wild animal protection law. Captive breeding is currently being undertaken in Germany and the Netherlands.

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Data Providers: Fei Liang, Xie Feng

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APPENDICES

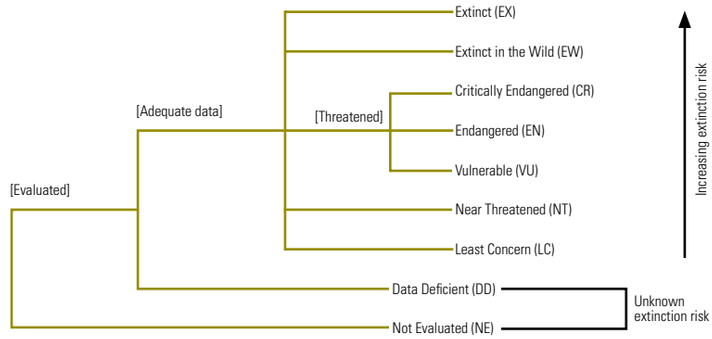
APPENDIX I. THE IUCN RED LIST CATEGORIES AND CRITERIA

Throughout this publication reference is made to the IUCN Red List Categories and Criteria (IUCN 2001). These are intended to be an easily and widely understood system for identifying and classifying species at high risk of global extinction. The general aim of the system is to provide an explicit, objective framework for the classification of the broadest range of species according to their extinction risk. It is important to note that although the Red List system may focus attention on those taxa at highest risk, it is not intended to be the sole means of identifying and setting priorities for conservation action.

Summaries of the Red List Categories (this appendix) and Criteria (Appendix Ib) are presented here. However, readers are referred to the full version of the system available at http://www.iucnredlist.org/info/categories_criteria2001.html. PDF versions in English, French and Spanish can also be downloaded from http://www.iucn.org/themes/ssc/redlists/RLcats2001booklet.html.

During the development of the Red List Categories and Criteria and the subsequent Criteria Review process, a number of difficult issues were encountered that were not fully resolved. As solutions arise, rather than constantly modifying the Red List Criteria, a set of 'User Guidelines' have been developed that provide advice on how to deal with some of these issues, and how to apply the criteria under particular circumstances (in other words, they are best practice guidelines). These 'User Guidelines' are in effect a living document that is periodically updated; the latest PDF version of which can be downloaded from http://www.iucn.org/themes/ssc/redlists/RedListGuidelines.pdf.

A representation of the relationships between the categories is shown in Figure 1.



Appendix Ia. The IUCN Red List Categories (IUCN 2001)

Note: Threatened species are listed in one of the three categories printed in red.

Category	Abbreviation	Definition
Extinct	EX	Species for which extensive surveys show there is no reasonable doubt that the last individual has died.
Extinct in the wild	EW	Species that survive only in cultivation, in captivity or as a naturalized population (or populations) well outside the past range.
Critically Endangered	CR	Species that are facing an extremely high risk of extinction in the wild (i.e., when the best available evidence indicates that they meet any of the criteria A to E for Critically Endangered in Appendix Ib).
Endangered	EN	Species that are facing a very high risk of extinction in the wild (i.e., when the best available evidence indicates that they meet any of the criteria A to E for Endangered in Appendix Ib).
Vulnerable	VU	Species that are facing a high risk of extinction in the wild (i.e., when the best available evidence indicates that they meet any of the criteria A to E for Vulnerable in Appendix Ib).
Near Threatened	NT	Species that do not qualify for Critically Endangered, Endangered or Vulnerable now, but are close to qualifying for or are likely to qualify for a threatened category in the near future.
Least Concern	LC	Species that do not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant species are included in this category.
Data Deficient	DD	Species for which there is inadequate information to make a direct, or indirect, assessment extinction risk based on distribution and/or population status. A species in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat.

Appendix Ib. Summary of the five criteria (A-E) used to evaluate if a species belongs in a Threatened category (Critically Endangered, Endangered or Vulnerable)

Use any of the criteria A–E	Critically Endangered	Endangered	Vulnerable
A. Population reduction	Declines measured over the longer of 10 years or 3 generations		
A1	≥ 90%	≥ 70%	≥ 50%
A2, A3 & A4	≥ 80%	≥ 50%	≥ 30%
A1. Population reduction observed, estimated, inferred, or suspected in the past where the causes of the reduction are clearly reversible AND understood AND have ceased, based on and specifying any of the following:			
(a) direct observation			
(b) an index of abundance appropriate to the taxon			
(c) a decline in area of occupancy (AOO), extent of occurrence (EOO) and/or habitat quality			
(d) actual or potential levels of exploitation			
(e) effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.			
A2. Population reduction observed, estimated, inferred, or suspected in the past where the causes of reduction may not have ceased OR may not be understood OR may not be reversible, based on (a) to (e) under A1.			
A3. Population reduction projected or suspected to be met in the future (up to a maximum of 100 years) based on (b) to (e) under A1.			
A4. An observed, estimated, inferred, projected or suspected population reduction (up to a maximum of 100 years) where the time period must include both the past and the future, and where the causes of reduction may not have ceased OR may not be understood OR may not be reversible, based on (a) to (e) under A1.			
B. Geographic range in the form of either B1 (extent of occurrence) AND/OR B2 (area of occupancy)			
B1. Extent of occurrence (EOO)	< 100 km²	< 5,000 km²	< 20,000 km²
B2. Area of occupancy (AOO)	< 10 km²	< 500 km²	< 2,000 km²
AND at least 2 of the following:			
(a) Severely fragmented, OR Number of locations	= 1	≤ 5	≤ 10
(b) Continuing decline in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) area, extent and/or quality of habitat; (iv) number of locations or subpopulations; (v) number of mature individuals.			
(c) Extreme fluctuations in any of: (i) extent of occurrence; (ii) area of occupancy; (iii) number of locations or subpopulations; (iv) number of mature individuals.			
C. Small population size and decline			
Number of mature individuals	< 250	< 2,500	< 10,000
AND either C1 or C2:			
C1. An estimated continuing decline of at least: (up to a max. of 100 years in future)	25% in 3 years or 1 generation	20% in 5 years or 2 generations	10% in 10 years or 3 generations
C2. A continuing decline AND (a) and/or (b):			
(a i) Number of mature individuals in each subpopulation:	< 50	< 250	< 1,000
or			
(a ii) % individuals in one subpopulation =	90-100%	95-100%	100%
(b) Extreme fluctuations in the number of mature individuals.			
D. Very small or restricted population			
Either: Number of mature individuals	< 50	< 250	D1. < 1,000 AND/OR
	Restricted area of occupancy		D2. typically: AOO < 20 km² or number of locations ≤ 5
E. Quantitative Analysis			
Indicating the probability of extinction in the wild to be:	≥ 50% in 10 years or 3 generations (100 years max.)	≥ 20% in 20 years or 5 generations (100 years max.)	≥ 10% in 100 years

APPENDIX II. DEFINITIONS FOR THE INITIAL DATA COLLECTION REGIONS

Note: the task of collecting the initial data was divided into 33 geographic regions that were defined to cover the global distribution of all amphibians. This list includes only complex regions (no definition is given where it is obvious, i.e., Australia, Japan, etc.).

Africa (includes all countries in Africa except Madagascar and the Seychelles).

Atlantic Forest-Cerrado-Caatinga (includes all of Brazil, except the Amazon Basin).

Borneo (includes Brunei, Kalimantan (Indonesia), and Sabah and Sarawak (Malaysia)).

Caribbean (covers Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Bermuda, Cayman Islands, Cuba, Dominica, Dominican Republic, Grenada, Guadeloupe, Haiti, Jamaica, Martinique, Montserrat, Netherlands Antilles, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Turks and Caicos Islands, British and U.S. Virgin Islands).

China (includes China, North Korea, and South Korea).

Europe (includes Albania, Andorra, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Greenland, Hungary, Iceland, Ireland, Italy, Luxembourg, Macedonia, Netherlands, Norway, Poland, Portugal, Romania, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom).

Northern Eurasia (includes Russia, Ukraine, Belarus, Lithuania, Latvia, Estonia, Georgia, Azerbaijan, Armenia, Kazakhstan, Uzbekistan, Turkmenistan, Kyrgyzstan, Moldova, Tajikistan, and Mongolia).

South Asia (includes India, Pakistan, Nepal, Bangladesh, Bhutan, and Sri Lanka).

Mainland Southeast Asia (includes Myanmar, Thailand, Laos, Cambodia, Vietnam, Peninsular Malaysia, and Singapore).

North America (USA and Canada).

Papuan Region (includes Solomon Islands, Papua New Guinea, Indonesia (only Papua and the Maluku Islands (including Halmahera, Ceram, Obi, Misool, Aru, Ambon, Buru and Kai)), Fiji, and Palau).

Sumatra, Java and Sulawesi (includes Sumatra, Java, Sulawesi, the Sula Islands, and the Lesser Sunda Islands (east to Tanimbar, and including East Timor)).

West Asia (includes Afghanistan, Iran, Turkey, Syria, Iraq, Lebanon, Israel, Jordan, Kuwait, Saudi Arabia, Oman, Yemen, Qatar, Bahrain, United Arab Emirates).

APPENDIX III. A SUMMARY OF IUCN RED LIST STATUS BY GENUS

Genus	Total	EX	EW	CR	EN	VU	NT	LC	DD	Number threatened or Extinct	% Threatened or Extinct
Acanthixalus	2	0	0	0	0	0	1	1	0	0	0
Acris	2	0	0	0	0	0	0	2	0	0	0
Adelastes	1	0	0	0	0	0	0	0	1	0	0
Adelophryne	5	0	0	1	1	0	0	2	1	2	40
Adelotus	1	0	0	0	0	0	1	0	0	0	0
Adenomera	9	0	0	0	0	0	0	8	1	0	0
Adenomus	3	1	0	1	1	0	0	0	0	3	100
Afrana	10	0	0	0	2	0	0	3	5	2	20
Afrixalus	32	0	0	0	3	6	2	18	3	9	28
Agalychnis	6	0	0	1	1	1	1	2	0	3	50
Aglyptodactylus	3	0	0	0	1	0	0	2	0	1	33
Albericus	14	0	0	1	0	0	0	5	8	1	7
Alexteroon	3	0	0	1	0	0	0	2	0	1	33
Allobates	2	0	0	0	0	0	0	2	0	0	0
Allophryne	1	0	0	0	0	0	0	1	0	0	0
Alsodes	16	0	0	3	0	1	1	1	10	4	25
Altigius	1	0	0	0	0	0	0	0	1	0	0
Altiphrynoides	1	0	0	0	1	0	0	0	0	1	100
Alytes	5	0	0	0	0	2	2	1	0	2	40
Ambystoma	30	0	0	9	2	2	1	13	3	13	43
Amietia	1	0	0	0	0	0	0	1	0	0	0
Amnirana	11	0	0	0	2	1	0	6	2	3	27
Amolops	32	0	0	0	1	6	5	10	10	7	22
Amphiuma	3	0	0	0	0	0	1	2	0	0	0
Andinophryne	3	0	0	1	0	0	0	0	2	1	33
Andrias	2	0	0	1	0	0	1	0	0	1	50
Aneides	6	0	0	0	0	0	4	2	0	0	0
Anhydrophryne	1	0	0	0	1	0	0	0	0	1	100
Anodonthyla	4	0	0	0	1	1	0	1	1	2	50
Anotheca	1	0	0	0	0	0	1	0	0	0	0
Ansonia	22	0	0	0	5	8	6	1	2	13	59
Aparasphenodon	3	0	0	0	0	0	0	2	1	0	0
Aphantophryne	3	0	0	0	0	0	0	1	2	0	0
Aplastodiscus	15	0	0	1	1	1	4	6	2	3	20
Arcovomer	1	0	0	0	0	0	1	0	0	0	0
Arenophryne	1	0	0	0	0	0	0	1	0	0	0
Argenteohyla	1	0	0	0	1	0	0	0	0	1	100
Arlequinus	1	0	0	0	1	0	0	0	0	1	100
Aromobates	1	0	0	1	0	0	0	0	0	1	100
Arthroleptella	8	0	0	1	0	0	2	3	2	1	12
Arthroleptides	3	0	0	1	2	0	0	0	0	3	100
Arthroleptis	34	0	0	1	3	2	2	12	14	6	18
Ascaphus	2	0	0	0	0	0	0	2	0	0	0
Assa	1	0	0	0	0	0	0	1	0	0	0
Asterophrys	2	0	0	0	0	0	0	1	1	0	0
Astylosternus	11	0	0	1	5	2	1	2	0	8	73
Atelognathus	9	0	0	0	3	3	1	0	2	6	67
Atelophryniscus	1	0	0	0	1	0	0	0	0	1	100
Atelopus	77	3	0	62	4	5	0	0	3	74	97
Atopophrynus	1	0	0	1	0	0	0	0	0	1	100
Atretochoana	1	0	0	0	0	0	0	0	1	0	0
Aubria	3	0	0	0	0	0	0	3	0	0	0
Austrochaperina	24	0	0	0	0	1	0	13	10	1	4
Balebreviceps	1	0	0	0	1	0	0	0	0	1	100
Barbourula	2	0	0	0	1	1	0	0	0	2	100
Barycholos	2	0	0	0	0	0	0	2	0	0	0
Barygenys	7	0	0	0	0	0	0	3	4	0	0
Batrachophrynus	2	0	0	0	2	0	0	0	0	2	100
Batrachoseps	19	0	0	0	1	4	1	7	6	5	26
Batrachuperus	10	0	0	2	2	4	1	0	1	8	80
Batrachyla	5	0	0	0	0	1	0	3	1	1	20
Batrachylodes	8	0	0	0	0	0	0	7	1	0	0
Bokermannohyla	23	0	0	2	0	4	1	7	9	6	26
Bolitoglossa	91	0	0	9	22	16	9	19	16	47	52
Bombina	8	0	0	0	0	3	0	5	0	3	37
Boophis	53	0	0	1	0	4	4	26	18	5	9
Boulengerula	7	0	0	1	0	0	0	3	3	1	14
Brachycephalus	8	0	0	0	0	1	1	1	5	1	12
Brachytarsophrys	5	0	0	0	0	1	0	3	1	1	20
Bradytriton	1	0	0	1	0	0	0	0	0	1	100
Brasilotyphlus	1	0	0	0	0	0	0	1	0	0	0
Breviceps	15	0	0	0	0	3	0	10	2	3	20
Bromeliohyla	2	0	0	1	1	0	0	0	0	2	100
Buergeria	4	0	0	0	0	1	0	3	0	1	25
Bufo	259	1	1	10	31	18	14	147	37	61	24
Bufoides	1	0	0	0	1	0	0	0	0	1	100
Cacosternum	10	0	0	0	0	1	0	5	4	1	10
Caecilia	33	0	0	0	0	0	0	10	23	0	0
Calamita	2	0	0	0	0	0	0	0	2	0	0
Callixalus	1	0	0	0	0	1	0	0	0	1	100
Calluella	7	0	0	0	0	0	0	2	5	0	0
Callulina	2	0	0	0	1	0	0	1	0	1	50
Callulops	16	0	0	0	1	0	0	8	7	1	6
Capensibufo	2	0	0	0	0	1	0	1	0	1	50
Cardioglossa	16	0	0	2	6	0	1	5	2	8	50
Caudacaecilia	5	0	0	0	0	0	0	0	5	0	0
Caudiverbera	1	0	0	0	0	1	0	0	0	1	100
Centrolene	41	0	0	4	7	6	2	7	15	17	41
Ceratobatrachus	1	0	0	0	0	0	0	1	0	0	0
Ceratophrys	8	0	0	0	0	1	1	4	2	1	12
Chacophrys	1	0	0	0	0	0	0	1	0	0	0
Chaparana	8	0	0	0	1	0	1	1	5	1	12
Chaperina	1	0	0	0	0	0	0	1	0	0	0
Charadrahyla	5	0	0	2	1	2	0	0	0	5	100
Chiasmocleis	19	0	0	0	1	2	1	10	5	3	16
Chioglossa	1	0	0	0	0	1	0	0	0	1	100
Chirixalus	13	0	0	0	1	0	1	4	7	1	8
Chiromantis	4	0	0	0	0	0	0	4	0	0	0
Chiropterotriton	12	0	0	3	4	1	1	0	3	8	67
Chlorolius	1	0	0	0	0	0	0	1	0	0	0
Choerophryne	4	0	0	0	0	0	0	2	2	0	0
Chrysobatrachus	1	0	0	0	0	0	0	0	1	0	0
Chthonerpeton	8	0	0	0	0	0	0	1	7	0	0
Churamiti	1	0	0	1	0	0	0	0	0	1	100
Cochranella	61	0	0	1	4	18	5	8	25	23	38
Colostethus	131	0	0	9	9	8	8	23	74	26	20
Conraua	6	0	0	1	1	2	0	2	0	4	67
Cophixalus	35	0	0	1	3	4	3	10	14	8	23
Cophyla	2	0	0	0	0	0	0	1	1	0	0
Copiula	8	0	0	0	0	1	0	3	4	1	12
Corythomantis	1	0	0	0	0	0	0	1	0	0	0
Craugastor	108	2	0	25	18	19	5	25	14	64	59
Crepidophryne	1	0	0	0	0	0	0	0	1	0	0
Crinia	15	0	0	0	0	1	0	13	1	1	7
Crossodactylodes	3	0	0	0	0	2	0	0	1	2	67
Crossodactylus	10	0	0	1	3	0	2	3	1	4	40
Crotaphatrema	3	0	0	0	0	0	0	0	3	0	0
Cruziohyla	2	0	0	0	0	0	0	2	0	0	0
Cryptobatrachus	3	0	0	1	1	1	0	0	0	3	100
Cryptobranchus	1	0	0	0	0	0	1	0	0	0	0
Cryptophyllobates	2	0	0	0	1	0	0	0	1	1	50
Cryptothylax	2	0	0	0	0	0	0	1	1	0	0
Cryptotriton	6	0	0	1	4	0	0	0	1	5	83
Ctenophryne	2	0	0	0	0	0	0	1	1	0	0
Cycloramphus	26	0	0	1	5	5	0	3	12	11	42
Cyclorana	13	0	0	0	0	0	0	13	0	0	0
Cynops	7	1	0	0	2	0	0	3	1	3	43
Dasypops	1	0	0	0	0	1	0	0	0	1	100
Dendrobates	43	0	0	3	6	5	1	19	9	14	33
Dendrophryniscus	7	0	0	0	1	1	0	4	1	2	29
Dendropsophus	90	0	0	1	3	1	0	71	14	5	6
Dendrotriton	6	0	0	1	3	2	0	0	0	6	100
Dermatonotus	1	0	0	0	0	0	0	1	0	0	0
Dermophis	7	0	0	0	0	0	0	2	5	0	0
Desmognathus	18	0	0	0	0	0	2	15	1	0	0
Dicamptodon	4	0	0	0	0	0	1	3	0	0	0
Didynamipus	1	0	0	0	1	0	0	0	0	1	100
Dimorphognathus	1	0	0	0	0	0	0	1	0	0	0
Dischidodactylus	2	0	0	0	0	0	0	0	2	0	0
Discodeles	5	0	0	0	0	0	0	3	2	0	0
Discoglossus	7	1	0	0	0	0	2	4	0	1	14
Duellmanohyla	8	0	0	3	3	2	0	0	0	8	100
Dyscophus	3	0	0	0	0	0	1	2	0	0	0

Genus	Total	EX	EW	CR	EN	VU	NT	LC	DD	Number threatened or Extinct	% Threatened or Extinct
Echinotriton	2	0	0	1	1	0	0	0	0	2	100
Ecnomiohyla	10	0	0	3	3	1	1	1	1	7	70
Edalorhina	2	0	0	0	0	0	0	1	1	0	0
Elachistocleis	6	0	0	0	1	0	0	4	1	1	17
Eleutherodactylus	610	0	0	76	154	90	33	135	122	320	52
Ensatina	1	0	0	0	0	0	0	1	0	0	0
Epicrionops	8	0	0	0	0	0	0	3	5	0	0
Epipedobates	30	0	0	2	1	1	2	13	11	4	13
Ericabatrachus	1	0	0	0	1	0	0	0	0	1	100
Euparkerella	4	0	0	0	2	2	0	0	0	4	100
Euphlyctis	4	0	0	0	0	0	0	3	1	0	0
Euproctus	3	0	0	0	1	0	1	1	0	1	33
Eupsophus	8	0	0	1	3	0	2	2	0	4	50
Eurycea	24	0	0	0	2	9	1	8	4	11	46
Exerodonta	11	0	0	1	2	4	0	2	2	7	64
Fejervarya	31	0	0	1	2	0	0	15	13	3	10
Flectonotus	5	0	0	0	1	0	0	4	0	1	20
Frostius	1	0	0	0	0	0	0	1	0	0	0
Gastrophryne	5	0	0	0	0	0	0	5	0	0	0
Gastrophrynoides	1	0	0	0	0	1	0	0	0	1	100
Gastrotheca	52	0	0	2	13	8	2	14	13	23	44
Gegeneophis	8	0	0	0	0	0	0	1	7	0	0
Genyophryne	1	0	0	0	0	0	0	1	0	0	0
Geobatrachus	1	0	0	0	1	0	0	0	0	1	100
Geocrinia	7	0	0	1	0	1	1	4	0	2	29
Geotrypetes	3	0	0	0	0	0	0	1	2	0	0
Glyphoglossus	1	0	0	0	0	0	1	0	0	0	0
Grandisonia	4	0	0	0	1	0	0	3	0	1	25
Gymnopis	2	0	0	0	0	0	0	1	1	0	0
Gyrinophilus	4	0	0	0	2	1	0	1	0	3	75
Haideotriton	1	0	0	0	0	1	0	0	0	1	100
Hamptophryne	1	0	0	0	0	0	0	1	0	0	0
Heleioporus	6	0	0	0	0	1	0	5	0	1	17
Heleophryne	6	0	0	2	0	0	0	4	0	2	33
Hemidactylium	1	0	0	0	0	0	0	1	0	0	0
Hemiphractus	6	0	0	0	1	0	2	3	0	1	17
Hemisus	9	0	0	0	0	1	0	4	4	1	11
Herpele	2	0	0	0	0	0	0	1	1	0	0
Heterixalus	11	0	0	0	0	0	2	9	0	0	0
Hildebrandtia	3	0	0	0	0	0	0	2	1	0	0
Holoaden	2	0	0	1	0	1	0	0	0	2	100
Hoplobatrachus	4	0	0	0	0	0	0	4	0	0	0
Hoplophryne	2	0	0	0	1	1	0	0	0	2	100
Huia	7	0	0	0	0	1	0	3	3	1	14
Hyalinobatrachium	36	0	0	1	5	5	3	13	9	11	31
Hydrolaetare	2	0	0	0	0	0	0	2	0	0	0
Hydromantes	3	0	0	0	0	2	0	1	0	2	67
Hyla	44	0	0	2	0	1	2	26	13	3	7
Hylodes	20	0	0	0	2	4	0	4	10	6	30
Hylomantis	8	0	0	0	2	1	0	2	3	3	37
Hylophorbus	7	0	0	0	0	0	0	1	6	0	0
Hylorina	1	0	0	0	0	0	0	1	0	0	0
Hyloscirtus	28	0	0	1	9	3	5	5	5	13	46
Hymenochirus	4	0	0	0	0	0	0	2	2	0	0
Hynobius	27	0	0	3	7	5	0	8	4	15	6
Hyophryne	1	0	0	0	0	0	0	0	1	0	0
Hyperolius	125	0	0	0	12	12	6	56	39	24	9
Hypogeophis	1	0	0	0	0	0	0	1	0	0	0
Hypopachus	2	0	0	0	0	1	0	1	0	1	50
Hypsiboas	73	0	0	1	0	2	2	47	21	3	4
Ichthyophis	34	0	0	0	0	2	0	5	27	2	6
Idiocranium	1	0	0	0	0	0	0	0	1	0	0
Indirana	10	0	0	2	3	1	0	2	2	6	60
Indotyphlus	2	0	0	0	0	0	0	0	2	0	0
Ingerana	9	0	0	0	0	2	0	2	5	2	22
Insuetophrynus	1	0	0	1	0	0	0	0	0	1	100
Ischnocnema	7	0	0	0	0	1	0	3	3	1	1
Isthmohyla	14	0	0	7	1	2	0	2	2	10	7
Itapotihyla	1	0	0	0	0	0	0	1	0	0	0
Ixalotriton	2	0	0	2	0	0	0	0	0	2	100
Kalophrynus	15	0	0	0	1	3	3	3	5	4	27
Kaloula	14	0	0	0	0	2	2	8	2	2	14
Karsenia	1	0	0	0	0	0	0	1	0	0	0
Kassina	13	0	0	0	0	2	1	9	1	2	15
Kassinula	1	0	0	0	0	0	0	1	0	0	0
Kurixalus	2	0	0	0	0	0	0	2	0	0	0
Laliostoma	1	0	0	0	0	0	0	1	0	0	0
Lankanectes	1	0	0	0	0	0	0	1	0	0	0
Lanzarana	1	0	0	0	0	0	1	0	0	0	0
Laurentophryne	1	0	0	0	0	0	0	0	1	0	0
Lechriodus	4	0	0	0	0	0	0	4	0	0	0
Leiopelma	4	0	0	1	1	2	0	0	0	4	100
Lepidobatrachus	3	0	0	0	0	0	1	2	0	0	0
Leptobrachella	7	0	0	1	0	4	0	1	1	5	71
Leptobrachium	14	0	0	0	0	3	0	8	3	3	21
Leptodactylodon	15	0	0	1	6	6	1	0	1	13	87
Leptodactylus	64	0	0	3	1	3	1	50	6	7	11
Leptolalax	18	0	0	0	1	5	3	4	5	6	33
Leptopelis	51	0	0	0	3	7	5	27	9	10	20
Leptophryne	2	0	0	1	0	0	0	1	0	1	50
Limnodynastes	13	0	0	0	0	0	0	13	0	0	0

Genus	Total	EX	EW	CR	EN	VU	NT	LC	DD	Number threatened or Extinct	% Threatened or Extinct
Limnomedusa	1	0	0	0	0	0	0	1	0	0	0
Limnonectes	50	0	0	0	4	8	11	17	10	12	24
Lineatriton	3	0	0	0	3	0	0	0	0	3	100
Liophryne	6	0	0	0	0	0	0	2	4	0	0
Lithodytes	1	0	0	0	0	0	0	1	0	0	0
Litoria	126	0	0	6	5	10	2	70	33	21	17
Luetkenotyphlus	1	0	0	0	0	0	0	0	1	0	0
Lyciasalamandra	7	0	0	1	5	1	0	0	0	7	100
Lysapsus	3	0	0	0	0	0	0	3	0	0	0
Macrogenioglottus	1	0	0	0	0	0	0	1	0	0	0
Madecassophryne	1	0	0	0	1	0	0	0	0	1	100
Mannophryne	12	0	0	4	3	2	1	0	2	9	75
Mantella	15	0	0	5	2	3	1	3	1	10	67
Mantidactylus	86	0	0	1	9	9	7	45	15	19	22
Mantophryne	3	0	0	0	0	0	0	1	2	0	0
Megaelosia	6	0	0	0		1	0	0	5	1	17
Megastomatohyla	4	0	0	2	2	0	0	0	0	4	100
Megophrys	8	0	0	0	1	2	1	2	2	3	37
Melanobatrachus	1	0	0	0	1	0	0	0	0	1	100
Melanophryniscus	19	0	0	1	2	4	2	7	3	7	37
Meristogenys	8	0	0	0	0	2	4	1	1	2	25
Mertensiella	1	0	0	0	0	1	0	0	0	1	100
Mertensophryne	1	0	0	0	0	0	0	1	0	0	0
Metacrinia	1	0	0	0	0	0	0	1	0	0	0
Metaphrynella	2	0	0	0	0	0	0	2	0	0	0
Metaphryniscus	1	0	0	0	0	1	0	0	0	1	100
Micrixalus	11	0	0	1	1	3	1	0	5	5	45
Microbatrachella	1	0	0	1	0	0	0	0	0	1	100
Microcaecilia	5	0	0	0	0	0	0	3	2	0	0
Microhyla	26	0	0	1	2	1	2	12	8	4	15
Micryletta	2	0	0	0	1	0	0	1	0	1	50
Mimosiphonops	2	0	0	0	0	0	0	0	2	0	0
Minervarya	1	0	0	0	1	0	0	0	0	1	100
Mixophyes	6	0	0	0	2	1	0	2	1	3	50
Myersiella	1	0	0	0	0	0	0	1	0	0	0
Myersiohyla	4	0	0	0	0	0	0	1	3	0	0
Myobatrachus	1	0	0	0	0	0	0	1	0	0	0
Nannophrys	3	1	0	1	0	1	0	0	0	3	100
Nanorana	3	0	0	0	0	0	1	2	0	0	0
Nasikabatrachus	1	0	0	0	1	0	0	0	0	1	100
Natalobatrachus	1	0	0	0	1	0	0	0	0	1	100
Nectocaecilia	1	0	0	0	0	0	0	1	0	0	0
Nectophryne	2	0	0	0	0	0	0	2	0	0	0
Nectophrynoides	11	0	0	3	4	1	0	1	2	8	78
Necturus	5	0	0	0	1	0	1	3	0	1	20
Nelsonophryne	2	0	0	0	0	0	0	2	0	0	0
Neobatrachus	10	0	0	0	0	0	0	10	0	0	0
Nephelobates	8	0	0	1	7	0	0	0	0	8	100
Nesomantis	1	0	0	0	0	1	0	0	0	1	100
Neurergus	4	0	0	1	1	2	0	0	0	4	100
Nimbaphrynoides	2	0	0	2	0	0	0	0	0	2	100
Notaden	4	0	0	0	0	0	0	3	1	0	0
Nothophryne	1	0	0	0	1	0	0	0	0	1	100
Notophthalmus	3	0	0	0	1	0	1	1	0	1	33
Nototriton	13	0	0	1	2	3	3	0	4	6	46
Nyctanolis	1	0	0	0	1	0	0	0	0	1	100
Nyctibates	1	0	0	0	0	0	0	1	0	0	0
Nyctibatrachus	12	0	0	0	6	3	0	1	2	9	75
Nyctimantis	1	0	0	0	0	0	0	1	0	0	0
Nyctimystes	24	0	0	0	1	2	0	10	11	3	12
Nyctixalus	4	0	0	0	0	3	1	0	0	3	75
Occidozyga	12	0	0	0	0	2	1	7	2	2	17
Odontophrynus	10	0	0	1	0	1	0	7	1	2	20
Oedipina	23	0	0	3	6	2	0	6	6	11	48
Onychodactylus	2	0	0	0	0	0	0	2	0	0	0
Ophryophryne	4	0	0	0	0	0	0	2	2	0	0
Opisthothylax	1	0	0	0	0	0	0	1	0	0	0
Oreolalax	17	0	0	1	4	5	3	2	2	10	59
Oreophryne	42	0	0	0	1	3	1	7	30	4	9
Oreophrynella	7	0	0	0	0	6	0	0	1	6	86
Oscaecilia	9	0	0	0	0	0	0	2	7	0	0
Osornophryne	6	0	0	0	4	1	1	0	0	5	83
Osteocephalus	17	0	0	0	0	0	0	15	2	0	0
Osteopilus	8	0	0	0	0	5	0	0	3	0	5	62
Otophryne	3	0	0	0	0	0	0	0	3	0	0
Oxydactyla	5	0	0	0	0	0	0	0	2	3	0	0
Paa	30	0	0	0	0	4	8	4	6	8	12	40
Pachyhynobius	1	0	0	0	0	0	1	0	0	0	1	100
Pachymedusa	1	0	0	0	0	0	0	0	1	0	0
Pachytriton	2	0	0	0	0	0	0	0	2	0	0
Palmatorappia	1	0	0	0	0	0	1	0	0	0	1	100
Paracassina	2	0	0	0	0	0	0	0	2	0	0
Paracrinia	1	0	0	0	0	0	0	0	1	0	0
Paradoxophyla	1	0	0	0	0	0	0	0	1	0	0
Paramesotriton	7	0	0	0	0	1	2	2	1	1	3	43
Paratelmatobius	5	0	0	0	3	1	0	0	0	1	4	80
Parhoplophryne	1	0	0	0	1	0	0	0	0	0	1	100
Parvicaecilia	2	0	0	0	0	0	0	0	2	0	0
Parvimolge	1	0	0	0	0	1	0	0	0	0	1	100
Pedostibes	6	0	0	0	0	1	0	1	1	3	1	7
Pelobates	4	0	0	0	0	1	0	1	2	0	1	25

Genus	Total	EX	EW	CR	EN	VU	NT	LC	DD	Number threatened or Extinct	% Threatened or Extinct
Pelodytes	3	0	0	0	0	0	0	3	0	0	0
Pelophryne	10	0	0	0	3	4	1	1	1	7	70
Petropedetes	7	0	0	0	2	0	3	2	0	2	29
Phaeognathus	1	0	0	0	1	0	0	0	0	1	100
Phasmahyla	4	0	0	0	0	0	1	3	0	0	0
Pherohapsis	1	0	0	0	0	0	0	0	1	0	0
Philautus	149	18	0	16	40	24	8	15	28	98	66
Philoria	6	0	0	1	5	0	0	0	0	6	100
Phlyctimantis	4	0	0	0	0	1	0	3	0	1	25
Phrynella	1	0	0	0	0	0	0	1	0	0	0
Phrynobatrachus	66	0	0	0	5	7	4	27	23	12	18
Phrynodon	1	0	0	0	0	0	0	1	0	0	0
Phrynomantis	5	0	0	0	0	0	0	5	0	0	0
Phrynomedusa	5	1	0	1	0	0	0	1	2	2	40
Phrynopus	36	0	0	12	7	3	0	1	13	22	61
Phyllobates	5	0	0	0	2	0	2	1	0	2	40
Phyllodytes	11	0	0	2	2	0	1	3	3	4	36
Phyllomedusa	26	0	0	1	2	0	0	18	5	3	11
Phyllonastes	6	0	0	0	0	0	1	2	3	0	0
Physalaemus	46	0	0	1	4	2	0	31	8	7	15
Phyzelaphryne	1	0	0	0	0	0	0	1	0	0	0
Pipa	7	0	0	0	1	0	0	6	0	1	14
Platymantis	55	0	0	1	11	13	3	15	12	25	45
Platypelis	11	0	0	0	4	1	0	3	3	5	45
Plectrohyla	41	0	0	27	10	1	0	1	2	38	93
Plethodon	48	1	0	0	2	10	9	23	3	13	27
Plethodontohyla	15	0	0	0	2	4	0	7	2	6	40
Pleurodeles	3	0	0	0	1	1	1	0	0	2	67
Pleurodema	12	0	0	0	0	0	2	10	0	0	0
Polypedates	28	0	0	1	4	0	3	14	6	5	18
Potomotyphlus	1	0	0	0	0	0	0	1	0	0	0
Poyntonia	1	0	0	0	0	0	1	0	0	0	0
Praslinia	1	0	0	0	0	1	0	0	0	1	100
Probreviceps	4	0	0	0	1	3	0	0	0	4	100
Proceratophrys	17	0	0	0	1	3	2	8	3	4	23
Proteus	1	0	0	0	0	1	0	0	0	1	100
Protohynobius	1	0	0	0	0	0	0	0	1	0	0
Pseudacris	12	0	0	0	0	0	0	12	0	0	0
Pseudhymenochirus	1	0	0	0	0	0	0	1	0	0	0
Pseudis	6	0	0	0	0	0	0	6	0	0	0
Pseudoamolops	2	0	0	0	1	0	0	1	0	1	50
Pseudobranchus	2	0	0	0	0	0	0	2	0	0	0
Pseudobufo	1	0	0	0	0	0	0	1	0	0	0
Pseudoeurycea	45	0	0	7	14	5	3	2	14	26	58
Pseudopaludicola	12	0	0	0	0	0	0	8	4	0	0
Pseudophryne	13	0	0	1	2	1	1	8	0	4	31
Pseudotriton	2	0	0	0	0	0	0	2	0	0	0
Pterorana	1	0	0	0	0	1	0	0	0	1	100
Ptychadena	47	0	0	0	2	0	2	32	11	2	4
Ptychohyla	13	0	0	4	6	0	1	0	2	10	77
Pyxicephalus	3	0	0	0	0	0	0	3	0	0	0
Ramanella	9	0	0	0	2	2	2	1	2	4	44
Rana	243	1	0	12	19	23	24	122	42	55	23
Ranodon	4	0	0	0	1	2	1	0	0	3	75
Relictivomer	1	0	0	0	0	0	0	1	0	0	0
Rhacophorus	64	0	0	1	5	6	12	18	22	12	19
Rhamphophryne	10	0	0	1	2	0	1	0	6	3	30
Rheobatrachus	2	2	0	0	0	0	0	0	0	2	100
Rhinatrema	1	0	0	0	0	0	0	1	0	0	0
Rhinoderma	2	0	0	1	0	1	0	0	0	2	100
Rhinophrynus	1	0	0	0	0	0	0	1	0	0	0
Rhombophryne	1	0	0	0	0	1	0	0	0	1	100
Rhyacotriton	4	0	0	0	0	1	2	1	0	1	25
Rupirana	1	0	0	0	0	1	0	0	0	1	100
Salamandra	6	0	0	0	0	2	1	3	0	2	33
Salamandrella	1	0	0	0	0	0	0	1	0	0	0
Salamandrina	1	0	0	0	0	0	0	1	0	0	0
Scaphiophryne	10	0	0	1	1	1	1	3	3	3	30
Scaphiopus	3	0	0	0	0	0	0	3	0	0	0
Scarthyla	1	0	0	0	0	0	0	1	0	0	0
Schismaderma	1	0	0	0	0	0	0	1	0	0	0
Schistometopum	2	0	0	0	0	0	0	2	0	0	0
Schoutedenella	1	0	0	0	0	0	0	1	0	0	0
Scinax	89	0	0	2	2	6	3	62	14	10	11
Scolecomorphus	3	0	0	0	0	0	0	3	0	0	0
Scotobleps	1	0	0	0	0	0	0	1	0	0	0
Scutiger	19	0	0	1	4	5	0	5	4	10	53
Scythrophrys	1	0	0	0	0	1	0	0	0	1	100
Semnodactylus	1	0	0	0	0	0	0	1	0	0	0
Silurana	2	0	0	0	0	0	0	2	0	0	0
Siphonops	5	0	0	0	0	0	0	3	2	0	0
Siren	2	0	0	0	0	0	0	2	0	0	0
Smilisca	8	0	0	0	1	1	1	5	0	2	25
Somuncuria	1	0	0	1	0	0	0	0	0	1	100
Sooglossus	3	0	0	0	0	3	0	0	0	3	100
Spea	4	0	0	0	0	0	1	3	0	0	0
Spelaeophryne	1	0	0	0	0	0	0	1	0	0	0
Speleomantes	7	0	0	0	1	2	4	0	0	3	43
Sphaenorhynchus	11	0	0	0	0	0	0	8	3	0	0
Sphaerotheca	6	0	0	0	0	0	0	4	2	0	0
Sphenophryne	1	0	0	0	0	0	0	1	0	0	0
Spicospina	1	0	0	0	0	1	0	0	0	1	100
Spinophrynoides	1	0	0	0	0	0	1	0	0	1	100
Staurois	3	0	0	0	0	0	1	2	0	0	0
Stefania	18	0	0	0	0	5	1	4	8	5	28
Stephopaedes	4	0	0	0	3	0	0	1	0	3	75
Stereochilus	1	0	0	0	0	0	0	1	0	0	0
Stereocyclops	2	0	0	0	0	1	0	1	0	1	50
Strongylopus	11	0	0	0	0	4	1	5	1	4	36
Stumpffia	8	0	0	1	0	1	0	1	5	2	25
Sylvacaecilia	1	0	0	0	0	0	0	0	1	0	0
Synapturanus	3	0	0	0	0	0	0	3	0	0	0
Syncope	3	0	0	0	0	0	0	3	0	0	0
Tachycnemis	1	0	0	0	0	0	0	1	0	0	0
Taricha	3	0	0	0	0	0	0	3	0	0	0
Taudactylus	6	1	0	4	0	0	1	0	0	5	83
Telmatobius	52	0	0	8	20	10	3	1	10	38	73
Telmatobufo	3	0	0	1	1	1	0	0	0	3	100
Tepuihyla	8	0	0	0	0	1	0	1	6	1	12
Theloderma	9	0	0	0	1	0	1	4	3	1	11
Thorius	23	0	0	8	13	0	0	0	2	21	91
Thoropa	5	0	0	1	2	0	1	1	0	3	60
Tlalocohyla	4	0	0	0	0	1	0	3	0	1	25
Tomopterna	9	0	0	0	0	0	0	8	1	0	0
Trachycephalus	10	0	0	0	0	0	0	9	1	0	0
Trichobatrachus	1	0	0	0	0	0	0	1	0	0	0
Triprion	2	0	0	0	0	0	0	2	0	0	0
Triturus	13	0	0	0	0	0	2	11	0	0	0
Truebella	2	0	0	0	0	0	0	0	2	0	0
Tylototriton	7	0	0	0	0	1	2	3	1	0	3	43
Typhlonectes	3	0	0	0	0	0	0	2	1	0	0
Typhlotriton	1	0	0	0	0	0	0	1	0	0	0
Uperodon	2	0	0	0	0	0	0	2	0	0	0
Uperoleia	24	0	0	0	0	0	0	19	5	0	0
Uraeotyphlus	5	0	0	0	0	0	0	0	5	0	0
Vanzolinius	1	0	0	0	0	0	0	1	0	0	0
Vibrissaphora	5	0	0	0	3	0	1	1	0	3	60
Werneria	6	0	0	1	5	0	0	0	0	6	100
Wolterstorffina	3	0	0	1	1	1	0	0	0	3	100
Xenobatrachus	18	0	0	0	0	0	0	6	12	0	0
Xenohyla	2	0	0	0	0	0	1	0	1	0	0
Xenophrys	31	0	0	0	1	2	5	12	11	3	10
Xenopus	16	0	0	1	1	0	1	10	3	2	12
Xenorhina	8	0	0	0	0	0	0	4	4	0	0
Zachaenus	3	0	0	0	0	1	0	0	2	1	33

APPENDIX IV. LIST OF RAPIDLY DECLINING SPECIES

Order	Family	Genus	Species	Threat type[a]	2007 Red List Category[b]	1980 Red List Category[b]	Biogeographic Realm[c]
Anura	Arthroleptidae	*Arthroleptis*	*crusculum*	B	EN	VU	Afrotropical
Anura	Arthroleptidae	*Arthroleptis*	*troglodytes*	B	CR	VU	Afrotropical
Anura	Arthroleptidae	*Cardioglossa*	*alsco*	B	CR	VU	Afrotropical
Anura	Bufonidae	*Andinophryne*	*colomai*	B	CR	EN	Neotropical
Anura	Bufonidae	*Ansonia*	*albomaculata*	B	NT	LC	Indomalayan
Anura	Bufonidae	*Ansonia*	*hanitschi*	B	NT	LC	Indomalayan
Anura	Bufonidae	*Ansonia*	*leptopus*	B	NT	LC	Indomalayan
Anura	Bufonidae	*Ansonia*	*longidigita*	B	NT	LC	Indomalayan
Anura	Bufonidae	*Ansonia*	*spinulifer*	B	NT	LC	Indomalayan
Anura	Bufonidae	*Atelopus*	*andinus*	C	CR	NT	Neotropical
Anura	Bufonidae	*Atelopus*	*angelito*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*arsyecue*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*arthuri*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*balios*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*bomolochos*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*boulengeri*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*carauta*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*carbonerensis*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*carrikeri*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*certus*	C	EN	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*chiriquiensis*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*chocoensis*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*chrysocorallus*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*coynei*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*cruciger*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*ebenoides*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*elegans*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*erythropus*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*eusebianus*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*exiguus*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*famelicus*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*farci*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*flavescens*	C	VU	LC	Neotropical
Anura	Bufonidae	*Atelopus*	*franciscus*	C	VU	LC	Neotropical

Order	Family	Genus	Species	Threat type[a]	2007 Red List Category[b]	1980 Red List Category[b]	Biogeographic Realm[c]
Anura	Bufonidae	*Atelopus*	*galactogaster*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*glyphus*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*guanujo*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*guitarraensis*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*halihelos*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*ignescens*	C	EX	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*laetissimus*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*limosus*	B	EN	NT	Neotropical
Anura	Bufonidae	*Atelopus*	*longibrachius*	C	EN	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*longirostris*	C	EX	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*lozanoi*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*lynchi*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*mandingues*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*mindoensis*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*minutulus*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*monohernandezi*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*mucubajiensis*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*muisca*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*nahumae*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*nanay*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*nepiozomus*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*nicefori*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*oxyrhynchus*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*pachydermus*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*pedimarmoratus*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*peruensis*	C	CR	NT	Neotropical
Anura	Bufonidae	*Atelopus*	*petriruizi*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*pictiventris*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*pinangoi*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*planispina*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*pulcher*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*quimbaya*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*reticulatus*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*seminiferus*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*senex*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*sernai*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*simulatus*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*sonsonensis*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*sorianoi*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*spumarius*	C	VU	LC	Neotropical
Anura	Bufonidae	*Atelopus*	*spurrelli*	C	VU	LC	Neotropical
Anura	Bufonidae	*Atelopus*	*subornatus*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*tamaense*	C	CR	VU	Neotropical
Anura	Bufonidae	*Atelopus*	*tricolor*	C	VU	LC	Neotropical
Anura	Bufonidae	*Atelopus*	*varius*	C	CR	NT	Neotropical
Anura	Bufonidae	*Atelopus*	*walkeri*	C	CR	EN	Neotropical
Anura	Bufonidae	*Atelopus*	*zeteki*	C	CR	EN	Neotropical
Anura	Bufonidae	*Bufo*	*amabilis*	B	CR	EN	Neotropical
Anura	Bufonidae	*Bufo*	*baxteri*	C	EW	CR	Nearctic
Anura	Bufonidae	*Bufo*	*blombergi*	B	NT	LC	Neotropical
Anura	Bufonidae	*Bufo*	*boreas*	C	NT	LC	Nearctic
Anura	Bufonidae	*Bufo*	*brauni*	B	EN	VU	Afrotropical
Anura	Bufonidae	*Bufo*	*brongersmai*	B	NT	LC	Palaearctic
Anura	Bufonidae	*Bufo*	*caeruleostictus*	B	EN	VU	Neotropical
Anura	Bufonidae	*Bufo*	*californicus*	B	EN	NT	Nearctic
Anura	Bufonidae	*Bufo*	*canorus*	C	EN	VU	Nearctic
Anura	Bufonidae	*Bufo*	*chavin*	B	CR	EN	Neotropical
Anura	Bufonidae	*Bufo*	*cycladen*	C	VU	NT	Neotropical
Anura	Bufonidae	*Bufo*	*fastidiosus*	C	CR	EN	Neotropical
Anura	Bufonidae	*Bufo*	*guentheri*	B	VU	NT	Neotropical
Anura	Bufonidae	*Bufo*	*gundlachi*	B	VU	NT	Neotropical
Anura	Bufonidae	*Bufo*	*holdridgei*	C	CR	VU	Neotropical
Anura	Bufonidae	*Bufo*	*lemur*	B	CR	EN	Neotropical
Anura	Bufonidae	*Bufo*	*mexicanus*	B	NT	LC	Nearctic, Neotropical
Anura	Bufonidae	*Bufo*	*periglenes*	C	EX	VU	Neotropical
Anura	Bufonidae	*Bufo*	*peripatetes*	C	CR	EN	Neotropical
Anura	Bufonidae	*Bufo*	*rubropunctatus*	B	VU	NT	Neotropical
Anura	Bufonidae	*Bufo*	*togoensis*	B	NT	LC	Afrotropical
Anura	Bufonidae	*Leptophryne*	*cruentata*	C	CR	VU	Indomalayan
Anura	Bufonidae	*Melanophryniscus*	*devincenzii*	B	EN	VU	Neotropical
Anura	Bufonidae	*Nectophrynoides*	*asperginis*	C	CR	VU	Afrotropical
Anura	Bufonidae	*Nimbaphrynoides*	*occidentalis*	B	CR	VU	Afrotropical
Anura	Bufonidae	*Osornophryne*	*percrassa*	B	EN	VU	Neotropical
Anura	Bufonidae	*Pedostibes*	*rugosus*	B	NT	LC	Indomalayan
Anura	Bufonidae	*Pelophryne*	*signata*	B	NT	LC	Indomalayan
Anura	Bufonidae	*Werneria*	*iboundji*	B	CR	VU	Afrotropical
Anura	Centrolenidae	*Centrolene*	*ballux*	C	CR	EN	Neotropical
Anura	Centrolenidae	*Centrolene*	*buckleyi*	C	NT	LC	Neotropical
Anura	Centrolenidae	*Centrolene*	*heloderma*	C	CR	VU	Neotropical
Anura	Centrolenidae	*Centrolene*	*lynchi*	C	EN	VU	Neotropical
Anura	Dendrobatidae	*Aromobates*	*nocturnus*	C	CR	VU	Neotropical
Anura	Dendrobatidae	*Colostethus*	*anthracinus*	C	CR	EN	Neotropical
Anura	Dendrobatidae	*Colostethus*	*delatorreae*	C	CR	EN	Neotropical
Anura	Dendrobatidae	*Colostethus*	*dunni*	C	CR	EN	Neotropical
Anura	Dendrobatidae	*Colostethus*	*elachyhistus*	C	EN	VU	Neotropical
Anura	Dendrobatidae	*Colostethus*	*infraguttatus*	B	NT	LC	Neotropical
Anura	Dendrobatidae	*Colostethus*	*lehmanni*	C	NT	LC	Neotropical
Anura	Dendrobatidae	*Colostethus*	*leopardalis*	C	CR	VU	Neotropical
Anura	Dendrobatidae	*Colostethus*	*machalilla*	B	NT	LC	Neotropical
Anura	Dendrobatidae	*Colostethus*	*olfersioides*	C	VU	LC	Neotropical
Anura	Dendrobatidae	*Colostethus*	*pulchellus*	C	VU	NT	Neotropical

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Order	Family	Genus	Species	Threat type[a]	2007 Red List Category[b]	1980 Red List Category[b]	Biogeographic Realm[c]
Anura	Dendrobatidae	*Colostethus*	*vertebralis*	C	CR	VU	Neotropical
Anura	Dendrobatidae	*Dendrobates*	*lehmanni*	B	CR	EN	Neotropical
Anura	Dendrobatidae	*Dendrobates*	*steyermarki*	B	CR	VU	Neotropical
Anura	Dendrobatidae	*Dendrobates*	*sylvaticus*	B	NT	LC	Neotropical
Anura	Dendrobatidae	*Mannophryne*	*olmonae*	C	CR	VU	Neotropical
Anura	Dendrobatidae	*Nephelobates*	*meridensis*	B	CR	EN	Neotropical
Anura	Discoglossidae	*Alytes*	*cisternasii*	B	NT	LC	Palaearctic
Anura	Discoglossidae	*Alytes*	*dickhilleni*	B	VU	NT	Palaearctic
Anura	Discoglossidae	*Discoglossus*	*jeanneae*	B	NT	LC	Palaearctic
Anura	Hemisotidae	*Hemisus*	*guttatus*	B	VU	NT	Afrotropical
Anura	Hylidae	*Agalychnis*	*annae*	C	EN	NT	Neotropical
Anura	Hylidae	*Agalychnis*	*litodryas*	B	VU	LC	Neotropical
Anura	Hylidae	*Agalychnis*	*moreletii*	C	CR	LC	Neotropical
Anura	Hylidae	*Agalychnis*	*saltator*	B	NT	LC	Neotropical
Anura	Hylidae	*Argenteohyla*	*siemersi*	B	EN	LC	Neotropical
Anura	Hylidae	*Bokermannohyla*	*claresignata*	C	CR	VU	Neotropical
Anura	Hylidae	*Bromeliohyla*	*bromeliacia*	C	EN	VU	Neotropical
Anura	Hylidae	*Bromeliohyla*	*dendroscarta*	C	CR	EN	Neotropical
Anura	Hylidae	*Charadrahyla*	*altipotens*	C	CR	EN	Neotropical
Anura	Hylidae	*Duellmanohyla*	*salvavida*	B	CR	EN	Neotropical
Anura	Hylidae	*Duellmanohyla*	*soralia*	B	CR	EN	Neotropical
Anura	Hylidae	*Duellmanohyla*	*uranochroa*	C	CR	VU	Neotropical
Anura	Hylidae	*Ecnomiohyla*	*echinata*	C	CR	EN	Neotropical
Anura	Hylidae	*Hyla*	*bocourti*	C	CR	EN	Neotropical
Anura	Hylidae	*Hylomantis*	*lemur*	C	EN	VU	Neotropical
Anura	Hylidae	*Hyloscirtus*	*colymba*	C	EN	VU	Neotropical
Anura	Hylidae	*Hypsiboas*	*alboniger*	B	NT	LC	Neotropical
Anura	Hylidae	*Hypsiboas*	*heilprini*	B	VU	NT	Neotropical
Anura	Hylidae	*Isthmohyla*	*angustilineata*	C	CR	EN	Neotropical
Anura	Hylidae	*Isthmohyla*	*calypsa*	C	CR	EN	Neotropical
Anura	Hylidae	*Isthmohyla*	*debilis*	C	CR	EN	Neotropical
Anura	Hylidae	*Isthmohyla*	*graceae*	C	CR	EN	Neotropical
Anura	Hylidae	*Isthmohyla*	*rivularis*	C	CR	VU	Neotropical
Anura	Hylidae	*Isthmohyla*	*tica*	C	CR	VU	Neotropical
Anura	Hylidae	*Litoria*	*aurea*	C	VU	NT	Australasian
Anura	Hylidae	*Litoria*	*booroolongensis*	C	CR	VU	Australasian
Anura	Hylidae	*Litoria*	*brevipalmata*	B	EN	VU	Australasian
Anura	Hylidae	*Litoria*	*cooloolensis*	B	EN	NT	Australasian
Anura	Hylidae	*Litoria*	*freycineti*	B	VU	NT	Australasian
Anura	Hylidae	*Litoria*	*lorica*	C	CR	EN	Australasian
Anura	Hylidae	*Litoria*	*nannotis*	C	EN	VU	Australasian
Anura	Hylidae	*Litoria*	*nyakalensis*	C	CR	VU	Australasian
Anura	Hylidae	*Litoria*	*pearsoniana*	C	NT	LC	Australasian
Anura	Hylidae	*Litoria*	*raniformis*	C	EN	LC	Australasian
Anura	Hylidae	*Litoria*	*rheocola*	C	EN	VU	Australasian
Anura	Hylidae	*Litoria*	*spenceri*	C	CR	EN	Australasian
Anura	Hylidae	*Megastomatohyla*	*pellita*	C	CR	EN	Neotropical
Anura	Hylidae	*Nyctimystes*	*dayi*	C	EN	VU	Australasian
Anura	Hylidae	*Osteopilus*	*pulchrilineatus*	C	EN	VU	Neotropical
Anura	Hylidae	*Osteopilus*	*vastus*	C	EN	VU	Neotropical
Anura	Hylidae	*Plectrohyla*	*acanthodes*	C	CR	EN	Neotropical
Anura	Hylidae	*Plectrohyla*	*avia*	C	CR	EN	Neotropical
Anura	Hylidae	*Plectrohyla*	*calthula*	B	CR	EN	Neotropical
Anura	Hylidae	*Plectrohyla*	*cembra*	C	CR	EN	Neotropical
Anura	Hylidae	*Plectrohyla*	*chryses*	C	CR	EN	Neotropical
Anura	Hylidae	*Plectrohyla*	*crassa*	C	CR	EN	Neotropical
Anura	Hylidae	*Plectrohyla*	*cyclada*	B	EN	VU	Neotropical
Anura	Hylidae	*Plectrohyla*	*dasypus*	C	CR	EN	Neotropical
Anura	Hylidae	*Plectrohyla*	*ephemera*	C	CR	EN	Neotropical
Anura	Hylidae	*Plectrohyla*	*exquisita*	C	CR	VU	Neotropical
Anura	Hylidae	*Plectrohyla*	*glandulosa*	B	EN	VU	Neotropical
Anura	Hylidae	*Plectrohyla*	*guatemalensis*	C	CR	LC	Neotropical
Anura	Hylidae	*Plectrohyla*	*hartwegi*	C	CR	VU	Neotropical
Anura	Hylidae	*Plectrohyla*	*hazelae*	C	CR	EN	Neotropical
Anura	Hylidae	*Plectrohyla*	*ixil*	C	CR	EN	Neotropical
Anura	Hylidae	*Plectrohyla*	*pentheter*	C	EN	VU	Neotropical
Anura	Hylidae	*Plectrohyla*	*pokomchi*	C	CR	EN	Neotropical
Anura	Hylidae	*Plectrohyla*	*psarosema*	B	CR	EN	Neotropical
Anura	Hylidae	*Plectrohyla*	*quecchi*	C	CR	VU	Neotropical
Anura	Hylidae	*Plectrohyla*	*sabrina*	C	CR	EN	Neotropical
Anura	Hylidae	*Plectrohyla*	*thorectes*	C	CR	EN	Neotropical
Anura	Hylidae	*Ptychohyla*	*hypomykter*	C	CR	NT	Neotropical
Anura	Hylidae	*Ptychohyla*	*leonhardschultzei*	C	EN	VU	Neotropical
Anura	Hylidae	*Ptychohyla*	*salvadorensis*	B	EN	VU	Neotropical
Anura	Hylidae	*Ptychohyla*	*sanctaecrucis*	B	CR	EN	Neotropical
Anura	Hylidae	*Scinax*	*heyeri*	B	CR	EN	Neotropical
Anura	Hyperoliidae	*Afrixalus*	*nigeriensis*	B	NT	LC	Afrotropical
Anura	Hyperoliidae	*Afrixalus*	*spinifrons*	B	VU	NT	Afrotropical
Anura	Hyperoliidae	*Heterixalus*	*rutenbergi*	B	NT	LC	Afrotropical
Anura	Hyperoliidae	*Hyperolius*	*chlorosteus*	B	NT	LC	Afrotropical
Anura	Hyperoliidae	*Hyperolius*	*cystocandicans*	B	VU	NT	Afrotropical
Anura	Hyperoliidae	*Leptopelis*	*occidentalis*	B	NT	LC	Afrotropical
Anura	Leiopelmatidae	*Leiopelma*	*archeyi*	C	CR	NT	Australasian
Anura	Leptodactylidae	*Adelophryne*	*maranguapensis*	B	CR	VU	Neotropical
Anura	Leptodactylidae	*Alsodes*	*barrioi*	B	VU	NT	Neotropical
Anura	Leptodactylidae	*Alsodes*	*montanus*	B	CR	VU	Neotropical
Anura	Leptodactylidae	*Alsodes*	*tumultuosus*	B	CR	VU	Neotropical
Anura	Leptodactylidae	*Alsodes*	*vanzolinii*	B	CR	VU	Neotropical
Anura	Leptodactylidae	*Atelognathus*	*patagonicus*	B	EN	VU	Neotropical
Anura	Leptodactylidae	*Atelognathus*	*praebasalticus*	B	EN	NT	Neotropical
Anura	Leptodactylidae	*Atopophrynus*	*syntomopus*	B	CR	EN	Neotropical

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Order	Family	Genus	Species	Threat type[a]	2007 Red List Category[b]	1980 Red List Category[b]	Biogeographic Realm[c]
Anura	Leptodactylidae	*Batrachophrynus*	*brachydactylus*	A	EN	NT	Neotropical
Anura	Leptodactylidae	*Batrachophrynus*	*macrostomus*	A	EN	VU	Neotropical
Anura	Leptodactylidae	*Caudiverbera*	*caudiverbera*	A	VU	LC	Neotropical
Anura	Leptodactylidae	*Ceratophrys*	*ornata*	B	NT	LC	Neotropical
Anura	Leptodactylidae	*Craugastor*	*alfredi*	B	VU	NT	Neotropical
Anura	Leptodactylidae	*Craugastor*	*andi*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Craugastor*	*angelicus*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Craugastor*	*berkenbuschii*	C	NT	LC	Nearctic, Neotropical
Anura	Leptodactylidae	*Craugastor*	*catalinae*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Craugastor*	*chrysozetetes*	C	EX	CR	Neotropical
Anura	Leptodactylidae	*Craugastor*	*emcelae*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Craugastor*	*epochthidius*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Craugastor*	*escoces*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Craugastor*	*fecundus*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Craugastor*	*fleischmanni*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Craugastor*	*greggi*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Craugastor*	*guerreroensis*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Craugastor*	*lineatus*	C	CR	VU	Neotropical
Anura	Leptodactylidae	*Craugastor*	*merendonensis*	C	CR	VU	Neotropical
Anura	Leptodactylidae	*Craugastor*	*milesi*	C	EX	EN	Neotropical
Anura	Leptodactylidae	*Craugastor*	*polymniae*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Craugastor*	*ranoides*	C	CR	LC	Neotropical
Anura	Leptodactylidae	*Craugastor*	*sabrinus*	C	EN	VU	Neotropical
Anura	Leptodactylidae	*Craugastor*	*saltuarius*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Craugastor*	*stadelmani*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Craugastor*	*tabasarae*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Crossodactylus*	*trachystomus*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Cycloramphus*	*granulosus*	C	EN	VU	Neotropical
Anura	Leptodactylidae	*Cycloramphus*	*ohausi*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*amadeus*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*apostates*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*bakeri*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*boconoensis*	B	CR	VU	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*brevirostris*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*chlorophenax*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*emleni*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*eneidae*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*eunaster*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*fowleri*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*furcyensis*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*fuscus*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*ginesi*	C	EN	VU	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*glandulifer*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*gryllus*	C	EN	NT	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*hedricki*	C	EN	NT	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*heminota*	B	EN	VU	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*jasperi*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*jugans*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*laevissimus*	C	EN	LC	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*lamprotes*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*lancinii*	C	EN	VU	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*leoncei*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*locustus*	C	CR	NT	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*martinicensis*	B	NT	LC	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*nortoni*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*olanchano*	C	CR	VU	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*orcutti*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*oxyrhyncus*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*parabates*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*parapelates*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*paulsoni*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*portoricensis*	C	EN	NT	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*richmondi*	C	CR	NT	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*rufescens*	B	CR	VU	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*rufifemoralis*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*sandersoni*	C	EN	VU	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*schmidti*	C	CR	VU	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*symingtoni*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*unicolor*	C	CR	VU	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*urichi*	C	EN	VU	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*warreni*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Eleutherodactylus*	*wightmanae*	C	EN	NT	Neotropical
Anura	Leptodactylidae	*Gastrotheca*	*angustifrons*	B	VU	NT	Neotropical
Anura	Leptodactylidae	*Gastrotheca*	*pseustes*	C	EN	LC	Neotropical
Anura	Leptodactylidae	*Gastrotheca*	*riobambae*	B	EN	LC	Neotropical
Anura	Leptodactylidae	*Gastrotheca*	*splendens*	B	EN	VU	Neotropical
Anura	Leptodactylidae	*Gastrotheca*	*zeugocystis*	B	CR	VU	Neotropical
Anura	Leptodactylidae	*Hemiphractus*	*bubalus*	B	NT	LC	Neotropical
Anura	Leptodactylidae	*Hemiphractus*	*fasciatus*	B	NT	LC	Neotropical
Anura	Leptodactylidae	*Leptodactylus*	*fallax*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Leptodactylus*	*laticeps*	A	NT	LC	Neotropical
Anura	Leptodactylidae	*Leptodactylus*	*silvanimbus*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Phrynopus*	*dagmarae*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Phrynopus*	*kauneorum*	B	CR	EN	Neotropical
Anura	Leptodactylidae	*Pleurodema*	*bibroni*	B	NT	LC	Neotropical
Anura	Leptodactylidae	*Telmatobius*	*arequipensis*	A	VU	NT	Neotropical
Anura	Leptodactylidae	*Telmatobius*	*brevipes*	C	EN	VU	Neotropical
Anura	Leptodactylidae	*Telmatobius*	*carillae*	C	VU	NT	Neotropical
Anura	Leptodactylidae	*Telmatobius*	*colanensis*	C	EN	VU	Neotropical
Anura	Leptodactylidae	*Telmatobius*	*culeus*	A	CR	VU	Neotropical
Anura	Leptodactylidae	*Telmatobius*	*gigas*	A	CR	VU	Neotropical
Anura	Leptodactylidae	*Telmatobius*	*huayra*	C	VU	NT	Neotropical
Anura	Leptodactylidae	*Telmatobius*	*jelskii*	A	NT	LC	Neotropical
Anura	Leptodactylidae	*Telmatobius*	*marmoratus*	A	VU	LC	Neotropical
Anura	Leptodactylidae	*Telmatobius*	*niger*	C	CR	VU	Neotropical
Anura	Leptodactylidae	*Telmatobius*	*pefauri*	B	CR	VU	Neotropical
Anura	Leptodactylidae	*Telmatobius*	*simonsi*	B	NT	LC	Neotropical
Anura	Leptodactylidae	*Telmatobius*	*vellardi*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Telmatobius*	*zapahuirensis*	B	CR	VU	Neotropical
Anura	Leptodactylidae	*Thoropa*	*lutzi*	C	CR	EN	Neotropical
Anura	Leptodactylidae	*Thoropa*	*petropolitana*	C	EN	VU	Neotropical
Anura	Leptodactylidae	*Thoropa*	*saxatilis*	C	EN	VU	Neotropical
Anura	Limnodynastidae	*Adelotus*	*brevis*	C	NT	LC	Australasian
Anura	Limnodynastidae	*Heleioporus*	*australiacus*	B	VU	LC	Australasian
Anura	Limnodynastidae	*Mixophyes*	*balbus*	B	VU	LC	Australasian
Anura	Limnodynastidae	*Mixophyes*	*fleayi*	C	EN	VU	Australasian
Anura	Limnodynastidae	*Mixophyes*	*iteratus*	B	EN	LC	Australasian
Anura	Limnodynastidae	*Philoria*	*frosti*	C	CR	EN	Australasian
Anura	Limnodynastidae	*Philoria*	*sphagnicolus*	B	EN	VU	Australasian
Anura	Mantellidae	*Mantella*	*cowanii*	A	CR	EN	Afrotropical
Anura	Megophryidae	*Leptolalax*	*dringi*	B	NT	LC	Indomalayan
Anura	Megophryidae	*Leptolalax*	*gracilis*	B	NT	LC	Indomalayan
Anura	Megophryidae	*Oreolalax*	*lichuanensis*	B	NT	LC	Palaearctic
Anura	Megophryidae	*Oreolalax*	*rugosus*	B	NT	LC	Palaearctic
Anura	Microhylidae	*Albericus*	*siegfriedi*	B	CR	VU	Australasian
Anura	Microhylidae	*Austrochaperina*	*novaebritanniae*	B	VU	NT	Australasian
Anura	Microhylidae	*Gastrophrynoides*	*borneensis*	B	VU	NT	Indomalayan
Anura	Microhylidae	*Glyphoglossus*	*molossus*	A	NT	LC	Indomalayan
Anura	Microhylidae	*Kalophrynus*	*subterrestris*	B	NT	LC	Indomalayan
Anura	Microhylidae	*Kaloula*	*mediolineata*	A	NT	LC	Indomalayan
Anura	Microhylidae	*Microhyla*	*perparva*	B	NT	LC	Indomalayan
Anura	Microhylidae	*Microhyla*	*petrigena*	B	NT	LC	Indomalayan
Anura	Microhylidae	*Scaphiophryne*	*gottlebei*	A	CR	EN	Afrotropical
Anura	Microhylidae	*Stumpffia*	*helenae*	B	CR	EN	Afrotropical
Anura	Myobatrachidae	*Crinia*	*tinnula*	B	VU	NT	Australasian
Anura	Myobatrachidae	*Pseudophryne*	*bibronii*	B	NT	LC	Australasian
Anura	Myobatrachidae	*Pseudophryne*	*corroboree*	C	CR	EN	Australasian
Anura	Myobatrachidae	*Pseudophryne*	*pengilleyi*	C	EN	VU	Australasian
Anura	Myobatrachidae	*Taudactylus*	*acutirostris*	C	CR	VU	Australasian
Anura	Myobatrachidae	*Taudactylus*	*diurnus*	C	EX	CR	Australasian
Anura	Myobatrachidae	*Taudactylus*	*eungellensis*	C	CR	EN	Australasian
Anura	Myobatrachidae	*Taudactylus*	*pleione*	C	CR	VU	Australasian
Anura	Myobatrachidae	*Taudactylus*	*rheophilus*	C	CR	EN	Australasian
Anura	Pelobatidae	*Pelobates*	*cultripes*	B	NT	LC	Palaearctic
Anura	Pelobatidae	*Pelobates*	*varaldii*	B	EN	VU	Palaearctic
Anura	Petropedetidae	*Arthroleptella*	*ngongoniensis*	B	CR	EN	Afrotropical
Anura	Petropedetidae	*Microbatrachella*	*capensis*	B	CR	EN	Afrotropical
Anura	Petropedetidae	*Natalobatrachus*	*bonebergi*	B	EN	VU	Afrotropical
Anura	Petropedetidae	*Phrynobatrachus*	*alleni*	B	NT	LC	Afrotropical
Anura	Petropedetidae	*Phrynobatrachus*	*guineensis*	B	NT	LC	Afrotropical
Anura	Petropedetidae	*Phrynobatrachus*	*liberiensis*	B	NT	LC	Afrotropical
Anura	Petropedetidae	*Phrynobatrachus*	*phyllophilus*	B	NT	LC	Afrotropical
Anura	Ranidae	*Amnirana*	*occidentalis*	B	EN	VU	Afrotropical
Anura	Ranidae	*Amolops*	*loloensis*	B	VU	NT	Palaearctic
Anura	Ranidae	*Chaparana*	*quadranus*	A	NT	LC	Indomalayan, Palaearctic
Anura	Ranidae	*Chaparana*	*unculuanus*	A	EN	NT	Indomalayan, Palaearctic
Anura	Ranidae	*Conraua*	*goliath*	A	EN	NT	Afrotropical
Anura	Ranidae	*Limnonectes*	*blythii*	A	NT	LC	Indomalayan
Anura	Ranidae	*Limnonectes*	*ibanorum*	B	NT	LC	Indomalayan
Anura	Ranidae	*Limnonectes*	*ingeri*	B	NT	LC	Indomalayan
Anura	Ranidae	*Limnonectes*	*macrocephalus*	B	NT	LC	Indomalayan
Anura	Ranidae	*Limnonectes*	*magnus*	A	NT	LC	Indomalayan
Anura	Ranidae	*Limnonectes*	*malesianus*	B	NT	LC	Indomalayan
Anura	Ranidae	*Limnonectes*	*paramacrodon*	B	NT	LC	Indomalayan
Anura	Ranidae	*Limnonectes*	*rhacoda*	B	NT	LC	Indomalayan
Anura	Ranidae	*Limnonectes*	*tweediei*	B	NT	LC	Indomalayan
Anura	Ranidae	*Limnonectes*	*visayanus*	A	VU	NT	Indomalayan
Anura	Ranidae	*Meristogenys*	*phaeomerus*	B	NT	LC	Indomalayan
Anura	Ranidae	*Meristogenys*	*poecilus*	B	NT	LC	Indomalayan
Anura	Ranidae	*Meristogenys*	*whiteheadi*	B	NT	LC	Indomalayan
Anura	Ranidae	*Nanorana*	*pleskei*	C	NT	LC	Palaearctic
Anura	Ranidae	*Occidozyga*	*baluensis*	B	NT	LC	Indomalayan
Anura	Ranidae	*Occidozyga*	*borealis*	B	VU	NT	Indomalayan, Palaearctic
Anura	Ranidae	*Paa*	*boulengeri*	A	EN	LC	Indomalayan, Palaearctic
Anura	Ranidae	*Paa*	*exilispinosa*	A	VU	LC	Indomalayan, Palaearctic
Anura	Ranidae	*Paa*	*jiulongensis*	A	VU	NT	Indomalayan, Palaearctic
Anura	Ranidae	*Paa*	*maculosa*	A	EN	VU	Indomalayan, Palaearctic
Anura	Ranidae	*Paa*	*shini*	A	VU	LC	Indomalayan, Palaearctic
Anura	Ranidae	*Paa*	*spinosa*	A	VU	LC	Indomalayan, Palaearctic
Anura	Ranidae	*Paa*	*yunnanensis*	A	EN	LC	Indomalayan, Palaearctic
Anura	Ranidae	*Platymantis*	*akarithyma*	B	VU	NT	Australasian
Anura	Ranidae	*Platymantis*	*hazelae*	B	EN	VU	Indomalayan

Order	Family	Genus	Species	Threat type[a]	2007 Red List Category[b]	1980 Red List Category[b]	Biogeographic Realm[c]
Anura	Ranidae	*Ptychadena*	*newtoni*	B	EN	VU	Afrotropical
Anura	Ranidae	*Ptychadena*	*superciliaris*	B	NT	LC	Afrotropical
Anura	Ranidae	*Rana*	*areolata*	B	NT	LC	Nearctic
Anura	Ranidae	*Rana*	*aurora*	B	NT	LC	Nearctic
Anura	Ranidae	*Rana*	*boylii*	B	NT	LC	Nearctic
Anura	Ranidae	*Rana*	*capito*	B	NT	LC	Nearctic, Neotropical
Anura	Ranidae	*Rana*	*cascadae*	B	NT	LC	Nearctic
Anura	Ranidae	*Rana*	*chosenica*	B	VU	NT	Palaearctic
Anura	Ranidae	*Rana*	*grafi*	B	NT	LC	Palaearctic
Anura	Ranidae	*Rana*	*grahami*	A	NT	LC	Indomalayan, Palaearctic
Anura	Ranidae	*Rana*	*iberica*	B	NT	LC	Palaearctic
Anura	Ranidae	*Rana*	*jingdongensis*	A	VU	LC	Indomalayan, Palaearctic
Anura	Ranidae	*Rana*	*latastei*	B	VU	NT	Palaearctic
Anura	Ranidae	*Rana*	*megapoda*	A	VU	LC	Nearctic, Neotropical
Anura	Ranidae	*Rana*	*minima*	B	CR	EN	Indomalayan
Anura	Ranidae	*Rana*	*muscosa*	C	CR	NT	Nearctic
Anura	Ranidae	*Rana*	*nigromaculata*	A	NT	LC	Indomalayan, Palaearctic
Anura	Ranidae	*Rana*	*omiltemana*	C	CR	EN	Neotropical
Anura	Ranidae	*Rana*	*shqiperica*	B	EN	NT	Palaearctic
Anura	Ranidae	*Rana*	*tarahumarae*	C	VU	LC	Nearctic, Neotropical
Anura	Ranidae	*Rana*	*vibicaria*	C	CR	EN	Neotropical
Anura	Ranidae	*Rana*	*warszewitschii*	C	NT	LC	Neotropical
Anura	Ranidae	*Staurois*	*tuberilinguis*	B	NT	LC	Indomalayan
Anura	Ranidae	*Strongylopus*	*wageri*	B	NT	LC	Afrotropical
Anura	Rhacophoridae	*Nyctixalus*	*pictus*	B	NT	LC	Indomalayan
Anura	Rhacophoridae	*Philautus*	*aurantium*	B	EN	VU	Indomalayan
Anura	Rhacophoridae	*Philautus*	*hosii*	B	NT	LC	Indomalayan
Anura	Rhacophoridae	*Philautus*	*kerangae*	B	EN	VU	Indomalayan
Anura	Rhacophoridae	*Philautus*	*tectus*	B	VU	NT	Indomalayan
Anura	Rhacophoridae	*Rhacophorus*	*bifasciatus*	B	NT	LC	Indomalayan
Anura	Rhacophoridae	*Rhacophorus*	*dulitensis*	B	NT	LC	Indomalayan
Anura	Rhacophoridae	*Rhacophorus*	*kajau*	B	NT	LC	Indomalayan
Anura	Rhacophoridae	*Rhacophorus*	*rufipes*	B	NT	LC	Indomalayan
Anura	Rheobatrachidae	*Rheobatrachus*	*silus*	C	EX	CR	Australasian
Anura	Rheobatrachidae	*Rheobatrachus*	*vitellinus*	C	EX	CR	Australasian
Anura	Rhinodermatidae	*Rhinoderma*	*darwinii*	C	VU	LC	Neotropical
Anura	Scaphiopodidae	*Spea*	*hammondii*	B	NT	LC	Nearctic
Caudata	Ambystomatidae	*Ambystoma*	*andersoni*	A	CR	VU	Neotropical
Caudata	Ambystomatidae	*Ambystoma*	*barbouri*	B	NT	LC	Nearctic
Caudata	Ambystomatidae	*Ambystoma*	*bombypellum*	B	CR	VU	Neotropical
Caudata	Ambystomatidae	*Ambystoma*	*dumerilii*	A	CR	VU	Neotropical
Caudata	Ambystomatidae	*Ambystoma*	*leorae*	B	CR	VU	Neotropical
Caudata	Ambystomatidae	*Ambystoma*	*taylori*	B	CR	VU	Neotropical
Caudata	Cryptobranchidae	*Andrias*	*davidianus*	A	CR	NT	Indomalayan, Palaearctic
Caudata	Hynobiidae	*Batrachuperus*	*gorganensis*	B	CR	VU	Palaearctic
Caudata	Hynobiidae	*Batrachuperus*	*pinchonii*	A	VU	LC	Palaearctic
Caudata	Plethodontidae	*Aneides*	*aeneus*	C	NT	LC	Nearctic
Caudata	Plethodontidae	*Aneides*	*ferreus*	B	NT	LC	Nearctic
Caudata	Plethodontidae	*Bolitoglossa*	*capitana*	B	CR	VU	Neotropical
Caudata	Plethodontidae	*Bolitoglossa*	*compacta*	B	EN	NT	Neotropical
Caudata	Plethodontidae	*Bolitoglossa*	*jacksoni*	B	CR	EN	Neotropical
Caudata	Plethodontidae	*Bolitoglossa*	*lignicolor*	B	VU	NT	Neotropical
Caudata	Plethodontidae	*Bolitoglossa*	*medemi*	B	VU	NT	Neotropical
Caudata	Plethodontidae	*Bolitoglossa*	*pesrubra*	C	EN	NT	Neotropical
Caudata	Plethodontidae	*Bolitoglossa*	*platydactyla*	B	NT	LC	Nearctic, Neotropical
Caudata	Plethodontidae	*Bolitoglossa*	*silverstonei*	B	VU	NT	Neotropical
Caudata	Plethodontidae	*Bolitoglossa*	*spongai*	B	EN	VU	Neotropical
Caudata	Plethodontidae	*Bolitoglossa*	*subpalmata*	C	EN	NT	Neotropical
Caudata	Plethodontidae	*Chiropterotriton*	*cracens*	C	EN	VU	Nearctic
Caudata	Plethodontidae	*Chiropterotriton*	*lavae*	B	CR	VU	Neotropical
Caudata	Plethodontidae	*Dendrotriton*	*cuchumatanus*	B	CR	EN	Neotropical
Caudata	Plethodontidae	*Oedipina*	*gracilis*	B	EN	VU	Neotropical
Caudata	Plethodontidae	*Pseudoeurycea*	*bellii*	C	VU	LC	Nearctic, Neotropical
Caudata	Plethodontidae	*Pseudoeurycea*	*cephalica*	B	NT	LC	Nearctic, Neotropical
Caudata	Plethodontidae	*Pseudoeurycea*	*lynchi*	B	CR	EN	Neotropical
Caudata	Plethodontidae	*Pseudoeurycea*	*smithi*	C	CR	EN	Neotropical
Caudata	Plethodontidae	*Speleomantes*	*supramontis*	B	EN	NT	Palaearctic
Caudata	Plethodontidae	*Thorius*	*minydemus*	B	CR	EN	Neotropical
Caudata	Plethodontidae	*Thorius*	*narisovalis*	C	CR	EN	Neotropical
Caudata	Plethodontidae	*Thorius*	*pennatulus*	C	CR	EN	Neotropical
Caudata	Proteidae	*Necturus*	*alabamensis*	B	EN	VU	Nearctic
Caudata	Salamandridae	*Chioglossa*	*lusitanica*	B	VU	NT	Palaearctic
Caudata	Salamandridae	*Cynops*	*wolterstorffi*	B	EX	CR	Palaearctic
Caudata	Salamandridae	*Neurergus*	*kaiseri*	A	CR	EN	Palaearctic
Caudata	Salamandridae	*Neurergus*	*microspilotus*	A	EN	VU	Palaearctic
Caudata	Salamandridae	*Notophthalmus*	*perstriatus*	B	NT	LC	Nearctic
Caudata	Salamandridae	*Pleurodeles*	*nebulosus*	B	VU	NT	Palaearctic
Caudata	Salamandridae	*Pleurodeles*	*waltl*	B	NT	LC	Palaearctic
Caudata	Salamandridae	*Salamandra*	*infraimmaculata*	B	NT	LC	Palaearctic
Caudata	Salamandridae	*Triturus*	*pygmaeus*	B	NT	LC	Palaearctic
Caudata	Salamandridae	*Tylototriton*	*asperrimus*	A	NT	LC	Indomalayan, Palaearctic
Caudata	Salamandridae	*Tylototriton*	*shanjing*	A	NT	LC	Indomalayan, Palaearctic

a *A = Over-Exploited; B = Reduced Habitat;* and *C = Enigmatic Decline.*

b CR = Critically Endangered; EN = Endangered; VU = Vulnerable; NT = Near Threatened; LC= Least Concern; EX = Extinct

c As with the approach elsewhere in this work, Australasia includes the Oceanic Realm.

APPENDIX V. SPECIES LISTED BY TERRITORY

Country	Number of species occurrences					Red List categories							Threatened species (CR+EN+VU)			Biogeographic realm
	Native	Native endemics	% endemics	Extinct	Introduced	EX or EW	CR	EN	VU	NT	LC	DD	Number threatened	Number threatened endemics	% threatened	
Afghanistan	6	1	17	0	0	0	1	0	0	0	5	0	1	1	17	Palaearctic
Albania	15	0	0	0	0	0	0	1	1	0	13	0	2	0	13	Palaearctic
Algeria	12	1	8	0	0	0	0	1	2	1	8	0	3	1	25	Palaearctic
Andorra	4	0	0	0	0	0	0	0	0	1	3	0	0	0	0	Palaearctic
Angola	99	21	21	0	0	0	0	0	0	0	77	22	0	0	0	Afrotropical
Anguilla	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	Neotropical
Antigua and Barbuda	2	0	0	0	1	0	0	0	0	1	1	0	0	0	0	Neotropical
Argentina	157	48	31	0	0	0	2	15	12	9	105	14	29	24	18	Neotropical
Armenia	8	0	0	0	0	0	0	0	0	0	8	0	0	0	0	Palaearctic
Australia	214	200	93	3	1	3	14	18	15	9	148	10	47	47	22	Australasian
Austria	20	0	0	0	0	0	0	0	0	1	19	0	0	0	0	Palaearctic
Azerbaijan	10	0	0	0	0	0	0	0	0	0	10	0	0	0	0	Palaearctic
Bahamas	2	0	0	0	4	0	0	0	0	0	2	0	0	0	0	Neotropical
Bahrain	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	Palaearctic
Bangladesh	32	1	3	0	0	0	0	0	1	0	30	1	1	0	3	Indomalayan
Barbados	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	Neotropical
Belarus	13	0	0	0	0	0	0	0	0	0	13	0	0	0	0	Palaearctic
Belgium	15	0	0	1	2	0	0	0	0	0	15	0	0	0	0	Palaearctic
Belize	38	1	3	0	0	0	1	3	2	6	25	1	6	0	16	Neotropical
Benin	20	0	0	0	0	0	0	0	0	0	20	0	0	0	0	Afrotropical
Bhutan	7	1	14	0	0	0	0	0	1	0	5	1	1	0	14	Indomalayan
Bolivia	209	53	25	0	0	0	5	6	10	6	165	17	21	18	10	Neotropical
Bosnia and Herzegovina	18	0	0	0	0	0	0	0	1	1	16	0	1	0	6	Palaearctic
Botswana	42	0	0	0	0	0	0	0	0	0	42	0	0	0	0	Afrotropical
Brazil[a]	751	489	65	1	1	1	20	37	53	22	448	171	110	106	15	Neotropical
Brunei Darussalam	54	0	0	1	0	0	0	0	3	17	34	0	3	0	6	Indomalayan
Bulgaria	17	0	0	0	0	0	0	0	0	1	16	0	0	0	0	Palaearctic
Burkina Faso	21	0	0	0	0	0	0	0	0	0	21	0	0	0	0	Afrotropical
Burundi	26	2	8	0	0	0	0	0	6	1	16	3	6	0	23	Afrotropical
Cambodia	44	3	7	0	0	0	0	0	3	2	37	2	3	0	7	Indomalayan
Cameroon	196	55	28	0	0	0	7	31	15	10	122	11	53	38	27	Afrotropical
Canada	45	0	0	0	3	0	0	0	1	3	41	0	1	0	2	Nearctic
Cape Verde	0	0	-	0	1	-	-	-	-	-	-	-	-	-	-	Afrotropical

Country	Number of species occurrences					Red List categories							Threatened species (CR+EN+VU)			Biogeographic realm
	Native	Native endemics	% endemics	Extinct	Introduced	EX or EW	CR	EN	VU	NT	LC	DD	Number threatened	Number threatened endemics	% threatened	
Cayman Islands	2	0	0	0	1	0	0	0	0	0	2	0	0	0	0	Neotropical
Central African Republic	62	3	5	0	0	0	0	0	0	0	59	3	0	0	0	Afrotropical
Chad	17	4	24	0	0	0	0	0	0	0	13	4	0	0	0	Afrotropical, Palaearctic
Afrotropical realm	*17*	*4*	*24*	*0*	-	*0*	*0*	*0*	*0*	*0*	*13*	*4*	*0*	*0*	*0*	
Palaearctic realm	*1*	*0*	*0*	*0*	-	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*0*	*0*	*0*	
Chile	55	38	69	0	1	0	9	4	7	4	13	18	20	16	36	Neotropical
China[b]	325	170	52	1	4	1	8	32	47	32	140	66	87	82	27	Indomalayan, Palaearctic
Indomalayan realm	*208*	*109*	*52*	*0*	-	*0*	*3*	*17*	*26*	*22*	*109*	*26*	*46*	*42*	*22*	
Palaearctic realm	*265*	*137*	*52*	*1*	-	*1*	*7*	*23*	*34*	*27*	*128*	*46*	*64*	*61*	*24*	
Colombia	697	337	48	0	2	0	50	78	81	44	325	119	209	159	30	Neotropical
Congo	59	0	0	0	0	0	0	0	0	0	57	2	0	0	0	Afrotropical
Congo, D.R.	211	53	25	0	0	0	0	3	10	2	148	48	13	4	6	Afrotropical
Costa Rica	179	44	25	2	1	1	19	22	20	9	87	22	61	23	34	Neotropical
Côte d'Ivoire	90	6	7	0	1	0	2	5	6	16	56	5	13	4	14	Afrotropical
Croatia	20	0	0	0	0	0	0	0	2	1	17	0	2	0	10	Palaearctic
Cuba	59	57	97	0	1	0	15	23	9	2	9	1	47	47	80	Neotropical
Cyprus	3	0	0	0	0	0	0	0	0	0	3	0	0	0	0	Palaearctic
Czech Republic	21	0	0	0	0	0	0	0	0	1	20	0	0	0	0	Palaearctic
Denmark	14	0	0	0	0	0	0	0	0	0	14	0	0	0	0	Palaearctic
Djibouti	6	0	0	0	0	0	0	0	0	0	6	0	0	0	0	Afrotropical
Dominica	4	1	25	0	0	0	1	1	0	1	1	0	2	1	50	Neotropical
Dominican Republic	36	12	33	0	2	0	10	16	5	1	4	0	31	11	86	Neotropical
Ecuador	447	159	36	2	2	2	33	72	58	23	198	63	163	102	36	Neotropical
Egypt	9	1	11	0	0	0	0	0	0	0	9	0	0	0	0	Palaearctic
El Salvador	32	0	0	0	0	0	4	4	1	1	21	1	9	0	28	Neotropical
Equatorial Guinea	70	1	1	0	0	0	0	4	0	1	64	1	4	0	6	Afrotropical
Eritrea	17	1	6	0	0	0	0	0	0	0	16	1	0	0	0	Afrotropical
Estonia	9	0	0	1	0	0	0	0	0	0	9	0	0	0	0	Palaearctic
Ethiopia	63	25	40	0	0	0	0	4	5	2	44	8	9	9	14	Afrotropical
Fiji	2	2	100	0	0	0	0	1	0	1	0	0	1	1	50	Australasian
Finland	4	0	0	0	0	0	0	0	0	0	4	0	0	0	0	Palaearctic
France	35	3	9	0	4	0	0	1	1	5	28	0	2	0	6	Palaearctic
French Guiana	104	6	6	0	1	0	0	0	3	0	98	3	3	2	3	Neotropical
Gabon	87	4	5	0	0	0	1	2	0	0	79	5	3	1	3	Afrotropical
Gambia	23	0	0	0	0	0	0	0	0	0	23	0	0	0	0	Afrotropical
Georgia	12	0	0	0	0	0	0	0	1	0	11	0	1	0	8	Palaearctic
Germany	21	0	0	0	3	0	0	0	0	0	21	0	0	0	0	Palaearctic
Ghana	76	4	5	0	0	0	1	5	4	9	54	3	10	1	13	Afrotropical
Gibraltar	2	0	0	1	1	0	0	0	0	0	2	0	0	0	0	Palaearctic
Greece	22	3	14	0	1	0	0	3	2	0	17	0	5	3	23	Palaearctic
Grenada	3	1	33	0	1	0	0	1	0	0	2	0	1	1	33	Neotropical
Guadeloupe	4	2	50	1	2	0	0	2	0	1	1	0	2	2	50	Neotropical
Guatemala	138	40	29	0	0	0	27	30	19	12	38	12	76	30	55	Neotropical
Guinea	74	5	7	0	0	0	1	3	1	13	46	10	5	1	7	Afrotropical
Guinea-Bissau	15	0	0	0	0	0	0	0	0	0	15	0	0	0	0	Afrotropical
Guyana	118	18	15	0	1	0	0	0	6	0	98	14	6	3	5	Neotropical
Haiti	50	26	52	0	1	0	31	10	5	0	4	0	46	26	92	Neotropical
Honduras	116	41	35	2	0	2	30	24	1	8	49	4	55	39	47	Neotropical
Hungary	18	0	0	0	0	0	0	0	0	1	17	0	0	0	0	Palaearctic
India	236	151	64	1	0	1[c]	13	29	21	9	88	76	63	61	27	Indomalayan, Palaearctic
Indomalayan realm	*236*	*151*	*64*	*1*	-	*1*	*13*	*29*	*21*	*9*	*88*	*76*	*63*	*61*	*27*	
Palaearctic realm	*54*	*0*	*0*	*0*	-	*0*	*0*	*0*	*3*	*1*	*44*	*6*	*3*	*0*	*6*	
Indonesia	347	160	46	0	7	0	3	9	21	41	160	113	33	23	10	Australasian, Indomalayan
Australasia/Oceanic realm	*146*	*86*	*59*	*0*	-	*0*	*0*	*1*	*3*	*0*	*65*	*77*	*4*	*4*	*3*	
Indomalayan realm	*205*	*76*	*37*	*0*	-	*0*	*3*	*8*	*18*	*41*	*99*	*36*	*29*	*10*	*14*	
Iraq	6	0	0	0	0	0	0	0	1	1	4	0	1	0	17	Palaearctic
Ireland	3	0	0	0	0	0	0	0	0	0	3	0	0	0	0	Palaearctic
Iran	20	6	30	0	0	0	2	1	1	2	13	1	4	3	20	Palaearctic
Israel	6	0	0	1	0	1	0	0	0	1	5	0	0	0	0	Palaearctic
Italy	37	11	30	0	3	0	0	2	5	4	26	0	7	4	19	Palaearctic
Jamaica	21	21	100	0	4	0	7	8	2	2	2	0	17	17	81	Neotropical
Japan	56	45	80	0	8	0	2	15	3	2	33	1	20	19	36	Indomalayan, Palaearctic
Indomalayan realm	*26*	*23*	*88*	*0*	-	*0*	*0*	*12*	*0*	*1*	*13*	*0*	*12*	*10*	*46*	
Palaearctic realm	*37*	*25*	*68*	*0*	-	*0*	*2*	*3*	*3*	*2*	*26*	*1*	*8*	*8*	*22*	
Jordan	4	0	0	1	0	0	0	0	0	0	4	0	0	0	0	Palaearctic
Kazakhstan	11	0	0	0	1	0	0	1	0	0	10	0	1	0	9	Palaearctic
Kenya	96	14	15	0	0	0	2	3	1	1	83	6	6	5	6	Afrotropical
Korea, D.P.R.	14	0	0	0	0	0	0	0	1	1	12	0	1	0	7	Palaearctic
Korea, Republic	16	3	19	0	0	0	0	0	1	1	12	2	1	0	6	Palaearctic
Kyrgyzstan	4	0	0	0	0	0	0	0	0	0	4	0	0	0	0	Palaearctic
Lao P.D.R.	73	8	11	0	0	0	0	0	4	6	51	12	4	0	5	Indomalayan
Latvia	12[d]	0	0	0	0	0	0	0	0	0	12	0	0	0	0	Palaearctic
Lebanon	7	0	0	0	0	0	0	0	0	1	6	0	0	0	0	Palaearctic
Lesotho	19	1	5	0	0	0	0	0	0	0	18	1	0	0	0	Afrotropical
Liberia	56	2	4	0	0	0	1	2	1	12	34	6	4	1	7	Afrotropical
Libya	4	0	0	0	0	0	0	0	0	0	4	0	0	0	0	Palaearctic
Liechtenstein	10	0	0	0	0	0	0	0	0	0	10	0	0	0	0	Palaearctic
Lithuania	11	0	0	0	0	0	0	0	0	0	11	0	0	0	0	Palaearctic
Luxembourg	14	0	0	0	0	0	0	0	0	0	14	0	0	0	0	Palaearctic
Macedonia, F.Y.R.	14	0	0	0	0	0	0	0	0	0	14	0	0	0	0	Palaearctic
Madagascar	226	225	99.6	0	1	0	9	21	25	16	106	49	55	55	24	Afrotropical
Malawi	76	3	4	0	0	0	0	4	1	1	67	3	5	3	7	Afrotropical
Malaysia	203	56	28	0	2	0	1	12	34	44	87	25	47	34	23	Indomalayan
Maldives	0	0	-	0	1	-	-	-	-	-	-	-	-	-	-	Indomalayan
Mali	24	2	8	0	0	0	0	0	0	0	22	2	0	0	0	Afrotropical, Palaearctic
Afrotropical realm	*24*	*2*	*8*	*0*	-	*0*	*0*	*0*	*0*	*0*	*22*	*2*	*0*	*0*	*0*	
Palaearctic realm	*5*	*0*	*0*	*0*	-	*0*	*0*	*0*	*0*	*0*	*5*	*0*	*0*	*0*	*0*	
Malta	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	Palaearctic
Martinique	3	1	33	1	2	0	0	0	1	1	1	0	1	1	33	Neotropical
Mauritania	4	0	0	0	0	0	0	0	0	0	4	0	0	0	0	Afrotropical, Palaearctic

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Country	Number of species occurrences					Red List categories							Threatened species (CR+EN+VU)			Biogeographic realm
	Native	Native endemics	% endemics	Extinct	Introduced	EX or EW	CR	EN	VU	NT	LC	DD	Number threatened	Number threatened endemics	% threatened	
Afrotropical realm	*4*	*0*	*0*	*0*	-	*0*	*0*	*0*	*0*	*0*	*4*	*0*	*0*	*0*	*0*	
Palaearctic realm	*4*	*0*	*0*	*0*	-	*0*	*0*	*0*	*0*	*0*	*4*	*0*	*0*	*0*	*0*	
Mauritius	0	0	-	0	2	-	-	-	-	-	-	-	-	-	-	Afrotropical
Mexico	363	246	68	0	2	0	71	85	42	22	95	48	198	162	55	Nearctic, Neotropical
Nearctic realm	*116*	*68*	*59*	*0*	-	*0*	*7*	*11*	*13*	*11*	*63*	*11*	*31*	*28*	*27*	
Neotropical realm	*336*	*234*	*70*	*0*	-	*0*	*69*	*80*	*41*	*16*	*85*	*45*	*190*	*161*	*57*	
Moldova	12	0	0	0	0	0	0	0	0	1	11	0	0	0	0	Palaearctic
Monaco	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	Palaearctic
Mongolia	6	0	0	0	0	0	0	0	0	0	6	0	0	0	0	Palaearctic
Montserrat	2	0	0	0	1	0	1	0	0	0	1	0	1	0	50	Neotropical
Morocco	12	2	17	0	0	0	0	1	1	3	7	0	2	1	17	Palaearctic
Mozambique	67	0	0	0	0	0	0	2	1	0	64	0	3	0	4	Afrotropical
Myanmar	79	16	20	0	0	0	0	0	0	4	54	21	0	0	0	Indomalayan
Namibia	48	4	8	0	0	0	0	0	1	0	44	3	1	0	2	Afrotropical
Nepal	46	10	22	0	0	0	0	0	3	3	35	5	3	2	7	Indomalayan
Netherlands	15	0	0	0	3	0	0	0	0	0	15	0	0	0	0	Palaearctic
Netherlands Antilles	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	Neotropical
New Caledonia	0	0	-	0	1	0	0	0	0	0	0	0	0	0	0	Australasian
New Zealand	4	4	100	0	3	0	1	1	2	0	0	0	4	4	100	Australasian
Nicaragua	69	3	4	0	0	0	2	3	5	2	55	2	10	3	14	Neotropical
Niger	8	0	0	0	0	0	0	0	0	0	8	0	0	0	0	Afrotropical, Palaearctic
Afrotropical realm	*8*	*0*	*0*	*0*	-	*0*	*0*	*0*	*0*	*0*	*8*	*0*	*0*	*0*	*0*	
Palaearctic realm	*5*	*0*	*0*	*0*	-	*0*	*0*	*0*	*0*	*0*	*5*	*0*	*0*	*0*	*0*	
Nigeria	103	1	1	0	0	0	0	5	8	6	84	0	13	1	13	Afrotropical
Northern Mariana Islands	0	0	-	0	1	0	0	0	0	0	0	0	0	0	0	Australasian
Norway	6	0	0	0	0	0	0	0	0	0	6	0	0	0	0	Palaearctic
Oman	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	Afrotropical, Palaearctic
Afrotropical realm	*2*	*0*	*0*	*0*	-	*0*	*0*	*0*	*0*	*0*	*2*	*0*	*0*	*0*	*0*	
Palaearctic realm	*2*	*0*	*0*	*0*	-	*0*	*0*	*0*	*0*	*0*	*2*	*0*	*0*	*0*	*0*	
Pakistan	18	1	6	0	0	0	0	0	0	0	18	0	0	0	0	Indomalayan, Palaearctic
Indomalayan realm	*17*	*1*	*6*	*0*	-	*0*	*0*	*0*	*0*	*0*	*17*	*0*	*0*	*0*	*0*	
Palaearctic realm	*17*	*1*	*6*	*0*	-	*0*	*0*	*0*	*0*	*0*	*17*	*0*	*0*	*0*	*0*	
Palau	1	1	100	0	0	0	0	0	0	0	1	0	0	0	0	Australasian
Panama	195	34	17	0	2	0	19	23	13	7	108	25	55	16	28	Neotropical
Papua New Guinea	245	165	67	0	2	0	1	0	9	0	139	96	10	8	4	Australasian
Paraguay	74	2	3	0	0	0	0	0	0	3	69	2	0	0	0	Neotropical
Peru	411	181	44	0	2	0	21	32	28	12	211	107	81	59	20	Neotropical
Philippines	98	77	79	0	5	0	1	15	32	12	26	12	48	48	49	Indomalayan
Poland	16	0	0	0	0	0	0	0	0	0	16	0	0	0	0	Palaearctic
Portugal	19	0	0	0	3	0	0	0	1	5	13	0	1	0	5	Palaearctic
Puerto Rico	18	14	78	0	6	0	7	5	1	0	5	0	13	12	72	Neotropical
Réunion	0	0	-	0	2	-	-	-	-	-	-	-	-	-	-	Afrotropical
Romania	19	0	0	0	0	0	0	0	0	1	18	0	0	0	0	Palaearctic
Russian Federation	28	0	0	0	1	0	0	0	0	1	29	0	0	0	0	Palaearctic
Rwanda	37	1	3	0	0	0	0	1	7	1	26	2	8	0	22	Afrotropical
St Helena	0	0	-	0	1	-	-	-	-	-	-	-	-	-	-	Afrotropical
St Kitts and Nevis	1	0	0	1	1	0	0	0	0	0	1	0	0	0	0	Neotropical
St Lucia	1	0	0	1	2	0	0	0	0	0	1	0	0	0	0	Neotropical
St Vincent and the Grenadines	3	1	33	0	1	0	0	1	0	0	2	0	1	1	33	Neotropical
São Tômе and Príncipe	6	6	100	0	0	0	0	2	1	0	3	0	3	3	50	Afrotropical
Saudi Arabia	7	0	0	0	1	0	0	0	0	0	7	0	0	0	0	Afrotropical, Palaearctic
Afrotropical realm	*7*	*0*	*0*	*0*	-	*0*	*0*	*0*	*0*	*0*	*7*	*0*	*0*	*0*	*0*	
Palaearctic realm	*6*	*0*	*0*	*0*	-	*0*	*0*	*0*	*0*	*0*	*6*	*0*	*0*	*0*	*0*	
Senegal	32	0	0	0	0	0	0	0	0	0	31	1	0	0	0	Afrotropical
Serbia and Montenegro[g]	21	0	0	0	0	0	0	1	0	1	19	0	1	0	5	Palaearctic
Seychelles	11	11	100	0	1	0	0	1	5	0	5	0	6	6	55	Afrotropical
Sierra Leone	55	2	4	0	0	0	0	1	1	11	36	6	2	1	4	Afrotropical
Singapore	27	1	4	0	1	0	0	0	0	4	22	1	0	0	0	Indomalayan
Slovakia	19	0	0	0	0	0	0	0	0	1	18	0	0	0	0	Palaearctic
Slovenia	20	0	0	0	0	0	0	0	2	0	18	0	2	0	10	Palaearctic
Solomon Islands	19	1	5	0	1	0	0	0	2	0	14	3	2	0	11	Australasian
Somalia	30	3	10	0	0	0	0	0	0	1	29	0	0	0	0	Afrotropical
South Africa	115	50	43	0	0	0	4	8	9	4	82	8	21	20	18	Afrotropical
Spain	33	3	9	0	11	0	0	1	4	8	20	0	5	2	14	Palaearctic
Sri Lanka	83	67	81	19	0	19[f]	11	35	6	5	24	2	52	51	63	Indomalayan
Sudan	22	1	5	0	0	0	0	0	0	0	21	1	0	0	0	Afrotropical, Palaearctic
Afrotropical realm	*21*	*0*	*0*	*0*	-	*0*	*0*	*0*	*0*	*0*	*21*	*0*	*0*	*0*	*0*	
Palaearctic realm	*9*	*1*	*11*	*0*	-	*0*	*0*	*0*	*0*	*0*	*8*	*1*	*0*	*0*	*0*	
Suriname	103	6	6	0	0	0	0	0	2	0	95	6	2	1	2	Neotropical
Swaziland	44	0	0	1	0	0	0	0	0	0	43	1	0	0	0	Afrotropical
Sweden	12	0	0	0	1	0	0	0	0	0	13	0	0	0	0	Palaearctic
Switzerland	18	0	0	3	2	0	0	0	1	0	17	0	1	0	6	Palaearctic
Syria	7	0	0	0	0	0	0	0	0	1	6	0	0	0	0	Palaearctic
Taiwan, Province of China	33	16	48	1	3	0	0	7	2	2	22	0	9	8	27	Indomalayan
Tajikistan	3	1	33	0	0	0	0	0	0	0	2	1	0	0	0	Palaearctic
Tanzania	162	65	40	0	0	0	5	17	19	1	105	15	41	40	25	Afrotropical
Thailand	129	10	8	0	1	0	0	0	3	10	100	16	3	2	2	Indomalayan
Timor-Leste	6	0	0	0	0	0	0	0	0	0	5	1	0	0	0	Indomalayan
Togo	22	2	9	0	0	0	1	2	0	1	16	2	3	0	14	Afrotropical
Trinidad and Tobago	33	6	18	0	1	0	2	2	5	0	24	0	9	6	27	Neotropical
Tunisia	7	0	0	0	0	0	0	0	1	0	6	0	1	0	14	Palaearctic
Turkey	26	7	27	0	0	0	1	5	3	1	15	1	9	6	35	Palaearctic
Turkmenistan	3	0	0	1	0	0	0	0	0	0	3	0	0	0	0	Palaearctic
Turks and Caicos Islands	0	0	-	0	1	-	-	-	-	-	-	-	-	-	-	Neotropical
Uganda	62	3	5	0	0	0	0	1	5	1	50	5	6	0	10	Afrotropical
Ukraine	19	0	0	0	0	0	0	0	0	1	18	0	0	0	0	Palaearctic
United Arab Emirates	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	Afrotropical, Palaearctic
Afrotropical realm	*2*	*0*	*0*	*0*	-	*0*	*0*	*0*	*0*	*0*	*2*	*0*	*0*	*0*	*0*	
Palaearctic realm	*2*	*0*	*0*	*0*	-	*0*	*0*	*0*	*0*	*0*	*2*	*0*	*0*	*0*	*0*	
United Kingdom	7	0	0	2	11	0	0	0	0	0	7	0	0	0	0	Palaearctic

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Country	Number of species occurrences					Red List categories							Threatened species (CR+EN+VU)			Biogeographic realm
	Native	Native endemics	% endemics	Extinct	Introduced	EX or EW	CR	EN	VU	NT	LC	DD	Number threatened	Number threatened endemics	% threatened	
United States of America	261	182	70	4	14	3	3	15	34	33	162	14	52	48	20	Nearctic, Neotropical
Nearctic realm	*261*	*182*	*70*	*4*	-	*3*	*3*	*15*	*34*	*33*	*162*	*14*	*52*	*48*	*20*	
Neotropical realm	*47*	*17*	*36*	*0*	-	*0*	*0*	*1*	*1*	*1*	*44*	*0*	*2*	*0*	*4*	
Virgin Islands (British)	5	1	20	0	1	0	1	1	0	0	3	0	2	1	40	Neotropical
Virgin Islands (United States)	4	1	25	1	3	0	0	1	0	0	3	0	1	1	25	Neotropical
Uruguay	43	2	5	0	0	0	0	2	2	3	36	0	4	1	9	Neotropical
Uzbekistan	3	0	0	0	0	0	0	0	0	0	3	0	0	0	0	Palaearctic
Venezuela	298	155	52	1	3	1	19	23	27	8	141	80	69	62	23	Neotropical
Viet Nam	145	39	27	0	0	0	0	3	12	15	71	44	15	5	10	Indomalayan
Western Sahara	5	0	0	0	0	0	0	0	0	1	4	0	0	0	0	Palaearctic
Yemen	6	1	17	0	0	0	0	0	1	0	5	0	1	1	17	Afrotropical, Palaearctic
Afrotropical realm	*6*	*1*	*17*	*0*	*0*	*0*	*0*	*0*	*1*	*0*	*5*	*0*	*1*	*1*	*17*	
Palaearctic realm	*4*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*4*	*0*	*0*	*0*	*0*	
Zambia	84	2	2	0	0	0	0	0	1	0	80	3	1	0	1	Afrotropical
Zimbabwe	63	5	8	0	0	0	1	4	1	0	57	0	6	4	10	Afrotropical

a These results shown in the table for Brazil are those determined by the GAA team in the consistency check. The results for Brazil as determined at the GAA workshop are: EX 0; CR 6; EN 6; VU 13; NT 22; LC 489; DD 215; Number threatened 25; Number threatened endemics 21; Percentage threatened 3.

b This includes Hong Kong and Macau, but excludes Taiwan, which is listed separately as a province of China.

c At the time of going to press, there were very exciting reports of the rediscovery of one EX species, namely *Philautus travancoricus* from the Western Ghats in India (S.D. Biju pers. comm.).

d This number includes the reintroduced species *Hyla arborea.*

e Serbia and Montenegro are now separate countries as of June 2006.

f At the time of going to press, Meegaskumbara *et al.* (2007) had just described two additional extinct species, *Philautus pardus* and *P. maia*, known only from collections made in Sri Lanka prior to 1876; both species await formal assessment.

APPENDIX VI. AMPHIBIAN CONSERVATION SUMMIT DECLARATION: AN AMPHIBIAN CONSERVATION ACTION PLAN

Washington DC, 17-19 September 2005
Declaration

Background

The amphibians – frogs, salamanders and caecilians – stem from an ancient lineage of organisms and they play essential roles, both as predators and prey, in the ecosystems of the world. Adult amphibians regulate populations of insects that are pests on crops, or which transmit diseases. The tadpoles of many amphibians, as herbivores or filter feeders, play a major role in aquatic ecosystems. Their well-being, or conversely their population declines and extinctions, signals that changes are occurring in the biosphere that have begun to negatively impact humans today.

Since 1970, scientists have observed precipitous population declines and outright disappearances of entire amphibian species. The extent of these declines and extinctions is without precedent among any other group of species over the last few millennia, and it has increasingly been the focus of scientific research. These declines have spread geographically and increasing numbers of species are involved. Recent research indicates that:

- Nearly one-third (32%) of the world's 5,743 amphibian species have been classified as threatened with extinction, representing 1,856 species.
- 122 species, perhaps many more, appear to have gone extinct since 1980. Further research may increase this number, since 23% of all species were classified as Data Deficient.
- At least 43% of all species have undergone population declines, but less than one percent is increasing in population size.
- As much as 50% of the amphibian fauna remains undescribed, and the possibility exists of discovering new groups that are widely divergent from any so far known.
- Habitat loss is the greatest threat to amphibians, impacting almost 90% of threatened species.
- A newly recognized fungal disease, chytridiomycosis, causes catastrophic mortality in amphibian populations, and subsequent extinctions.
- Many species are declining for reasons, such as disease, climate change, invasive species, and over-harvesting, that cannot be readily addressed through traditional conservation strategies.
- Other issues, such as the role of environmental pollutants in amphibian declines, need to be more thoroughly addressed.

Since 1990, scientists have referred to amphibians as canaries in the coal mine; the Global Amphibian Assessment (GAA) shows that the canaries are dying. This underscores a weakness in current strategies for biodiversity conservation: that habitat conservation is essential but not sufficient. Existing protected areas alone are not sufficient to protect amphibians from a growing array of threats.

The Amphibian Conservation Summit was called because it is morally irresponsible to document amphibian declines and extinctions without also designing and promoting a response to this global crisis. To this end, the Amphibian Conservation Summit has designed the Amphibian Conservation Action Plan (ACAP), and commends it to governments, the business sector, civil society and the scientific community for urgent and immediate adoption and implementation.

Amphibian Conservation Action Plan (ACAP)

Four kinds of intervention are needed to conserve amphibians, all of which need to be started immediately:

1. Expanded understanding of the causes of declines and extinctions
2. Ongoing documentation of amphibian diversity, and how it is changing
3. Development and implementation of long-term conservation programmes
4. Emergency responses to immediate crises

1. Expanded understanding of the causes of declines and extinctions

A. Emerging amphibian diseases

Emerging diseases are a major threat to the survival of human populations globally. Diseases like SARS, HIV/AIDS, Ebola, and avian influenza emerge because of changes to the environment (e.g., encroachment into wildlife habitat) and human behaviour (e.g., trade and travel). At the same time, a series of wildlife diseases have emerged, threatening many species. These are products of the same underlying causes – anthropogenic environmental changes – and highlight the growing link between conservation of biodiversity and the protection of human health.

Of the diseases known from amphibians, one, chytridiomycosis, is clearly linked to population declines and extinctions. This fungal disease is appearing in new regions, causing rapid population disappearances in many amphibian species. It is the worst infectious disease ever recorded among vertebrates in terms of the number of species impacted, and its propensity to drive them to extinction.

A series of strategies to deal with disease in the field is needed. Research should focus on understanding why some species of amphibians become extinct in some regions and at certain times, while others do not. This will require studying the persistence of the pathogen, reservoir hosts, mechanisms of spread, interactions with climate change, and comparing disease dynamics between sites of declines and control sites where amphibians survive. Research is also urgently needed on the biology of this emerging pathogen, in particular on:

- how it causes death;
- how amphibians respond by developing immunity or changing behaviour;
- understanding the geographic distribution and dispersal of chytridiomycosis; and
- whether or not animals from decline and control sites differ in their responses to chytridiomycosis.

These research programmes should also consider possible interactions between disease and other factors involved in amphibian declines (such as climate change, habitat loss or contaminants) and mechanisms for dealing with them (such as captive breeding and reintroduction).

To implement this research on disease, *Regional Centers for Disease Diagnostics* will be set up in Latin America, North America, Europe, Australia, Asia and Africa. They will provide free testing to field research groups, and will manage the logistics for regionally based *Rapid Response Teams*. A seed funding system should be created to support imaginative approaches to stopping outbreaks from spreading and preventing extinction by infection.

B. Climate change

Evidence of a link between amphibian declines and climate change is growing. Changes in temperature or precipitation influence host-pathogen interactions, and short-term and seasonal patterns in amphibian behaviour. One consequence is an increase in the probability of outbreaks of lethal diseases such as chytridiomycosis. If efforts to address climate change remain inadequate, none of the other proposed conservation efforts can save amphibians in the long term. The current spate of extinctions might be the first wave in a more general, profound loss of biodiversity. Ultimately, preventing this requires greater political will to take all necessary measures to reduce human impact on the global climate.

Research is needed to understand how climate change affects amphibians, and why the impacts are greater today than they were historically. In particular, studies should focus on the impacts of climate change on disease dynamics, and should develop predictive models for future declines, thus enabling implementation of conservation measures. Research will also explore ways in which ecosystems could be made more resilient to climate change (such as measures to restore movement corridors that would ensure metapopulation functions or allow migration to new habitats), and whether or not there might be ways to manipulate local micro-scale climates.

C. Environmental contamination

Contaminants may have strong impacts on amphibian populations by negatively affecting immune function and causing infertility, developmental malformations, feminization, endocrine disruption, and alterations in food webs. There is evidence that environmental contaminants can cause local amphibian declines and extinctions. The effects of contaminants on broader geographic scales such as watersheds are not well understood. An ecotoxicology consortium should be formed in order to determine: how contaminant loads differ between stable and declining populations; the relationship between declines and contaminants in all regions; the effects of major chemical classes on both the aquatic and terrestrial life stages of amphibians; the effects of sub-lethal exposure in the presence of other threats such as disease; the role of contamination in amphibian population declines at the landscape scale; whether or not present regulatory screening is adequate; approaches to minimize the movement of chemicals through the environment; and how well the future impacts of contaminants can be predicted. The research should be integrated with the work of the regional centers recommended for disease research and management.

2. Ongoing documentation of amphibian diversity, and how it is changing

A. Exploration and biodiversity evaluation

Without an understanding of the amphibian fauna, its history, and its distributional patterns, conservation priorities cannot be set rationally. Therefore it is essential that basic exploration and species descriptions continue. The rate of species description among amphibians is higher than it has ever been. However, in many parts of the world, especially in the tropics, knowledge of amphibian species, their distributions, and their requirements for survival is still too poor to enable reliable conservation priorities to be identified. The ACAP will implement a greatly enhanced programme to: name at least 1,000 new species in five years, and 2,500 species in ten years; understand species limits and resolve species complexes; and carry out inventories of amphibian faunas. The implementation of this programme will require major building of taxonomic capabilities in a number of tropical countries, with priority being given to poorly known areas, and areas of high endemism and diversity. To assist in identification of species, new field guides and internet resources should be produced. Innovative mechanisms should be developed to enable taxonomists to devote more time to high priority work. Research should also focus on: Data Deficient species; identification of unique and ancient evolutionary lineages; understanding the extent to which similarity in vulnerability to threats is determined by degree of relatedness between species; and whether genetic diversity of species relates to their ability to persist in the face of an array of threats.

B. Updating the Global Amphibian Assessment continuously

An accelerated programme of assessment must underpin the ACAP. To build on its initial success, the GAA needs to be maintained continuously by: establishing a new full-time GAA coordinating team; recording updates and

corrections to the data; developing more efficient mechanisms within regions to update the data; making the data more widely available; maintaining and enhancing the GAA web site; and undertaking analyses and communicating findings. A complete update of the GAA should be finished by 2009. Particular emphasis should be given to improving discrimination between real and apparent declines.

3. Development and implementation of long-term conservation programmes

A. Protection of key sites for amphibian survival

Habitat loss and degradation are impacting nearly 90% of threatened amphibians. Most of these require habitat- or site-based conservation as the primary means to ensure their survival. Therefore, safeguarding key sites for threatened amphibians is the most urgent priority for the survival of many species. At least 940 amphibian species (422 of which are threatened with extinction) are not in any protected areas. An urgent priority of the ACAP is to identify the highest priority sites, using globally recognized, standardised, and quantified criteria, which are essential for the survival of threatened species that are currently receiving no effective conservation measures. These sites and their associated landscapes need urgent attention, such as protected area establishment, community level sustainable development, and local education and training. The ACAP will establish a site conservation programme with the following main elements: identifying the 120 highest priority sites; and applying appropriate conservation actions at each site, including the development and implementation of management plans, standardised monitoring and assessment protocols, and long-term sustainability plans for ongoing funding and management. Given that what goes on outside a key amphibian site will hugely impact the success of conserving that site, management plans should incorporate the need to protect ecosystem services at a broad ecological scale. This site conservation programme will involve governments, non-governmental organizations, community-based organizations and the business sector collaborating to bring about effective conservation in the highest priority sites, with the widest possible stakeholder support.

B. Reintroductions

The goal of reintroduction is to re-establish protected, viable amphibian populations in the wild where conventional habitat management and threat abatement alone are unlikely to result in population recovery. Many amphibian reintroductions will be needed once techniques for the management of chytridiomycosis and other threats become available. Experience and expertise in amphibian reintroductions need to be developed as a matter of urgency. The ACAP will determine which species will benefit from reintroduction programmes by developing and applying rigorous and objective criteria. Once the species have been selected, reintroduction programmes will be initiated. The animals used for reintroductions may either stem from captive breeding programmes or wild populations, depending on availability of stock and the nature of the circumstances. In the first instance, it is estimated that 20 species will be selected for reintroduction, but this may increase as funds and capacity are built.

C. Control of harvesting.

In some parts of the world, especially in East and Southeast Asia, but also in some other tropical countries, unsustainable harvesting of amphibians, especially for food and medicines, has led to severe population declines. There are also instances of declines due to the international pet trade. The ACAP will establish a harvest management programme, concentrating on 15 countries that appear to be the focus of the heaviest levels of harvest. The programme will build management capacity in each of these countries to halt declines due to over-harvesting, with an emphasis on: the development of sustainable use projects (when the biology of the species permits this); the development and strict enforcement of appropriate legislation; monitoring the levels of amphibian harvests and trade; the implementation of recovery plans for the most threatened species; the certification and regulation of commercial captive breeding operations with a proportion of profits returning to conservation in the wild; and raising awareness of the impacts of unsustainable use of amphibians. Commercial captive breeding facilities should only use species native to their regions to reduce the risk of the spread of disease and alien frogs. Species that are threatened by international trade should be listed on the appropriate appendices of the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES).

4. Emergency responses to immediate crises

A. Rapid response capacity.

The short timescale of many amphibian declines requires the capacity for immediate response, as already mentioned. The regionally based *Rapid Response Teams* required to react to disease outbreaks should be established and implemented urgently.

B. Captive survival assurance programmes

The ACAP recommends prioritized (as outlined below) captive survival assurance programmes that are primarily in-country, coupled with an obligation to deliver *in situ* threat mitigation and conservation programs. This is both a stopgap to buy time for species that would otherwise become extinct, and an integral component of other approaches to tackling amphibian declines. Guidelines for including species in captive survival assurance programmes will be based on predictive models of threats so that species are targeted proactively and representative populations are collected. Decision processes will involve consultation with representatives across the ACAP consortium and the range country will be the ultimate arbiter.

Several hundred amphibian species, perhaps more, are facing threats such as disease and climate change that cannot be addressed in the wild with currently available conservation management strategies. Since solutions for the conservation of these species in the wild are not currently available, a short-term solution is to breed them in captive survival assurance colonies to maintain options for reintroduction. Capacity to implement a major captive programme for amphibians does not currently exist anywhere in the world. Therefore this should be achieved through the establishment of an Amphibian Survival Alliance to coordinate this effort globally, involving rapid-response teams to collect disappearing species, short- and long-term captive management, training and capacity building for captive conservation programs in range countries, research on captive breeding and reproductive science, disease management, and education and outreach. Captive programs will include a variety of operations from rapid-response, portable units, to large-scale permanent facilities. The goal is to maintain and breed in captivity species at risk of extinction, which should be collected from places where declines have not yet occurred, as well as from places where animals need to be rescued urgently before they disappear.

C. Saving sites about to be lost.

The integrity of some of the top priority sites for amphibian survival is under immediate threat. In some cases, habitats are reduced to tiny fragments that will disappear very soon. An "amphibian emergency fund" should be established to implement immediate conservation measures in such sites before it is too late.

D. Saving harvested species about to disappear

Several species are close to extinction due to over-exploitation. The "amphibian emergency fund" should be used to address threats to these species.

Amphibian Action Fund

The implementation of the ACAP over the period 2006-2010 will cost approximately US$ 400 million. To help support the implementation of the ACAP, the Amphibian Conservation Summit announced the formation of the Amphibian Action Fund and received initial pledges from donors.

The Amphibian Action Fund will support:

1. Expanded understanding of the causes of declines and extinctions
2. Ongoing documentation of amphibian diversity, and how it is changing
3. Development and implementation of long-term conservation programmes
4. Emergency responses to immediate crises

Supporting a network of amphibian experts

The ACAP cannot be implemented without a global network of scientists and conservationists who work on amphibians. To date, the IUCN Species Survival Commission (IUCN/SSC) has focused on decline-related research through the Declining Amphibian Populations Task Force (DAPTF), on promoting conservation through the Global Amphibian Specialist Group (GASG), and on monitoring and assessments through an informal network of scientists contributing data to the GAA. All three of these programmes have made significant achievements, but all of them are also struggling for resources, and are based on broadly the same network of experts. In view of the extraordinary nature of the crisis facing amphibians, the IUCN/SSC should bring these three programmes together in a single Amphibian Specialist Group (ASG) focused on conservation, research and assessment. The ASG needs to have sufficient resources and finances to lead the implementation of the ACAP.

Conclusion

The Amphibian Conservation Action Plan is the most ambitious programme ever developed to combat the extinction of species. This response is necessary because the amphibian extinction crisis is unlike anything that the modern world has previously experienced, and a large proportion of amphibian diversity remains undocumented. The ACAP requires the international community to enter uncharted territory and to take great risks. But the risks of inaction are even greater. The Amphibian Conservation Summit calls on all governments, corporations, civil society and the scientific community to respond to this unprecedented crisis. There needs to be unprecedented commitment to implementing the Amphibian Conservation Action Plan with accompanying changes in international and local environmental policies that affect this class of vertebrate animals. They are indeed canaries in the global coalmine.

APPENDIX VIIA. THE SCALE OF CONSERVATION REQUIRED FOR GLOBALLY THREATENED AMPHIBIANS

Species scientific name	IUCN Red List category (2007)	Primary biome	Scale of conservation				
			Insufficient information	Single site	Network of sites	Network of sites plus broad-scale conservation action	Broad-scale conservation action
Adelophryne baturitensis	VU	Terrestrial			y		
Adelophryne maranguapensis	EN	Terrestrial		y			
Adenomus dasi	CR	Freshwater				?	
Adenomus kelaartii	EN	Freshwater				?	
Afrana inyangae	EN	Freshwater			y		
Afrana johnstoni	EN	Freshwater				?	
Afrixalus clarkeorum	VU	Freshwater			y		
Afrixalus enseticola	VU	Freshwater			y		
Afrixalus knysnae	EN	Freshwater			y		
Afrixalus lacteus	EN	Freshwater			y		
Afrixalus morerei	VU	Freshwater			y		
Afrixalus orophilus	VU	Freshwater			y		
Afrixalus spinifrons	VU	Freshwater				y	
Afrixalus sylvaticus	EN	Freshwater			y		
Afrixalus uluguruensis	VU	Freshwater			y		
Agalychnis annae	EN	Freshwater			y		
Agalychnis litodryas	VU	Freshwater			y		
Agalychnis moreletii	CR	Freshwater			y		
Aglyptodactylus laticeps	EN	Freshwater		y			
Albericus siegfriedi	CR	Terrestrial		y			

►

Species scientific name	IUCN Red List category (2007)	Primary biome	Scale of conservation				
			Insufficient information	Single site	Network of sites	Network of sites plus broad-scale conservation action	Broad-scale conservation action
Alexteroon jynx	CR	Freshwater		y			
Alsodes barrioi	VU	Freshwater			y		
Alsodes montanus	CR	Freshwater		y			
Alsodes tumultuosus	CR	Freshwater		y			
Alsodes vanzolinii	CR	Freshwater		y			
Altiphrynoides malcolmi	EN	Terrestrial		y			
Alytes dickhilleni	VU	Freshwater				y	
Alytes muletensis	VU	Freshwater				y	
Ambystoma altamirani	EN	Freshwater				y	
Ambystoma amblycephalum	CR	Freshwater				y	
Ambystoma andersoni	CR	Freshwater				y	
Ambystoma bombypellum	CR	Freshwater				y	
Ambystoma californiense	VU	Freshwater				?	
Ambystoma cingulatum	VU	Freshwater			y		
Ambystoma dumerilii	CR	Freshwater				y	
Ambystoma granulosum	CR	Freshwater				y	
Ambystoma leorae	CR	Freshwater				y	
Ambystoma lermaense	CR	Freshwater				y	
Ambystoma mexicanum	CR	Freshwater				y	
Ambystoma ordinarium	EN	Freshwater				?	
Ambystoma taylori	CR	Freshwater				y	
Amnirana asperrima	EN	Freshwater			y		
Amnirana longipes	VU	Freshwater			y		
Amnirana occidentalis	EN	Freshwater			y		
Amolops hainanensis	EN	Freshwater				y	
Amolops jinjiangensis	VU	Freshwater				?	
Amolops kangtingensis	VU	Freshwater			y		
Amolops loloensis	VU	Freshwater				y	
Amolops tormotus	VU	Freshwater			y		
Amolops torrentis	VU	Freshwater			y		
Amolops tuberodepressus	VU	Freshwater			y		
Andinophryne colomai	CR	Terrestrial	y				
Andrias davidianus	CR	Freshwater				y	
Anhydrophryne rattrayi	EN	Terrestrial			y		
Anodonthyla montana	VU	Terrestrial		y			
Anodonthyla rouxae	EN	Terrestrial		y			
Ansonia anotis	EN	Freshwater				?	
Ansonia fuliginea	VU	Freshwater		y			
Ansonia guibei	EN	Freshwater				y	
Ansonia latidisca	EN	Freshwater				y	
Ansonia mcgregori	VU	Freshwater				y	
Ansonia muelleri	VU	Freshwater				y	
Ansonia ornata	EN	Freshwater			y		
Ansonia penangensis	VU	Freshwater		y			
Ansonia platysoma	EN	Freshwater				?	
Ansonia rubigina	VU	Freshwater			y		
Ansonia siamensis	VU	Freshwater				?	
Ansonia tiomanica	VU	Freshwater			y		
Ansonia torrentis	VU	Freshwater		y			
Argenteohyla siemersi	EN	Freshwater				y	
Arlequinus krebsi	EN	Freshwater			y		
Aromobates nocturnus	CR	Freshwater	y				
Arthroleptella ngongoniensis	CR	Freshwater				y	
Arthroleptides dutoiti	CR	Freshwater	y				
Arthroleptides martiensseni	EN	Freshwater				y	
Arthroleptides yakusini	EN	Freshwater				y	
Arthroleptis crusculum	EN	Freshwater		y			
Arthroleptis francei	EN	Terrestrial		y			
Arthroleptis nikeae	EN	Terrestrial		y			
Arthroleptis tanneri	VU	Freshwater			y		
Arthroleptis troglodytes	CR	Terrestrial		y			
Arthroleptis xenodactylus	VU	Terrestrial			y		
Astylosternus diadematus	VU	Freshwater			y		
Astylosternus fallax	EN	Freshwater			y		
Astylosternus laurenti	EN	Freshwater			y		
Astylosternus nganhanus	CR	Freshwater		y			
Astylosternus perreti	EN	Freshwater			y		
Astylosternus ranoides	EN	Freshwater				y	
Astylosternus rheophilus	VU	Freshwater			y		
Astylosternus schioetzi	EN	Freshwater			y		
Atelognathus nitoi	VU	Freshwater		y			
Atelognathus patagonicus	EN	Freshwater				?	
Atelognathus praebasalticus	EN	Freshwater			y		
Atelognathus reverberii	EN	Freshwater				y	
Atelognathus salai	VU	Freshwater		?			
Atelognathus solitarius	VU	Freshwater		y			
Atelophryniscus chrysophorus	EN	Freshwater			y		
Atelopus andinus	CR	Freshwater			y		
Atelopus angelito	CR	Freshwater			y		
Atelopus arsyecue	CR	Freshwater				?	
Atelopus arthuri	CR	Freshwater	y				
Atelopus balios	CR	Freshwater	y				
Atelopus bomolochos	CR	Freshwater			y		
Atelopus boulengeri	CR	Freshwater				?	
Atelopus carauta	CR	Freshwater			y		
Atelopus carbonerensis	CR	Freshwater	y				
Atelopus carrikeri	CR	Freshwater				?	
Atelopus certus	EN	Freshwater				y	
Atelopus chiriquiensis	CR	Freshwater	y				
Atelopus chocoensis	CR	Terrestrial			y		
Atelopus chrysocorallus	CR	Freshwater	y				

Species scientific name	IUCN Red List category (2007)	Primary biome	Scale of conservation				
			Insufficient information	Single site	Network of sites	Network of sites plus broad-scale conservation action	Broad-scale conservation action
Atelopus coynei	CR	Freshwater	y				
Atelopus cruciger	CR	Freshwater			y		
Atelopus dimorphus	EN	Freshwater		y			
Atelopus ebenoides	CR	Freshwater			y		
Atelopus elegans	CR	Freshwater			y		
Atelopus erythropus	CR	Freshwater			y		
Atelopus eusebianus	CR	Freshwater				y	
Atelopus exiguus	CR	Freshwater				y	
Atelopus famelicus	CR	Freshwater				?	
Atelopus farci	CR	Freshwater		y			
Atelopus flavescens	VU	Freshwater			y		
Atelopus franciscus	VU	Freshwater			y		
Atelopus galactogaster	CR	Terrestrial		y			
Atelopus glyphus	CR	Freshwater				?	
Atelopus guanujo	CR	Freshwater	y				
Atelopus guitarraensis	CR	Freshwater		y			
Atelopus halihelos	CR	Freshwater		y			
Atelopus laetissimus	CR	Freshwater		y			
Atelopus limosus	EN	Freshwater				y	
Atelopus longibrachius	EN	Freshwater				y	
Atelopus lozanoi	CR	Freshwater		y			
Atelopus lynchi	CR	Freshwater	y				
Atelopus mandingues	CR	Freshwater		y			
Atelopus mindoensis	CR	Freshwater	y				
Atelopus minutulus	CR	Freshwater			y		
Atelopus monohernandezi	CR	Freshwater		y			
Atelopus mucubajiensis	CR	Freshwater		y			
Atelopus muisca	CR	Freshwater	y				
Atelopus nahumae	CR	Freshwater		y			
Atelopus nanay	CR	Freshwater	y				
Atelopus nepiozomus	CR	Freshwater			y		
Atelopus nicefori	CR	Freshwater		y			
Atelopus oxyrhynchus	CR	Freshwater	y				
Atelopus pachydermus	CR	Freshwater	y				
Atelopus pedimarmoratus	CR	Freshwater		y			
Atelopus peruensis	CR	Freshwater			y		
Atelopus petriruizi	CR	Freshwater		y			
Atelopus pictiventris	CR	Freshwater		y			
Atelopus pinangoi	CR	Freshwater	y				
Atelopus planispina	CR	Freshwater	y				
Atelopus pulcher	CR	Freshwater			y		
Atelopus quimbaya	CR	Freshwater			y		
Atelopus reticulatus	CR	Freshwater		y			
Atelopus seminiferus	CR	Freshwater		y			
Atelopus senex	CR	Freshwater	y				
Atelopus sernai	CR	Freshwater				y	
Atelopus simulatus	CR	Freshwater				y	
Atelopus sonsonensis	CR	Freshwater				y	
Atelopus sorianoi	CR	Freshwater	y				
Atelopus spumarius	VU	Freshwater			y		
Atelopus spurrelli	VU	Freshwater				?	
Atelopus subornatus	CR	Freshwater				y	
Atelopus tamaense	CR	Freshwater		y			
Atelopus tricolor	VU	Freshwater				y	
Atelopus varius	CR	Freshwater			y		
Atelopus walkeri	CR	Freshwater				?	
Atelopus zeteki	CR	Freshwater				y	
Atopophrynus syntomopus	CR	Freshwater		y			
Austrochaperina novaebritanniae	VU	Terrestrial			y		
Balebreviceps hillmani	EN	Terrestrial		y			
Barbourula busuangensis	VU	Freshwater				y	
Barbourula kalimantanensis	EN	Freshwater				y	
Batrachophrynus brachydactylus	EN	Freshwater			y		
Batrachophrynus macrostomus	EN	Freshwater				?	
Batrachoseps campi	EN	Freshwater				y	
Batrachoseps regius	VU	Terrestrial			y		
Batrachoseps simatus	VU	Terrestrial			y		
Batrachoseps stebbinsi	VU	Terrestrial				?	
Batrachoseps wrightorum	VU	Terrestrial			y		
Batrachuperus cochranae	EN	Freshwater			y		
Batrachuperus gorganensis	CR	Freshwater		y			
Batrachuperus karlschmidti	VU	Freshwater			y		
Batrachuperus londongensis	EN	Freshwater		y			
Batrachuperus mustersi	CR	Freshwater				y	
Batrachuperus pinchonii	VU	Freshwater				y	
Batrachuperus tibetanus	VU	Freshwater				y	
Batrachuperus yenyuanensis	VU	Freshwater			y		
Batrachyla fitzroya	VU	Freshwater		y			
Bokermannohyla izecksohni	CR	Freshwater	y				
Bolitoglossa alvaradoi	EN	Terrestrial			y		
Bolitoglossa capitana	CR	Terrestrial		y			
Bolitoglossa carri	CR	Terrestrial		y			
Bolitoglossa celaque	EN	Terrestrial			y		
Bolitoglossa chica	VU	Terrestrial			y		
Bolitoglossa compacta	EN	Terrestrial			y		
Bolitoglossa conanti	EN	Terrestrial			y		
Bolitoglossa decora	CR	Terrestrial		y			
Bolitoglossa diaphora	CR	Terrestrial		y			
Bolitoglossa diminuta	VU	Terrestrial		y			
Bolitoglossa dunni	EN	Terrestrial			y		
Bolitoglossa engelhardti	EN	Terrestrial			y		

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Species scientific name	IUCN Red List category (2007)	Primary biome	Scale of conservation				
			Insufficient information	Single site	Network of sites	Network of sites plus broad-scale conservation action	Broad-scale conservation action
Bolitoglossa flavimembris	EN	Terrestrial			y		
Bolitoglossa franklini	EN	Terrestrial			y		
Bolitoglossa gracilis	VU	Terrestrial		y			
Bolitoglossa guaramacalensis	VU	Terrestrial		y			
Bolitoglossa heiroreias	CR	Terrestrial				?	
Bolitoglossa hiemalis	VU	Terrestrial		y			
Bolitoglossa hypacra	VU	Terrestrial			y		
Bolitoglossa jacksoni	CR	Terrestrial	y				
Bolitoglossa lignicolor	VU	Terrestrial			y		
Bolitoglossa longissima	CR	Terrestrial		y			
Bolitoglossa macrinii	VU	Terrestrial			y		
Bolitoglossa magnifica	EN	Terrestrial			y		
Bolitoglossa marmorea	EN	Terrestrial			y		
Bolitoglossa medemi	VU	Terrestrial			y		
Bolitoglossa meliana	EN	Terrestrial			y		
Bolitoglossa minutula	EN	Terrestrial			y		
Bolitoglossa mombachoensis	VU	Terrestrial		y			
Bolitoglossa mulleri	VU	Terrestrial				y	
Bolitoglossa odonnelli	EN	Terrestrial			y		
Bolitoglossa oresbia	CR	Terrestrial			y		
Bolitoglossa orestes	VU	Terrestrial			y		
Bolitoglossa palmata	VU	Terrestrial			y		
Bolitoglossa pandi	EN	Terrestrial			y		
Bolitoglossa pesrubra	EN	Terrestrial			y		
Bolitoglossa porrasorum	EN	Terrestrial			y		
Bolitoglossa riletti	EN	Terrestrial			y		
Bolitoglossa rostrata	VU	Terrestrial			y		
Bolitoglossa salvinii	EN	Terrestrial			y		
Bolitoglossa silverstonei	VU	Terrestrial			y		
Bolitoglossa sima	VU	Terrestrial			y		
Bolitoglossa sooyorum	EN	Terrestrial			y		
Bolitoglossa spongai	EN	Terrestrial			y		
Bolitoglossa stuarti	EN	Terrestrial			y		
Bolitoglossa subpalmata	EN	Terrestrial			y		
Bolitoglossa synoria	CR	Terrestrial		y			
Bombina fortinuptialis	VU	Freshwater			y		
Bombina lichuanensis	VU	Freshwater			y		
Bombina microdeladigitora	VU	Freshwater			y		
Boophis andreonei	VU	Freshwater			y		
Boophis blommersae	VU	Freshwater			y		
Boophis haematopus	VU	Freshwater			y		
Boophis jaegeri	VU	Freshwater				y	
Boophis williamsi	CR	Freshwater				?	
Boulengerula niedeni	CR	Terrestrial			y		
Brachytarsophrys intermedia	VU	Freshwater			y		
Bradytriton silus	CR	Terrestrial	y				
Breviceps gibbosus	VU	Terrestrial			y		
Breviceps macrops	VU	Terrestrial			y		
Breviceps sylvestris	VU	Terrestrial			y		
Bromeliohyla bromeliacia	EN	Terrestrial			y		
Bromeliohyla dendroscarta	CR	Freshwater	y				
Buergeria oxycephalus	VU	Freshwater				y	
Bufo amabilis	CR	Freshwater			y		
Bufo amatolicus	EN	Freshwater			y		
Bufo aucoinae	VU	Freshwater				y	
Bufo beddomii	EN	Freshwater			y		
Bufo brauni	EN	Freshwater			y		
Bufo caeruleostictus	EN	Freshwater			y		
Bufo californicus	EN	Freshwater				y	
Bufo canorus	EN	Freshwater				?	
Bufo cataulaciceps	EN	Freshwater			y		
Bufo cavifrons	EN	Freshwater			y		
Bufo chavin	CR	Terrestrial			y		
Bufo claviger	EN	Freshwater			y		
Bufo corynetes	VU	Freshwater		y			
Bufo cristatus	CR	Freshwater				y	
Bufo cycladen	VU	Freshwater			y		
Bufo djohongensis	EN	Freshwater			y		
Bufo empusus	VU	Freshwater				?	
Bufo exsul	VU	Freshwater				y	
Bufo fastidiosus	CR	Freshwater	y				
Bufo fluviaticus	CR	Freshwater	y				
Bufo fractus	EN	Freshwater			y		
Bufo gallardoi	EN	Freshwater				?	
Bufo gemmifer	EN	Freshwater			y		
Bufo guentheri	VU	Freshwater				?	
Bufo gundlachi	VU	Freshwater				y	
Bufo holdridgei	CR	Freshwater	y				
Bufo houstonensis	EN	Terrestrial		y			
Bufo ibarrai	EN	Freshwater			y		
Bufo inyangae	EN	Freshwater		y			
Bufo justinianoi	VU	Freshwater			y		
Bufo kotagamai	EN	Freshwater			y		
Bufo koynayensis	EN	Freshwater			y		
Bufo kumquat	EN	Freshwater			y		
Bufo lemur	CR	Freshwater		y			
Bufo leucomyos	EN	Freshwater			y		
Bufo longinasus	EN	Freshwater			y		
Bufo macrocristatus	VU	Freshwater			y		
Bufo microtympanum	VU	Terrestrial			y		
Bufo nelsoni	EN	Freshwater				?	

Species scientific name	IUCN Red List category (2007)	Primary biome	Scale of conservation				
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Bufo nesiotes	EN	Terrestrial		y			
Bufo noellerti	EN	Terrestrial			y		
Bufo nyikae	VU	Freshwater		y			
Bufo pantherinus	EN	Freshwater			y		
Bufo peripatetes	CR	Freshwater			y		
Bufo perplexus	EN	Freshwater			y		
Bufo perreti	VU	Terrestrial		y			
Bufo quechua	VU	Freshwater				y	
Bufo rubropunctatus	VU	Freshwater			y		
Bufo rumbolli	VU	Freshwater				y	
Bufo sclerocephalus	EN	Freshwater			y		
Bufo scorteccii	VU	Freshwater		y			
Bufo spiculatus	EN	Freshwater				y	
Bufo sumatranus	CR	Freshwater				?	
Bufo tacanensis	EN	Freshwater			y		
Bufo taiensis	CR	Freshwater		y			
Bufo taladai	VU	Freshwater				?	
Bufo tutelarius	EN	Freshwater			y		
Bufo uzunguensis	VU	Freshwater			y		
Bufo villiersi	EN	Freshwater			y		
Bufoides meghalayanus	EN	Freshwater			y		
Cacosternum capense	VU	Freshwater			y		
Callixalus pictus	VU	Terrestrial			y		
Callulina kisiwamsitu	EN	Terrestrial			y		
Callulops kopsteini	EN	Terrestrial		y			
Capensibufo rosei	VU	Freshwater			y		
Cardioglossa alsco	CR	Freshwater			y		
Cardioglossa aureoli	EN	Freshwater			y		
Cardioglossa melanogaster	EN	Freshwater			y		
Cardioglossa oreas	EN	Freshwater			y		
Cardioglossa pulchra	EN	Freshwater			y		
Cardioglossa schioetzi	EN	Freshwater			y		
Cardioglossa trifasciata	CR	Freshwater		y			
Cardioglossa venusta	EN	Freshwater			y		
Caudiverbera caudiverbera	VU	Freshwater				y	
Centrolene audax	EN	Freshwater			y		
Centrolene azulae	EN	Freshwater			y		
Centrolene ballux	CR	Freshwater	y				
Centrolene fernandoi	EN	Freshwater		y			
Centrolene geckoideum	VU	Freshwater				?	
Centrolene gemmatum	CR	Freshwater		y			
Centrolene heloderma	CR	Freshwater	y				
Centrolene hesperium	VU	Freshwater			y		
Centrolene lynchi	EN	Freshwater				y	
Centrolene mariae	EN	Terrestrial			y		
Centrolene peristictum	VU	Freshwater				y	
Centrolene petrophilum	EN	Freshwater			y		
Centrolene pipilatum	EN	Freshwater			y		
Centrolene puyoense	CR	Freshwater			y		
Centrolene quindianum	VU	Freshwater				?	
Centrolene robledoi	VU	Freshwater				y	
Centrolene tayrona	VU	Freshwater				?	
Ceratophrys stolzmanni	VU	Terrestrial			y		
Chaparana unculuanus	EN	Freshwater			y		
Charadrahyla altipotens	CR	Freshwater	y				
Charadrahyla chaneque	EN	Freshwater			y		
Charadrahyla nephila	VU	Freshwater			y		
Charadrahyla taeniopus	VU	Freshwater			y		
Charadrahyla trux	CR	Freshwater	y				
Chiasmocleis carvalhoi	EN	Freshwater			y		
Chioglossa lusitanica	VU	Freshwater				y	
Chirixalus romeri	EN	Freshwater			y		
Chiropterotriton chondrostega	EN	Terrestrial			y		
Chiropterotriton cracens	EN	Terrestrial		y			
Chiropterotriton dimidiatus	EN	Terrestrial			y		
Chiropterotriton lavae	CR	Terrestrial			y		
Chiropterotriton magnipes	CR	Terrestrial	y				
Chiropterotriton mosaueri	CR	Terrestrial	y				
Chiropterotriton multidentatus	EN	Terrestrial			y		
Chiropterotriton orculus	VU	Terrestrial			y		
Churamiti maridadi	CR	Terrestrial		y			
Cochranella adiazeta	VU	Freshwater			y		
Cochranella anomala	CR	Freshwater		y			
Cochranella armata	VU	Freshwater		y			
Cochranella balionota	VU	Freshwater				?	
Cochranella cochranae	VU	Freshwater				y	
Cochranella daidalea	VU	Freshwater			y		
Cochranella garciae	VU	Freshwater			y		
Cochranella griffithsi	VU	Freshwater				?	
Cochranella luminosa	EN	Freshwater			y		
Cochranella mache	EN	Freshwater			y		
Cochranella megacheira	EN	Freshwater				?	
Cochranella posadae	VU	Freshwater				y	
Cochranella prasina	VU	Freshwater				y	
Cochranella punctulata	VU	Freshwater				y	
Cochranella resplendens	VU	Freshwater				y	
Cochranella riveroi	VU	Terrestrial		y			
Cochranella rosada	VU	Freshwater				y	
Cochranella ruizi	VU	Freshwater				?	
Cochranella savagei	VU	Freshwater			y		
Cochranella saxiscandens	EN	Freshwater		y			

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Cochranella siren	VU	Freshwater			y		
Cochranella susatamai	VU	Freshwater				y	
Cochranella xanthocheridia	VU	Freshwater				y	
Colostethus anthracinus	CR	Freshwater			y		
Colostethus awa	VU	Freshwater				?	
Colostethus cevallosi	EN	Freshwater			y		
Colostethus chalcopis	VU	Freshwater		y			
Colostethus delatorreae	CR	Freshwater			y		
Colostethus dunni	CR	Freshwater	y				
Colostethus edwardsi	CR	Freshwater	y				
Colostethus elachyhistus	EN	Freshwater				y	
Colostethus humilis	VU	Freshwater			y		
Colostethus jacobuspetersi	CR	Freshwater	y				
Colostethus juanii	CR	Freshwater				y	
Colostethus kingsburyi	EN	Freshwater			y		
Colostethus leopardalis	CR	Freshwater		y			
Colostethus mandelorum	EN	Freshwater			y		
Colostethus mertensi	EN	Freshwater			y		
Colostethus murisipanensis	VU	Freshwater		y			
Colostethus olfersioides	VU	Freshwater			y		
Colostethus pulchellus	VU	Freshwater				?	
Colostethus ranoides	EN	Freshwater			y		
Colostethus ruizi	CR	Freshwater	y				
Colostethus ruthveni	EN	Freshwater				?	
Colostethus saltuensis	EN	Freshwater				y	
Colostethus toachi	EN	Freshwater				?	
Colostethus vergeli	VU	Freshwater			y		
Colostethus vertebralis	CR	Freshwater	y				
Colostethus wayuu	VU	Freshwater		y			
Conraua alleni	VU	Freshwater				?	
Conraua derooi	CR	Freshwater				y	
Conraua goliath	EN	Freshwater				y	
Conraua robusta	VU	Freshwater				y	
Cophixalus aenigma	VU	Terrestrial			y		
Cophixalus concinnus	CR	Terrestrial		y			
Cophixalus hosmeri	VU	Terrestrial		y			
Cophixalus mcdonaldi	EN	Terrestrial		y			
Cophixalus monticola	EN	Terrestrial		y			
Cophixalus neglectus	EN	Terrestrial			y		
Cophixalus nubicola	VU	Terrestrial		y			
Cophixalus saxatilis	VU	Terrestrial		?			
Copiula minor	VU	Terrestrial			y		
Craugastor alfredi	VU	Terrestrial			y		
Craugastor anatipes	VU	Freshwater				?	
Craugastor anciano	CR	Freshwater	y				
Craugastor andi	CR	Freshwater	y				
Craugastor angelicus	CR	Freshwater	y				
Craugastor aphanus	VU	Terrestrial			y		
Craugastor aurilegulus	EN	Freshwater			y		
Craugastor azueroensis	EN	Freshwater			y		
Craugastor biporcatus	VU	Terrestrial			y		
Craugastor bocourti	VU	Terrestrial			y		
Craugastor brocchi	VU	Freshwater			y		
Craugastor catalinae	CR	Freshwater			y		
Craugastor charadra	EN	Freshwater			y		
Craugastor cheiroplethus	VU	Freshwater			y		
Craugastor coffeus	CR	Terrestrial	y				
Craugastor cruzi	CR	Freshwater	y				
Craugastor daryi	EN	Freshwater			y		
Craugastor decoratus	VU	Terrestrial			y		
Craugastor emcelae	CR	Terrestrial			y		
Craugastor epochthidius	CR	Freshwater			y		
Craugastor escoces	CR	Freshwater	y				
Craugastor fecundus	CR	Freshwater	y				
Craugastor fleischmanni	CR	Freshwater	y				
Craugastor glaucus	CR	Terrestrial		y			
Craugastor greggi	CR	Freshwater			y		
Craugastor guerreroensis	CR	Terrestrial	y				
Craugastor gulosus	EN	Terrestrial			y		
Craugastor hobartsmithi	EN	Terrestrial			y		
Craugastor inachus	EN	Freshwater			y		
Craugastor lauraster	EN	Terrestrial			y		
Craugastor lineatus	CR	Freshwater			y		
Craugastor matudai	VU	Terrestrial			y		
Craugastor megalotympanum	CR	Terrestrial		y			
Craugastor melanostictus	VU	Terrestrial			y		
Craugastor merendonensis	CR	Freshwater	y				
Craugastor necerus	VU	Freshwater				?	
Craugastor obesus	EN	Freshwater			y		
Craugastor omiltemanus	EN	Terrestrial			y		
Craugastor omoaensis	CR	Freshwater	y				
Craugastor persimilis	VU	Terrestrial			y		
Craugastor podiciferus	VU	Terrestrial			y		
Craugastor polymniae	CR	Terrestrial	y				
Craugastor pozo	CR	Terrestrial		y			
Craugastor psephosypharus	VU	Terrestrial			y		
Craugastor punctariolus	EN	Freshwater			y		
Craugastor pygmaeus	VU	Terrestrial				?	
Craugastor ranoides	CR	Freshwater			y		
Craugastor rhodopis	VU	Terrestrial			y		
Craugastor rhyacobatrachus	EN	Freshwater			y		

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Species scientific name	IUCN Red List category (2007)	Primary biome	Scale of conservation				
			Insufficient information	Single site	Network of sites	Network of sites plus broad-scale conservation action	Broad-scale conservation action
Craugastor sabrinus	EN	Freshwater			y		
Craugastor saltuarius	CR	Terrestrial	y				
Craugastor sartori	EN	Terrestrial			y		
Craugastor silvicola	EN	Terrestrial		y			
Craugastor spatulatus	EN	Terrestrial			y		
Craugastor stadelmani	CR	Freshwater	y				
Craugastor stuarti	EN	Terrestrial			y		
Craugastor tabasarae	CR	Terrestrial			y		
Craugastor tarahumaraensis	VU	Terrestrial			y		
Craugastor taurus	VU	Freshwater			y		
Craugastor trachydermus	CR	Freshwater	y				
Craugastor uno	EN	Terrestrial			y		
Craugastor xucanebi	VU	Terrestrial			y		
Crinia tinnula	VU	Freshwater			y		
Cryptobatrachus boulengeri	EN	Freshwater		y			
Cryptobatrachus fuhrmanni	VU	Freshwater				?	
Cryptobatrachus nicefori	CR	Freshwater	y				
Cryptophyllobates azureiventris	EN	Freshwater		y			
Cryptotriton adelos	EN	Terrestrial			y		
Cryptotriton alvarezdeltoroi	EN	Terrestrial			y		
Cryptotriton monzoni	CR	Terrestrial		y			
Cryptotriton nasalis	EN	Terrestrial		y			
Cryptotriton veraepacis	EN	Terrestrial			y		
Cycloramphus acangatan	VU	Terrestrial			y		
Cynops ensicauda	EN	Freshwater			y		
Cynops orphicus	EN	Freshwater			y		
Dasypops schirchi	VU	Freshwater			y		
Dendrobates abditus	CR	Terrestrial	y				
Dendrobates altobueyensis	VU	Terrestrial		y			
Dendrobates arboreus	EN	Terrestrial			y		
Dendrobates azureus	VU	Freshwater		y			
Dendrobates bombetes	EN	Terrestrial			y		
Dendrobates granuliferus	VU	Terrestrial			y		
Dendrobates lehmanni	CR	Terrestrial			y		
Dendrobates mysteriosus	EN	Terrestrial		y			
Dendrobates opisthomelas	VU	Terrestrial			y		
Dendrobates sirensis	EN	Terrestrial		y			
Dendrobates speciosus	EN	Terrestrial			y		
Dendrobates steyermarki	CR	Terrestrial		y			
Dendrobates viridis	VU	Terrestrial			y		
Dendrobates virolensis	EN	Freshwater			y		
Dendrophryniscus carvalhoi	EN	Terrestrial			y		
Dendropsophus amicorum	CR	Terrestrial		y			
Dendropsophus gryllatus	EN	Freshwater				?	
Dendropsophus meridensis	EN	Freshwater				?	
Dendropsophus stingi	VU	Freshwater		y			
Dendrotriton bromeliacius	EN	Terrestrial			y		
Dendrotriton cuchumatanus	CR	Terrestrial	y				
Dendrotriton megarhinus	VU	Terrestrial		y			
Dendrotriton rabbi	EN	Terrestrial			y		
Dendrotriton sanctibarbarus	EN	Terrestrial		y			
Dendrotriton xolocalcae	VU	Terrestrial		y			
Didynamipus sjostedti	EN	Terrestrial			y		
Duellmanohyla chamulae	EN	Freshwater			y		
Duellmanohyla ignicolor	EN	Freshwater				y	
Duellmanohyla lythrodes	EN	Freshwater			y		
Duellmanohyla rufioculis	VU	Freshwater			y		
Duellmanohyla salvavida	CR	Freshwater			y		
Duellmanohyla schmidtorum	VU	Freshwater			y		
Duellmanohyla soralia	CR	Freshwater				y	
Duellmanohyla uranochroa	CR	Freshwater			y		
Echinotriton andersoni	EN	Freshwater			y		
Echinotriton chinhaiensis	CR	Freshwater			y		
Ecnomiohyla echinata	CR	Freshwater	y				
Ecnomiohyla fimbrimembra	EN	Terrestrial			y		
Ecnomiohyla miliaria	VU	Terrestrial			y		
Ecnomiohyla minera	EN	Terrestrial			y		
Ecnomiohyla phantasmagoria	EN	Terrestrial			y		
Ecnomiohyla salvaje	CR	Terrestrial			y		
Ecnomiohyla valancifer	CR	Freshwater			y		
Eleutherodactylus acerus	EN	Terrestrial		y			
Eleutherodactylus acmonis	EN	Terrestrial			y		
Eleutherodactylus actinolaimus	EN	Terrestrial		y			
Eleutherodactylus actites	VU	Terrestrial		y			
Eleutherodactylus acutirostris	EN	Terrestrial		y			
Eleutherodactylus adelus	EN	Terrestrial		y			
Eleutherodactylus affinis	VU	Terrestrial			y		
Eleutherodactylus albericoi	CR	Freshwater				?	
Eleutherodactylus albipes	CR	Terrestrial		y			
Eleutherodactylus alcoae	EN	Terrestrial			y		
Eleutherodactylus altae	VU	Terrestrial			y		
Eleutherodactylus alticola	CR	Terrestrial		y			
Eleutherodactylus amadeus	CR	Terrestrial		y			
Eleutherodactylus amplinympha	EN	Terrestrial			y		
Eleutherodactylus andrewsi	EN	Terrestrial		y			
Eleutherodactylus angustidigitorum	VU	Terrestrial			y		
Eleutherodactylus angustilineata	EN	Terrestrial			y		
Eleutherodactylus apostates	CR	Freshwater		y			
Eleutherodactylus armstrongi	EN	Terrestrial			y		
Eleutherodactylus ashkapara	VU	Terrestrial			y		
Eleutherodactylus atratus	EN	Terrestrial			y		

Species scientific name	IUCN Red List category (2007)	Primary biome	Scale of conservation				
			Insufficient information	Single site	Network of sites	Network of sites plus broad-scale conservation action	Broad-scale conservation action
Eleutherodactylus audanti	VU	Terrestrial			y		
Eleutherodactylus auriculatoides	EN	Terrestrial			y		
Eleutherodactylus bacchus	EN	Terrestrial			y		
Eleutherodactylus bakeri	CR	Terrestrial		y			
Eleutherodactylus balionotus	EN	Terrestrial		y			
Eleutherodactylus barlagnei	EN	Freshwater				?	
Eleutherodactylus bartonsmithi	CR	Terrestrial			y		
Eleutherodactylus baryecuus	EN	Terrestrial			y		
Eleutherodactylus bellona	EN	Terrestrial			y		
Eleutherodactylus bernali	CR	Terrestrial	y				
Eleutherodactylus bicolor	VU	Freshwater			y		
Eleutherodactylus bicumulus	VU	Terrestrial			y		
Eleutherodactylus bisignatus	EN	Terrestrial		y			
Eleutherodactylus blairhedgesi	CR	Terrestrial		y			
Eleutherodactylus boconoensis	CR	Terrestrial		y			
Eleutherodactylus bresslerae	CR	Terrestrial			y		
Eleutherodactylus brevirostris	CR	Terrestrial		y			
Eleutherodactylus briceni	VU	Terrestrial			y		
Eleutherodactylus bromeliaceus	VU	Terrestrial			y		
Eleutherodactylus cabrerai	EN	Terrestrial			y		
Eleutherodactylus cacao	EN	Terrestrial		y			
Eleutherodactylus calcaratus	EN	Terrestrial			y		
Eleutherodactylus calcarulatus	VU	Freshwater				?	
Eleutherodactylus capitonis	EN	Terrestrial			y		
Eleutherodactylus caribe	CR	Terrestrial		y			
Eleutherodactylus casparii	EN	Terrestrial			y		
Eleutherodactylus cavernicola	CR	Terrestrial		y			
Eleutherodactylus ceuthospilus	VU	Terrestrial			y		
Eleutherodactylus charlottevillensis	VU	Terrestrial		y			
Eleutherodactylus chlorophenax	CR	Terrestrial		y			
Eleutherodactylus chrysops	EN	Terrestrial			y		
Eleutherodactylus colodactylus	VU	Terrestrial			y		
Eleutherodactylus colomai	EN	Terrestrial			y		
Eleutherodactylus colostichos	VU	Terrestrial		y			
Eleutherodactylus condor	VU	Terrestrial			y		
Eleutherodactylus cooki	EN	Terrestrial			y		
Eleutherodactylus cornutus	VU	Freshwater			y		
Eleutherodactylus corona	CR	Terrestrial		y			
Eleutherodactylus cosnipatae	EN	Terrestrial		y			
Eleutherodactylus counouspeus	EN	Terrestrial		y			
Eleutherodactylus cremnobates	EN	Freshwater			y		
Eleutherodactylus crenunguis	EN	Freshwater			y		
Eleutherodactylus crucifer	VU	Freshwater			y		
Eleutherodactylus cryophilius	EN	Terrestrial			y		
Eleutherodactylus cryptomelas	EN	Terrestrial			y		
Eleutherodactylus cubanus	CR	Terrestrial		y			
Eleutherodactylus cundalli	VU	Terrestrial			y		
Eleutherodactylus darlingtoni	CR	Terrestrial		y			
Eleutherodactylus degener	EN	Terrestrial			y		
Eleutherodactylus deinops	EN	Terrestrial			y		
Eleutherodactylus dennisi	EN	Terrestrial		y			
Eleutherodactylus devillei	EN	Terrestrial			y		
Eleutherodactylus diaphonus	VU	Freshwater				y	
Eleutherodactylus dilatus	EN	Terrestrial			y		
Eleutherodactylus diogenes	VU	Freshwater			y		
Eleutherodactylus dissimulatus	EN	Terrestrial			y		
Eleutherodactylus dixoni	CR	Terrestrial		y			
Eleutherodactylus dolomedes	CR	Terrestrial		y			
Eleutherodactylus dolops	VU	Freshwater			y		
Eleutherodactylus dorsopictus	EN	Terrestrial			y		
Eleutherodactylus douglasi	VU	Terrestrial			y		
Eleutherodactylus duellmani	VU	Freshwater			y		
Eleutherodactylus elassodiscus	EN	Terrestrial			y		
Eleutherodactylus elegans	VU	Terrestrial			y		
Eleutherodactylus emiliae	EN	Terrestrial		y			
Eleutherodactylus emleni	CR	Freshwater	y				
Eleutherodactylus eneidae	CR	Terrestrial	y				
Eleutherodactylus eremitus	VU	Terrestrial			y		
Eleutherodactylus eriphus	VU	Terrestrial			y		
Eleutherodactylus ernesti	VU	Terrestrial		y			
Eleutherodactylus etheridgei	EN	Terrestrial			y		
Eleutherodactylus eugeniae	EN	Terrestrial			y		
Eleutherodactylus eunaster	CR	Terrestrial		y			
Eleutherodactylus euphronides	EN	Terrestrial			y		
Eleutherodactylus fallax	EN	Freshwater			y		
Eleutherodactylus fetosus	EN	Freshwater			y		
Eleutherodactylus floridus	VU	Terrestrial			y		
Eleutherodactylus fowleri	CR	Terrestrial			y		
Eleutherodactylus frater	VU	Terrestrial			y		
Eleutherodactylus furcyensis	CR	Terrestrial			y		
Eleutherodactylus fuscus	CR	Terrestrial			y		
Eleutherodactylus gentryi	EN	Terrestrial			y		
Eleutherodactylus ginesi	EN	Terrestrial			y		
Eleutherodactylus gladiator	EN	Terrestrial			y		
Eleutherodactylus glamyrus	EN	Terrestrial		y			
Eleutherodactylus glandulifer	CR	Freshwater		y			
Eleutherodactylus glanduliferoides	CR	Terrestrial	y				
Eleutherodactylus glandulosus	EN	Terrestrial			y		
Eleutherodactylus glaphycompus	EN	Terrestrial			y		
Eleutherodactylus goini	VU	Terrestrial			y		
Eleutherodactylus grabhami	EN	Terrestrial			y		

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Species scientific name	IUCN Red List category (2007)	Primary biome	Scale of conservation				
			Insufficient information	Single site	Network of sites	Network of sites plus broad-scale conservation action	Broad-scale conservation action
Eleutherodactylus gracilis	VU	Freshwater			y		
Eleutherodactylus grahami	EN	Terrestrial			y		
Eleutherodactylus grandis	CR	Terrestrial		y			
Eleutherodactylus greyi	EN	Terrestrial			y		
Eleutherodactylus griphus	CR	Terrestrial		y			
Eleutherodactylus gryllus	EN	Terrestrial			y		
Eleutherodactylus guanahacabibes	EN	Terrestrial		y			
Eleutherodactylus guantanamera	VU	Terrestrial			y		
Eleutherodactylus gundlachi	EN	Terrestrial			y		
Eleutherodactylus haitianus	EN	Terrestrial			y		
Eleutherodactylus hamiotae	CR	Terrestrial		y			
Eleutherodactylus hedricki	EN	Terrestrial			y		
Eleutherodactylus helonotus	CR	Terrestrial			y		
Eleutherodactylus helvolus	EN	Terrestrial			y		
Eleutherodactylus heminota	EN	Terrestrial			y		
Eleutherodactylus hernandezi	EN	Terrestrial			y		
Eleutherodactylus hybotragus	VU	Freshwater			y		
Eleutherodactylus hypostenor	EN	Terrestrial			y		
Eleutherodactylus iberia	CR	Terrestrial		y			
Eleutherodactylus ignicolor	EN	Freshwater		y			
Eleutherodactylus incanus	EN	Freshwater			y		
Eleutherodactylus incomptus	VU	Terrestrial			y		
Eleutherodactylus ingeri	VU	Terrestrial			y		
Eleutherodactylus insignitus	EN	Freshwater				?	
Eleutherodactylus intermedius	EN	Terrestrial			y		
Eleutherodactylus inusitatus	VU	Terrestrial			y		
Eleutherodactylus ionthus	EN	Terrestrial			y		
Eleutherodactylus jamaicensis	EN	Terrestrial			y		
Eleutherodactylus jasperi	CR	Terrestrial	y				
Eleutherodactylus jaumei	CR	Terrestrial		y			
Eleutherodactylus johannesdei	EN	Terrestrial			y		
Eleutherodactylus jorgevelosai	EN	Freshwater			y		
Eleutherodactylus jugans	CR	Terrestrial			y		
Eleutherodactylus junori	CR	Terrestrial			y		
Eleutherodactylus karlschmidti	CR	Freshwater	y				
Eleutherodactylus katoptroides	EN	Terrestrial			y		
Eleutherodactylus kelephas	VU	Terrestrial			y		
Eleutherodactylus klinikowskii	EN	Terrestrial			y		
Eleutherodactylus laevissimus	EN	Freshwater				y	
Eleutherodactylus lamprotes	CR	Terrestrial		y			
Eleutherodactylus lancinii	EN	Terrestrial			y		
Eleutherodactylus lasalleorum	VU	Terrestrial		y			
Eleutherodactylus latens	EN	Terrestrial			y		
Eleutherodactylus leberi	EN	Terrestrial		y			
Eleutherodactylus lemur	EN	Terrestrial			y		
Eleutherodactylus lentus	EN	Terrestrial			y		
Eleutherodactylus leoncei	CR	Terrestrial			y		
Eleutherodactylus leprus	VU	Terrestrial			y		
Eleutherodactylus lichenoides	CR	Freshwater		y			
Eleutherodactylus limbatus	VU	Terrestrial			y		
Eleutherodactylus lividus	EN	Terrestrial		y			
Eleutherodactylus locustus	CR	Terrestrial			y		
Eleutherodactylus longipes	VU	Terrestrial			y		
Eleutherodactylus loustes	EN	Freshwater				?	
Eleutherodactylus lucioi	CR	Terrestrial		y			
Eleutherodactylus luteolus	EN	Terrestrial			y		
Eleutherodactylus maculosus	EN	Terrestrial			y		
Eleutherodactylus marahuaka	VU	Terrestrial		y			
Eleutherodactylus mariposa	CR	Terrestrial		y			
Eleutherodactylus mars	EN	Terrestrial		y			
Eleutherodactylus melacara	EN	Terrestrial			y		
Eleutherodactylus merostictus	EN	Terrestrial			y		
Eleutherodactylus minutus	EN	Terrestrial			y		
Eleutherodactylus mnionaetes	EN	Terrestrial		y			
Eleutherodactylus modestus	VU	Terrestrial			y		
Eleutherodactylus modipeplus	EN	Terrestrial			y		
Eleutherodactylus monensis	VU	Terrestrial		y			
Eleutherodactylus montanus	EN	Terrestrial			y		
Eleutherodactylus muricatus	VU	Terrestrial			y		
Eleutherodactylus museosus	EN	Terrestrial			y		
Eleutherodactylus necopinus	VU	Terrestrial			y		
Eleutherodactylus nephophilus	VU	Terrestrial			y		
Eleutherodactylus nigrogriseus	VU	Freshwater			y		
Eleutherodactylus nivicolimae	VU	Terrestrial			y		
Eleutherodactylus nortoni	CR	Terrestrial			y		
Eleutherodactylus nubicola	EN	Terrestrial		y			
Eleutherodactylus nyctophylax	VU	Terrestrial			y		
Eleutherodactylus ocreatus	EN	Terrestrial			y		
Eleutherodactylus olanchano	CR	Freshwater	y				
Eleutherodactylus orcutti	CR	Freshwater	y				
Eleutherodactylus orestes	EN	Terrestrial			y		
Eleutherodactylus orientalis	CR	Terrestrial		y			
Eleutherodactylus ornatissimus	VU	Terrestrial			y		
Eleutherodactylus orpacobates	VU	Terrestrial			y		
Eleutherodactylus oxyrhyncus	CR	Terrestrial			y		
Eleutherodactylus parabates	CR	Terrestrial			y		
Eleutherodactylus paramerus	EN	Terrestrial		y			
Eleutherodactylus parapelates	CR	Terrestrial		y			
Eleutherodactylus pardalis	VU	Terrestrial			y		
Eleutherodactylus parectatus	EN	Terrestrial			y		
Eleutherodactylus pastazensis	EN	Terrestrial			y		

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Species scientific name	IUCN Red List category (2007)	Primary biome	Scale of conservation				
			Insufficient information	Single site	Network of sites	Network of sites plus broad-scale conservation action	Broad-scale conservation action
Eleutherodactylus pataikos	VU	Terrestrial			y		
Eleutherodactylus patriciae	EN	Terrestrial			y		
Eleutherodactylus paulsoni	CR	Freshwater			y		
Eleutherodactylus pechorum	EN	Freshwater			y		
Eleutherodactylus penelopus	VU	Freshwater			y		
Eleutherodactylus pentasyringos	VU	Terrestrial			y		
Eleutherodactylus percultus	EN	Terrestrial		y			
Eleutherodactylus petersorum	VU	Terrestrial			y		
Eleutherodactylus pezopetrus	CR	Terrestrial		y			
Eleutherodactylus phalarus	VU	Terrestrial			y		
Eleutherodactylus phragmipleuron	CR	Terrestrial		y			
Eleutherodactylus pictissimus	VU	Terrestrial			y		
Eleutherodactylus pinarensis	EN	Terrestrial			y		
Eleutherodactylus pinchoni	EN	Terrestrial			y		
Eleutherodactylus pituinus	EN	Terrestrial		y			
Eleutherodactylus platychilus	VU	Terrestrial			y		
Eleutherodactylus polemistes	VU	Terrestrial			y		
Eleutherodactylus polychrus	EN	Freshwater			y		
Eleutherodactylus poolei	CR	Terrestrial		y			
Eleutherodactylus portoricensis	EN	Terrestrial			y		
Eleutherodactylus principalis	EN	Terrestrial			y		
Eleutherodactylus probolaeus	EN	Terrestrial			y		
Eleutherodactylus prolatus	EN	Freshwater			y		
Eleutherodactylus proserpens	EN	Terrestrial			y		
Eleutherodactylus pteridophilus	EN	Terrestrial			y		
Eleutherodactylus pugnax	VU	Freshwater			y		
Eleutherodactylus pycnodermis	EN	Terrestrial			y		
Eleutherodactylus pyrrhomerus	EN	Terrestrial			y		
Eleutherodactylus quantus	VU	Terrestrial			y		
Eleutherodactylus quinquagesimus	VU	Freshwater			y		
Eleutherodactylus renjiforum	EN	Terrestrial			y		
Eleutherodactylus repens	VU	Terrestrial		y			
Eleutherodactylus rhodesi	CR	Terrestrial		y			
Eleutherodactylus rhodoplichus	EN	Terrestrial			y		
Eleutherodactylus rhodostichus	VU	Terrestrial			y		
Eleutherodactylus richmondi	CR	Terrestrial			y		
Eleutherodactylus ricordii	VU	Terrestrial			y		
Eleutherodactylus rivularis	CR	Freshwater				y	
Eleutherodactylus rivulus	VU	Freshwater				y	
Eleutherodactylus ronaldi	VU	Terrestrial			y		
Eleutherodactylus rosadoi	VU	Freshwater				?	
Eleutherodactylus rubicundus	EN	Terrestrial			y		
Eleutherodactylus rubrimaculatus	VU	Terrestrial			y		
Eleutherodactylus ruedai	VU	Freshwater			y		
Eleutherodactylus rufescens	CR	Terrestrial		y			
Eleutherodactylus rufifemoralis	CR	Terrestrial		y			
Eleutherodactylus ruizi	EN	Terrestrial			y		
Eleutherodactylus ruthae	EN	Terrestrial			y		
Eleutherodactylus ruthveni	EN	Terrestrial		y			
Eleutherodactylus sandersoni	EN	Freshwater			y		
Eleutherodactylus satagius	VU	Terrestrial		?			
Eleutherodactylus saxatilis	EN	Terrestrial			y		
Eleutherodactylus schmidti	CR	Freshwater	y				
Eleutherodactylus schultei	VU	Terrestrial			y		
Eleutherodactylus schwartzi	EN	Terrestrial			y		
Eleutherodactylus sciagraphus	CR	Terrestrial		y			
Eleutherodactylus scoloblepharus	EN	Freshwater			y		
Eleutherodactylus scolodiscus	EN	Freshwater			y		
Eleutherodactylus semipalmatus	CR	Freshwater	y				
Eleutherodactylus serendipitus	VU	Terrestrial			y		
Eleutherodactylus shrevei	EN	Terrestrial			y		
Eleutherodactylus signifer	VU	Freshwater			y		
Eleutherodactylus simonbolivari	EN	Terrestrial		y			
Eleutherodactylus simoteriscus	EN	Terrestrial			y		
Eleutherodactylus simulans	EN	Freshwater		y			
Eleutherodactylus siopelus	EN	Terrestrial		y			
Eleutherodactylus sisyphodemus	CR	Terrestrial		y			
Eleutherodactylus sobetes	EN	Terrestrial			y		
Eleutherodactylus spilogaster	EN	Terrestrial			y		
Eleutherodactylus suetus	EN	Terrestrial			y		
Eleutherodactylus sulculus	EN	Freshwater		y			
Eleutherodactylus supernatis	VU	Terrestrial			y		
Eleutherodactylus surdus	EN	Terrestrial			y		
Eleutherodactylus symingtoni	CR	Terrestrial			y		
Eleutherodactylus syristes	EN	Terrestrial			y		
Eleutherodactylus tenebrionis	EN	Terrestrial			y		
Eleutherodactylus tetajulia	CR	Terrestrial		y			
Eleutherodactylus thomasi	EN	Terrestrial			y		
Eleutherodactylus thorectes	CR	Terrestrial			y		
Eleutherodactylus thymalopsoides	EN	Terrestrial		y			
Eleutherodactylus toa	EN	Freshwater			y		
Eleutherodactylus tonyi	CR	Terrestrial			y		
Eleutherodactylus torrenticola	CR	Freshwater				y	
Eleutherodactylus trepidotus	EN	Terrestrial			y		
Eleutherodactylus tribulosus	CR	Terrestrial		y			
Eleutherodactylus truebae	EN	Terrestrial			y		
Eleutherodactylus turpinorum	VU	Terrestrial		y			
Eleutherodactylus turquinensis	CR	Freshwater		y			
Eleutherodactylus turumiquirensis	EN	Terrestrial		y			
Eleutherodactylus unicolor	CR	Terrestrial		y			
Eleutherodactylus urichi	EN	Terrestrial			y		

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Species scientific name	IUCN Red List category (2007)	Primary biome	Scale of conservation				
			Insufficient information	Single site	Network of sites	Network of sites plus broad-scale conservation action	Broad-scale conservation action
Eleutherodactylus varians	VU	Terrestrial			y		
Eleutherodactylus veletis	CR	Freshwater		y			
Eleutherodactylus ventrilineatus	CR	Terrestrial			y		
Eleutherodactylus verecundus	VU	Freshwater			y		
Eleutherodactylus verrucipes	VU	Terrestrial			y		
Eleutherodactylus versicolor	VU	Terrestrial			y		
Eleutherodactylus vertebralis	VU	Freshwater			y		
Eleutherodactylus vidua	EN	Terrestrial			y		
Eleutherodactylus viridicans	EN	Terrestrial			y		
Eleutherodactylus vulcani	EN	Freshwater		y			
Eleutherodactylus warreni	CR	Terrestrial			y		
Eleutherodactylus wetmorei	VU	Terrestrial			y		
Eleutherodactylus wightmanae	EN	Terrestrial			y		
Eleutherodactylus xylochobates	VU	Terrestrial			y		
Eleutherodactylus zeus	EN	Terrestrial			y		
Eleutherodactylus zongoensis	CR	Terrestrial	y				
Eleutherodactylus zophus	EN	Freshwater			y		
Eleutherodactylus zugi	EN	Terrestrial			y		
Epipedobates cainarachi	VU	Freshwater			y		
Epipedobates ingeri	CR	Terrestrial		y			
Epipedobates planipaleae	CR	Freshwater		y			
Epipedobates tricolor	EN	Freshwater				y	
Ericabatrachus baleensis	EN	Freshwater		y			
Euparkerella robusta	VU	Terrestrial			y		
Euparkerella tridactyla	VU	Terrestrial		y			
Euproctus platycephalus	EN	Freshwater				y	
Eupsophus contulmoensis	EN	Freshwater			y		
Eupsophus insularis	CR	Freshwater		y			
Eupsophus migueli	EN	Freshwater		y			
Eupsophus nahuelbutensis	EN	Freshwater			y		
Eurycea chisholmensis	VU	Freshwater				y	
Eurycea junaluska	VU	Freshwater				?	
Eurycea latitans	VU	Freshwater				?	
Eurycea nana	VU	Freshwater				y	
Eurycea naufragia	EN	Freshwater			y		
Eurycea neotenes	VU	Freshwater				y	
Eurycea rathbuni	VU	Freshwater				y	
Eurycea sosorum	VU	Freshwater				y	
Eurycea tonkawae	EN	Freshwater				y	
Eurycea tridentifera	VU	Freshwater				?	
Eurycea waterlooensis	VU	Freshwater				y	
Exerodonta catracha	EN	Freshwater			y		
Exerodonta chimalapa	EN	Freshwater				y	
Exerodonta juanitae	VU	Freshwater			y		
Exerodonta melanomma	VU	Freshwater			y		
Exerodonta perkinsi	CR	Freshwater		y			
Exerodonta pinorum	VU	Freshwater			y		
Exerodonta xera	VU	Freshwater			y		
Fejervarya greenii	EN	Freshwater				y	
Fejervarya murthii	CR	Freshwater		y			
Fejervarya nilagirica	EN	Freshwater			y		
Flectonotus fitzgeraldi	EN	Terrestrial			y		
Gastrophrynoides borneensis	VU	Terrestrial			y		
Gastrotheca angustifrons	VU	Freshwater				y	
Gastrotheca antomia	VU	Terrestrial			y		
Gastrotheca bufona	EN	Terrestrial			y		
Gastrotheca christiani	EN	Terrestrial			y		
Gastrotheca chrysosticta	VU	Terrestrial			y		
Gastrotheca dendronastes	VU	Freshwater				y	
Gastrotheca espeletia	EN	Freshwater				?	
Gastrotheca excubitor	VU	Terrestrial			y		
Gastrotheca gracilis	VU	Freshwater				y	
Gastrotheca guentheri	VU	Freshwater				y	
Gastrotheca lauzuricae	CR	Terrestrial	y				
Gastrotheca litonedis	EN	Freshwater			y		
Gastrotheca orophylax	EN	Terrestrial			y		
Gastrotheca ovifera	EN	Terrestrial			y		
Gastrotheca plumbea	VU	Terrestrial			y		
Gastrotheca pseustes	EN	Freshwater			y		
Gastrotheca psychrophila	EN	Terrestrial		y			
Gastrotheca riobambae	EN	Freshwater				?	
Gastrotheca ruizi	EN	Freshwater				y	
Gastrotheca splendens	EN	Terrestrial		y			
Gastrotheca stictopleura	EN	Freshwater			y		
Gastrotheca trachyceps	EN	Terrestrial		y			
Gastrotheca zeugocystis	CR	Terrestrial			y		
Geobatrachus walkeri	EN	Terrestrial			y		
Geocrinia alba	CR	Freshwater			y		
Geocrinia vitellina	VU	Freshwater		y			
Grandisonia brevis	EN	Freshwater			y		
Gyrinophilus gulolineatus	EN	Freshwater				?	
Gyrinophilus palleucus	VU	Freshwater				y	
Gyrinophilus subterraneus	EN	Freshwater				?	
Haideotriton wallacei	VU	Freshwater				y	
Heleioporus australiacus	VU	Freshwater				y	
Heleophryne hewitti	CR	Freshwater				y	
Heleophryne rosei	CR	Freshwater				y	
Hemiphractus johnsoni	EN	Terrestrial			y		
Hemisus guttatus	VU	Freshwater				y	
Holoaden bradei	CR	Terrestrial	y				
Hoplophryne rogersi	EN	Terrestrial			y		

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Species scientific name	IUCN Red List category (2007)	Primary biome	Scale of conservation				
			Insufficient information	Single site	Network of sites	Network of sites plus broad-scale conservation action	Broad-scale conservation action
Hoplophryne uluguruensis	VU	Terrestrial			y		
Huia masonii	VU	Freshwater				y	
Hyalinobatrachium antisthenesi	VU	Freshwater			y		
Hyalinobatrachium cardiacalyptum	EN	Freshwater				y	
Hyalinobatrachium crybetes	CR	Freshwater	y				
Hyalinobatrachium esmeralda	EN	Freshwater				?	
Hyalinobatrachium fragile	VU	Freshwater			y		
Hyalinobatrachium guairarepanensis	EN	Freshwater				y	
Hyalinobatrachium ibama	VU	Freshwater				?	
Hyalinobatrachium orientale	VU	Freshwater			y		
Hyalinobatrachium pallidum	EN	Freshwater			y		
Hyalinobatrachium pellucidum	EN	Freshwater			y		
Hyalinobatrachium revocatum	VU	Freshwater				?	
Hydromantes brunus	VU	Freshwater				?	
Hydromantes shastae	VU	Freshwater				y	
Hyla bocourti	CR	Freshwater	y				
Hyla chlorostea	CR	Freshwater	y				
Hyla walkeri	VU	Freshwater			y		
Hylomantis lemur	EN	Freshwater			y		
Hyloscirtus charazani	EN	Freshwater				y	
Hyloscirtus colymba	EN	Freshwater			y		
Hyloscirtus denticulentus	EN	Freshwater			y		
Hyloscirtus lindae	VU	Freshwater				?	
Hyloscirtus lynchi	EN	Freshwater			y		
Hyloscirtus pantostictus	EN	Freshwater				?	
Hyloscirtus piceigularis	EN	Freshwater			y		
Hyloscirtus platydactylus	VU	Freshwater			y		
Hyloscirtus psarolaimus	EN	Freshwater				?	
Hyloscirtus ptychodactylus	CR	Freshwater			y		
Hyloscirtus simmonsi	EN	Freshwater				y	
Hyloscirtus staufferorum	EN	Freshwater			y		
Hyloscirtus torrenticola	VU	Freshwater				?	
Hynobius abei	CR	Freshwater			y		
Hynobius amjiensis	CR	Freshwater		y			
Hynobius arisanensis	VU	Freshwater			y		
Hynobius boulengeri	VU	Freshwater				y	
Hynobius chinensis	EN	Freshwater			y		
Hynobius dunni	EN	Freshwater				y	
Hynobius formosanus	EN	Freshwater			y		
Hynobius hidamontanus	EN	Freshwater				y	
Hynobius okiensis	CR	Freshwater				?	
Hynobius sonani	EN	Freshwater			y		
Hynobius stejnegeri	VU	Freshwater				?	
Hynobius takedai	EN	Freshwater				y	
Hynobius tokyoensis	VU	Freshwater				y	
Hynobius yiwuensis	VU	Freshwater				y	
Hynobius yunanicus	EN	Freshwater		y			
Hyperolius bobirensis	EN	Freshwater		y			
Hyperolius castaneus	VU	Freshwater			y		
Hyperolius chrysogaster	VU	Freshwater			y		
Hyperolius cystocandicans	VU	Freshwater			y		
Hyperolius dintelmanni	EN	Freshwater			y		
Hyperolius discodactylus	VU	Freshwater			y		
Hyperolius endjami	VU	Freshwater			y		
Hyperolius frontalis	VU	Freshwater			y		
Hyperolius horstockii	VU	Freshwater				?	
Hyperolius kihangensis	EN	Freshwater		y			
Hyperolius laurenti	VU	Freshwater			y		
Hyperolius leleupi	EN	Freshwater		y			
Hyperolius leucotaenius	EN	Freshwater			y		
Hyperolius minutissimus	VU	Freshwater			y		
Hyperolius nienokouensis	EN	Freshwater		y			
Hyperolius nimbae	EN	Freshwater		y			
Hyperolius pickersgilli	EN	Freshwater				?	
Hyperolius polystictus	VU	Freshwater		y			
Hyperolius riggenbachi	VU	Freshwater			y		
Hyperolius rubrovermiculatus	EN	Freshwater		y			
Hyperolius tannerorum	EN	Freshwater		y			
Hyperolius thomensis	EN	Freshwater			y		
Hyperolius torrentis	EN	Freshwater			y		
Hyperolius viridigulosus	VU	Terrestrial			y		
Hypopachus barberi	VU	Freshwater			y		
Hypsiboas cymbalum	CR	Freshwater	y				
Hypsiboas heilprini	VU	Freshwater				?	
Ichthyophis orthoplicatus	VU	Freshwater				y	
Ichthyophis pseudangularis	VU	Freshwater				y	
Indirana brachytarsus	EN	Freshwater			y		
Indirana diplosticta	EN	Freshwater			y		
Indirana gundia	CR	Freshwater		y			
Indirana leithii	VU	Freshwater			y		
Indirana leptodactyla	EN	Freshwater			y		
Indirana phrynoderma	CR	Freshwater		y			
Ingerana liui	VU	Freshwater			y		
Ingerana tasanae	VU	Freshwater			y		
Insuetophrynus acarpicus	CR	Freshwater		y			
Ischnocnema simmonsi	VU	Terrestrial		?			
Isthmohyla angustilineata	CR	Freshwater			y		
Isthmohyla calypsa	CR	Freshwater	y				
Isthmohyla debilis	CR	Freshwater	y				
Isthmohyla graceae	CR	Freshwater	y				
Isthmohyla insolita	CR	Freshwater		y			

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			Insufficient information	Single site	Network of sites	Network of sites plus broad-scale conservation action	Broad-scale conservation action
Isthmohyla picadoi	EN	Terrestrial			y		
Isthmohyla pictipes	VU	Freshwater			y		
Isthmohyla rivularis	CR	Freshwater	y				
Isthmohyla tica	CR	Freshwater	y				
Isthmohyla zeteki	VU	Terrestrial			y		
Ixalotriton niger	CR	Terrestrial		y			
Ixalotriton parva	CR	Terrestrial	y				
Kalophrynus intermedius	VU	Freshwater			y		
Kalophrynus minusculus	VU	Freshwater			y		
Kalophrynus palmatissimus	EN	Terrestrial			y		
Kalophrynus punctatus	VU	Freshwater			y		
Kaloula kalingensis	VU	Terrestrial			y		
Kaloula rigida	VU	Freshwater				y	
Kassina arboricola	VU	Freshwater			y		
Kassina lamottei	VU	Freshwater			y		
Leiopelma archeyi	CR	Terrestrial			y		
Leiopelma hamiltoni	EN	Terrestrial		y			
Leiopelma hochstetteri	VU	Terrestrial			y		
Leiopelma pakeka	VU	Terrestrial		y			
Leptobrachella baluensis	VU	Freshwater			y		
Leptobrachella brevicrus	VU	Freshwater		y			
Leptobrachella palmata	CR	Freshwater				y	
Leptobrachella parva	VU	Freshwater				y	
Leptobrachella serasanae	VU	Freshwater			y		
Leptobrachium banae	VU	Freshwater			y		
Leptobrachium gunungense	VU	Freshwater		y			
Leptobrachium hainanense	VU	Freshwater			y		
Leptodactylodon albiventris	VU	Freshwater			y		
Leptodactylodon axillaris	EN	Freshwater			y		
Leptodactylodon bicolor	VU	Freshwater			y		
Leptodactylodon boulengeri	VU	Freshwater			y		
Leptodactylodon bueanus	VU	Freshwater			y		
Leptodactylodon erythrogaster	CR	Freshwater		y			
Leptodactylodon mertensi	EN	Freshwater			y		
Leptodactylodon ornatus	EN	Freshwater			y		
Leptodactylodon perreti	EN	Freshwater			y		
Leptodactylodon polyacanthus	VU	Freshwater			y		
Leptodactylodon stevarti	EN	Freshwater			y		
Leptodactylodon ventrimarmoratus	VU	Freshwater			y		
Leptodactylodon wildi	EN	Freshwater		y			
Leptodactylus dominicensis	EN	Freshwater			y		
Leptodactylus fallax	CR	Terrestrial			y		
Leptodactylus magistris	CR	Freshwater				?	
Leptodactylus nesiotus	VU	Freshwater		y			
Leptodactylus pascoensis	VU	Freshwater			y		
Leptodactylus silvanimbus	CR	Freshwater			y		
Leptolalax alpinus	EN	Freshwater		y			
Leptolalax arayai	VU	Freshwater				y	
Leptolalax hamidi	VU	Freshwater			y		
Leptolalax kajangensis	VU	Freshwater		y			
Leptolalax pictus	VU	Freshwater			y		
Leptolalax tuberosus	VU	Freshwater			y		
Leptopelis barbouri	VU	Freshwater			y		
Leptopelis karissimbensis	EN	Freshwater			y		
Leptopelis palmatus	VU	Freshwater			y		
Leptopelis parkeri	VU	Freshwater			y		
Leptopelis ragazzii	VU	Freshwater			y		
Leptopelis susanae	EN	Freshwater			y		
Leptopelis uluguruensis	VU	Freshwater			y		
Leptopelis vannutellii	VU	Freshwater			y		
Leptopelis vermiculatus	VU	Freshwater			y		
Leptopelis xenodactylus	EN	Freshwater				y	
Leptophryne cruentata	CR	Freshwater			y		
Limnonectes acanthi	VU	Freshwater				y	
Limnonectes arathooni	EN	Freshwater				y	
Limnonectes diuatus	VU	Freshwater				y	
Limnonectes fragilis	VU	Freshwater			y		
Limnonectes heinrichi	VU	Freshwater			y		
Limnonectes macrodon	VU	Freshwater				y	
Limnonectes microtympanum	EN	Freshwater			y		
Limnonectes namiyei	EN	Freshwater				y	
Limnonectes nitidus	EN	Freshwater			y		
Limnonectes parvus	VU	Freshwater				y	
Limnonectes toumanoffi	VU	Freshwater				?	
Limnonectes visayanus	VU	Freshwater				y	
Lineatriton lineolus	EN	Terrestrial				y	
Lineatriton orchileucos	EN	Terrestrial		y			
Lineatriton orchimelas	EN	Terrestrial		y			
Litoria andiirrmalin	VU	Freshwater			y		
Litoria aurea	VU	Freshwater			y		
Litoria becki	VU	Freshwater		y			
Litoria booroolongensis	CR	Freshwater				y	
Litoria brevipalmata	EN	Freshwater			y		
Litoria castanea	CR	Freshwater	y				
Litoria cooloolensis	EN	Freshwater				y	
Litoria daviesae	VU	Freshwater			y		
Litoria freycineti	VU	Freshwater				y	
Litoria lorica	CR	Freshwater	y				
Litoria lutea	VU	Terrestrial			y		
Litoria nannotis	EN	Freshwater			y		
Litoria nyakalensis	CR	Freshwater	y				

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Species scientific name	IUCN Red List category (2007)	Primary biome	Scale of conservation				
			Insufficient information	Single site	Network of sites	Network of sites plus broad-scale conservation action	Broad-scale conservation action
Litoria olongburensis	VU	Freshwater				y	
Litoria piperata	CR	Freshwater	y				
Litoria quadrilineata	VU	Freshwater		y			
Litoria raniformis	EN	Freshwater				y	
Litoria rheocola	EN	Freshwater				y	
Litoria spenceri	CR	Freshwater			y		
Litoria subglandulosa	VU	Freshwater				y	
Litoria wisselensis	VU	Freshwater			y		
Lyciasalamandra antalyana	EN	Terrestrial			y		
Lyciasalamandra atifi	EN	Terrestrial			y		
Lyciasalamandra billae	CR	Terrestrial			y		
Lyciasalamandra fazilae	EN	Terrestrial			y		
Lyciasalamandra flavimembris	EN	Terrestrial			y		
Lyciasalamandra helverseni	VU	Terrestrial			y		
Lyciasalamandra luschani	EN	Terrestrial			y		
Madecassophryne truebae	EN	Terrestrial			y		
Mannophryne caquetio	CR	Freshwater				?	
Mannophryne collaris	EN	Freshwater				?	
Mannophryne cordilleriana	VU	Freshwater			y		
Mannophryne lamarcai	CR	Freshwater				?	
Mannophryne neblina	CR	Freshwater	y				
Mannophryne olmonae	CR	Freshwater		y			
Mannophryne riveroi	EN	Freshwater			y		
Mannophryne trinitatis	VU	Freshwater				y	
Mannophryne yustizi	EN	Freshwater				?	
Mantella aurantiaca	CR	Freshwater			y		
Mantella bernhardi	EN	Freshwater			y		
Mantella cowanii	CR	Freshwater			y		
Mantella crocea	EN	Freshwater			y		
Mantella expectata	CR	Freshwater		y			
Mantella haraldmeieri	VU	Freshwater			y		
Mantella madagascariensis	VU	Freshwater			y		
Mantella milotympanum	CR	Freshwater			y		
Mantella pulchra	VU	Freshwater			y		
Mantella viridis	CR	Freshwater				?	
Mantidactylus ambohitra	VU	Terrestrial			y		
Mantidactylus brunae	EN	Freshwater			y		
Mantidactylus corvus	EN	Freshwater			y		
Mantidactylus elegans	VU	Freshwater				?	
Mantidactylus guibei	EN	Terrestrial			y		
Mantidactylus horridus	EN	Terrestrial			y		
Mantidactylus klemmeri	VU	Terrestrial			y		
Mantidactylus madecassus	EN	Freshwater		y			
Mantidactylus massorum	VU	Freshwater			y		
Mantidactylus microtis	EN	Freshwater		y			
Mantidactylus microtympanum	EN	Freshwater			y		
Mantidactylus pauliani	CR	Freshwater				?	
Mantidactylus rivicola	VU	Terrestrial			y		
Mantidactylus salegy	VU	Terrestrial			y		
Mantidactylus schilfi	VU	Terrestrial		y			
Mantidactylus silvanus	EN	Freshwater			y		
Mantidactylus striatus	VU	Freshwater			y		
Mantidactylus tandroka	VU	Freshwater			y		
Mantidactylus webbi	EN	Freshwater			y		
Megastomatohyla mixe	CR	Freshwater		y			
Megastomatohyla mixomaculata	EN	Freshwater			y		
Megastomatohyla nubicola	EN	Freshwater			y		
Megastomatohyla pellita	CR	Freshwater	y				
Megophrys edwardinae	VU	Freshwater				y	
Megophrys ligayae	EN	Freshwater				y	
Megophrys stejnegeri	VU	Freshwater				y	
Melanobatrachus indicus	EN	Freshwater				?	
Melanophryniscus devincenzii	EN	Freshwater				y	
Melanophryniscus dorsalis	VU	Freshwater			y		
Melanophryniscus macrogranulosus	VU	Freshwater	y				
Melanophryniscus montevidensis	VU	Freshwater			y		
Melanophryniscus orejasmirandai	VU	Freshwater		y			
Meristogenys amoropalamus	VU	Freshwater			y		
Meristogenys jerboa	VU	Freshwater		y			
Mertensiella caucasica	VU	Freshwater				y	
Metaphryniscus sosae	VU	Terrestrial		y			
Micrixalus gadgili	EN	Freshwater				y	
Micrixalus kottigeharensis	CR	Freshwater			y		
Micrixalus nudis	VU	Freshwater			y		
Micrixalus phyllophilus	VU	Freshwater			y		
Micrixalus saxicola	VU	Freshwater				y	
Microbatrachella capensis	CR	Freshwater				y	
Microhyla karunaratnei	CR	Freshwater				y	
Microhyla maculifera	VU	Freshwater		y			
Microhyla sholigari	EN	Freshwater			y		
Microhyla zeylanica	EN	Freshwater			y		
Micryletta steinegeri	EN	Freshwater			y		
Minervarya sahyadris	EN	Freshwater			y		
Mixophyes balbus	VU	Freshwater			y		
Mixophyes fleayi	EN	Freshwater			y		
Mixophyes iteratus	EN	Freshwater			y		
Nannophrys ceylonensis	VU	Freshwater				y	
Nannophrys marmorata	CR	Freshwater				y	
Nasikabatrachus sahyadrensis	EN	Freshwater			y		
Natalobatrachus bonebergi	EN	Freshwater				y	
Nectophrynoides asperginis	CR	Freshwater	y				

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Nectophrynoides cryptus	EN	Terrestrial		y			
Nectophrynoides minutus	EN	Terrestrial			y		
Nectophrynoides poyntoni	CR	Terrestrial		y			
Nectophrynoides pseudotornieri	EN	Terrestrial		y			
Nectophrynoides vestergaardi	EN	Terrestrial		y			
Nectophrynoides viviparus	VU	Terrestrial			y		
Nectophrynoides wendyae	CR	Terrestrial		y			
Necturus alabamensis	EN	Freshwater				y	
Nephelobates alboguttatus	EN	Freshwater			y		
Nephelobates duranti	EN	Freshwater			y		
Nephelobates haydeeae	EN	Freshwater			y		
Nephelobates mayorgai	EN	Freshwater				y	
Nephelobates meridensis	CR	Freshwater				y	
Nephelobates molinarii	EN	Freshwater			y		
Nephelobates orostoma	EN	Freshwater				?	
Nephelobates serranus	EN	Freshwater		y			
Nesomantis thomasseti	VU	Freshwater			y		
Neurergus crocatus	VU	Freshwater				y	
Neurergus kaiseri	CR	Freshwater				y	
Neurergus microspilotus	EN	Freshwater				y	
Neurergus strauchii	VU	Freshwater				y	
Nimbaphrynoides liberiensis	CR	Terrestrial		y			
Nimbaphrynoides occidentalis	CR	Terrestrial		y			
Nothophryne broadleyi	EN	Terrestrial			y		
Notophthalmus meridionalis	EN	Freshwater				y	
Nototriton barbouri	EN	Terrestrial			y		
Nototriton gamezi	VU	Terrestrial		y			
Nototriton guanacaste	VU	Terrestrial			y		
Nototriton lignicola	CR	Terrestrial		y			
Nototriton limnospectator	EN	Terrestrial		y			
Nototriton saslaya	VU	Terrestrial			y		
Nyctanolis pernix	EN	Terrestrial			y		
Nyctibatrachus aliciae	EN	Freshwater			y		
Nyctibatrachus beddomii	EN	Freshwater			y		
Nyctibatrachus deccanensis	VU	Freshwater			y		
Nyctibatrachus humayuni	VU	Freshwater				y	
Nyctibatrachus hussaini	EN	Freshwater		y			
Nyctibatrachus major	VU	Freshwater			y		
Nyctibatrachus minor	EN	Freshwater			y		
Nyctibatrachus sanctipalustris	EN	Freshwater			y		
Nyctibatrachus vasanthi	EN	Terrestrial		y			
Nyctimystes avocalis	VU	Freshwater		y			
Nyctimystes dayi	EN	Freshwater				y	
Nyctimystes rueppelli	VU	Freshwater			y		
Nyctixalus margaritifer	VU	Terrestrial			y		
Nyctixalus moloch	VU	Freshwater			y		
Nyctixalus spinosus	VU	Terrestrial			y		
Occidozyga borealis	VU	Freshwater				y	
Occidozyga diminutivus	VU	Freshwater				y	
Odontophrynus achalensis	VU	Freshwater				?	
Odontophrynus moratoi	CR	Freshwater	y				
Oedipina alfaroi	VU	Terrestrial			y		
Oedipina altura	CR	Terrestrial			y		
Oedipina gephyra	EN	Terrestrial			y		
Oedipina gracilis	EN	Terrestrial			y		
Oedipina grandis	EN	Terrestrial		y			
Oedipina maritima	CR	Terrestrial		y			
Oedipina paucidentata	CR	Terrestrial	y				
Oedipina poelzi	EN	Freshwater				?	
Oedipina pseudouniformis	EN	Terrestrial			y		
Oedipina stenopodia	EN	Terrestrial			y		
Oedipina uniformis	VU	Terrestrial			y		
Oreolalax chuanbeiensis	EN	Freshwater			y		
Oreolalax granulosus	VU	Freshwater		?			
Oreolalax jingdongensis	VU	Freshwater			y		
Oreolalax liangbeiensis	CR	Freshwater				y	
Oreolalax major	VU	Freshwater			y		
Oreolalax multipunctatus	VU	Freshwater			y		
Oreolalax omeimontis	EN	Freshwater			y		
Oreolalax pingii	EN	Freshwater			y		
Oreolalax puxiongensis	EN	Freshwater			y		
Oreolalax rhodostigmatus	VU	Freshwater			y		
Oreophryne anulata	VU	Freshwater			y		
Oreophryne celebensis	VU	Terrestrial			y		
Oreophryne monticola	EN	Terrestrial			y		
Oreophryne variabilis	VU	Terrestrial			y		
Oreophrynella cryptica	VU	Terrestrial		y			
Oreophrynella huberi	VU	Freshwater		y			
Oreophrynella macconnelli	VU	Terrestrial		y			
Oreophrynella nigra	VU	Freshwater			y		
Oreophrynella quelchii	VU	Terrestrial			y		
Oreophrynella vasquezi	VU	Terrestrial		y			
Osornophryne antisana	EN	Terrestrial			y		
Osornophryne guacamayo	EN	Terrestrial			y		
Osornophryne percrassa	EN	Terrestrial			y		
Osornophryne sumacoensis	VU	Terrestrial		y			
Osornophryne talipes	EN	Terrestrial			y		
Osteopilus crucialis	EN	Terrestrial			y		
Osteopilus marianae	EN	Terrestrial			y		
Osteopilus pulchrilineatus	EN	Freshwater			y		
Osteopilus vastus	EN	Freshwater			y		

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Species scientific name	IUCN Red List category (2007)	Primary biome	Scale of conservation				
			Insufficient information	Single site	Network of sites	Network of sites plus broad-scale conservation action	Broad-scale conservation action
Osteopilus wilderi	EN	Terrestrial			y		
Paa boulengeri	EN	Freshwater				y	
Paa exilispinosa	VU	Freshwater			y		
Paa fasciculispina	VU	Freshwater			y		
Paa jiulongensis	VU	Freshwater			y		
Paa liui	VU	Freshwater			y		
Paa maculosa	EN	Freshwater			y		
Paa minica	VU	Freshwater				y	
Paa robertingeri	EN	Freshwater		y			
Paa rostandi	VU	Freshwater			y		
Paa shini	VU	Freshwater				y	
Paa spinosa	VU	Freshwater				y	
Paa yunnanensis	EN	Freshwater				y	
Pachyhynobius shangchengensis	VU	Freshwater			y		
Palmatorappia solomonis	VU	Terrestrial			y		
Paramesotriton deloustali	VU	Freshwater				?	
Paramesotriton fuzhongensis	VU	Freshwater			y		
Paramesotriton guanxiensis	EN	Freshwater			y		
Parhoplophryne usambarica	CR	Terrestrial		y			
Parvimolge townsendi	EN	Terrestrial				y	
Pedostibes tuberculosus	EN	Freshwater				y	
Pelobates varaldii	EN	Freshwater				?	
Pelophryne albotaeniata	EN	Freshwater			y		
Pelophryne api	EN	Freshwater			y		
Pelophryne guentheri	VU	Freshwater			y		
Pelophryne lighti	VU	Freshwater				?	
Pelophryne misera	VU	Freshwater			y		
Pelophryne rhopophilius	VU	Freshwater			y		
Pelophryne scalptus	EN	Freshwater			y		
Petropedetes palmipes	EN	Freshwater			y		
Petropedetes perreti	EN	Freshwater				y	
Phaeognathus hubrichti	EN	Terrestrial			y		
Philautus acutirostris	VU	Terrestrial			y		
Philautus acutus	VU	Terrestrial		y			
Philautus alto	EN	Terrestrial		y			
Philautus amoenus	VU	Terrestrial		y			
Philautus asankai	EN	Terrestrial		y			
Philautus aurantium	EN	Terrestrial			y		
Philautus auratus	EN	Terrestrial			y		
Philautus bobingeri	VU	Terrestrial		y			
Philautus bombayensis	VU	Terrestrial			y		
Philautus bunitus	VU	Terrestrial			y		
Philautus caeruleus	EN	Terrestrial			y		
Philautus cavirostris	EN	Terrestrial			y		
Philautus chalazodes	CR	Terrestrial		y			
Philautus charius	EN	Terrestrial			y		
Philautus cuspis	EN	Terrestrial			y		
Philautus decoris	EN	Terrestrial			y		
Philautus disgregus	EN	Terrestrial			y		
Philautus erythrophthalmus	VU	Terrestrial		y			
Philautus femoralis	EN	Terrestrial			y		
Philautus folicola	EN	Terrestrial			y		
Philautus frankenbergi	EN	Terrestrial			y		
Philautus fulvus	EN	Terrestrial		y			
Philautus garo	VU	Terrestrial			y		
Philautus glandulosus	VU	Terrestrial			y		
Philautus graminirupes	VU	Terrestrial		y			
Philautus griet	CR	Terrestrial		y			
Philautus gunungensis	VU	Terrestrial		y			
Philautus hallidayi	VU	Terrestrial			y		
Philautus hoffmanni	EN	Terrestrial			y		
Philautus ingeri	VU	Terrestrial			y		
Philautus jacobsoni	CR	Terrestrial	y				
Philautus jinxiuensis	VU	Freshwater			y		
Philautus kerangae	EN	Freshwater			y		
Philautus leitensis	VU	Terrestrial			y		
Philautus limbus	CR	Terrestrial		y			
Philautus lunatus	CR	Terrestrial		y			
Philautus macropus	CR	Terrestrial				y	
Philautus microtympanum	EN	Terrestrial		y			
Philautus mittermeieri	EN	Terrestrial			y		
Philautus mooreorum	EN	Terrestrial			y		
Philautus nemus	CR	Terrestrial		y			
Philautus nerostagona	EN	Terrestrial			y		
Philautus ocellatus	EN	Terrestrial			y		
Philautus ocularis	EN	Terrestrial		y			
Philautus pallidipes	VU	Terrestrial			y		
Philautus papillosus	CR	Terrestrial		y			
Philautus pleurotaenia	EN	Terrestrial			y		
Philautus poecilius	VU	Terrestrial			y		
Philautus ponmudi	CR	Terrestrial			y		
Philautus poppiae	EN	Terrestrial			y		
Philautus procax	CR	Terrestrial		y			
Philautus refugii	VU	Terrestrial		y			
Philautus reticulatus	EN	Terrestrial			y		
Philautus sanctisilvaticus	CR	Terrestrial		y			
Philautus sarasinorum	EN	Freshwater				?	
Philautus saueri	VU	Terrestrial		y			
Philautus schmackeri	EN	Terrestrial			y		
Philautus schmarda	EN	Terrestrial			y		
Philautus shillongensis	CR	Terrestrial		y			

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Philautus signatus	EN	Terrestrial			y		
Philautus silus	EN	Terrestrial			y		
Philautus silvaticus	EN	Terrestrial			y		
Philautus simba	CR	Terrestrial		y			
Philautus similis	EN	Terrestrial		y			
Philautus sp. nov. 'Amboli Forest'	CR	Terrestrial			y		
Philautus sp. nov. 'Athirimala'	EN	Terrestrial			y		
Philautus sp. nov. 'Eravikulam NP'	VU	Terrestrial		?			
Philautus sp. nov. 'Munnar'	CR	Terrestrial			y		
Philautus sp. nov. 'Munnar 2'	CR	Terrestrial			y		
Philautus sp. nov. 'Tholpetti Forest'	VU	Terrestrial			y		
Philautus steineri	EN	Terrestrial			y		
Philautus stuarti	EN	Terrestrial			y		
Philautus surrufus	EN	Terrestrial			y		
Philautus tectus	VU	Terrestrial			y		
Philautus tinniens	EN	Terrestrial			y		
Philautus umbra	VU	Terrestrial		y			
Philautus viridis	EN	Terrestrial			y		
Philautus worcesteri	VU	Terrestrial			y		
Philautus wynaadensis	EN	Terrestrial			y		
Philautus zorro	EN	Terrestrial			y		
Philoria frosti	CR	Freshwater		y			
Philoria kundagungan	EN	Freshwater				y	
Philoria loveridgei	EN	Freshwater				y	
Philoria pughi	EN	Freshwater			y		
Philoria richmondensis	EN	Freshwater				y	
Philoria sphagnicolus	EN	Freshwater				y	
Phlyctimantis keithae	VU	Freshwater			y		
Phrynobatrachus acutirostris	VU	Freshwater			y		
Phrynobatrachus annulatus	EN	Terrestrial			y		
Phrynobatrachus bequaerti	VU	Freshwater			y		
Phrynobatrachus cricogaster	VU	Freshwater			y		
Phrynobatrachus ghanensis	EN	Freshwater			y		
Phrynobatrachus irangi	EN	Freshwater			y		
Phrynobatrachus krefftii	EN	Freshwater			y		
Phrynobatrachus pakenhami	EN	Freshwater		y			
Phrynobatrachus steindachneri	VU	Freshwater			y		
Phrynobatrachus uzungwensis	VU	Freshwater			y		
Phrynobatrachus versicolor	VU	Freshwater			y		
Phrynobatrachus villiersi	VU	Freshwater			y		
Phrynopus adenobrachius	CR	Terrestrial		y			
Phrynopus bagrecitoi	VU	Terrestrial			y		
Phrynopus barthlenae	VU	Terrestrial			y		
Phrynopus bracki	EN	Terrestrial		y			
Phrynopus brunneus	EN	Terrestrial			y		
Phrynopus carpish	CR	Terrestrial		y			
Phrynopus cophites	EN	Terrestrial		y			
Phrynopus dagmarae	CR	Terrestrial			y		
Phrynopus flavomaculatus	EN	Terrestrial			y		
Phrynopus heimorum	CR	Terrestrial		y			
Phrynopus horstpauli	CR	Terrestrial			y		
Phrynopus iatamasi	VU	Terrestrial		y			
Phrynopus juninensis	CR	Terrestrial			y		
Phrynopus kauneorum	CR	Terrestrial			y		
Phrynopus kempffi	EN	Terrestrial			y		
Phrynopus lucida	CR	Terrestrial		y			
Phrynopus montium	EN	Terrestrial			y		
Phrynopus parkeri	CR	Terrestrial			y		
Phrynopus pereger	CR	Terrestrial			y		
Phrynopus peruvianus	EN	Terrestrial			y		
Phrynopus simonsii	CR	Terrestrial			y		
Phrynopus spectabilis	CR	Terrestrial	y				
Phyllobates terribilis	EN	Freshwater				?	
Phyllobates vittatus	EN	Freshwater				y	
Phyllodytes auratus	CR	Terrestrial			y		
Phyllomedusa ayeaye	CR	Freshwater				?	
Phyllomedusa baltea	EN	Freshwater		y			
Phyllomedusa ecuatoriana	EN	Freshwater			y		
Physalaemus atlanticus	VU	Freshwater			y		
Physalaemus soaresi	EN	Freshwater		y			
Pipa myersi	EN	Freshwater				y	
Platymantis akarithyma	VU	Terrestrial			y		
Platymantis banahao	VU	Terrestrial		y			
Platymantis cagayanensis	EN	Terrestrial			y		
Platymantis cornuta	VU	Terrestrial			y		
Platymantis guentheri	VU	Terrestrial			y		
Platymantis hazelae	EN	Terrestrial			y		
Platymantis indeprensus	VU	Terrestrial		y			
Platymantis insulata	CR	Terrestrial		y			
Platymantis isarog	VU	Terrestrial		y			
Platymantis lawtoni	EN	Terrestrial			y		
Platymantis levigata	EN	Terrestrial			y		
Platymantis montana	VU	Terrestrial		y			
Platymantis naomiae	VU	Terrestrial		y			
Platymantis negrosensis	EN	Terrestrial			y		
Platymantis panayensis	EN	Terrestrial			y		
Platymantis parkeri	VU	Terrestrial			y		
Platymantis polillensis	EN	Terrestrial			y		
Platymantis pseudodorsalis	VU	Terrestrial			y		
Platymantis pygmaea	VU	Terrestrial			y		
Platymantis rabori	VU	Terrestrial			y		

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Platymantis sierramadrensis	VU	Terrestrial			y		
Platymantis spelaea	EN	Terrestrial			y		
Platymantis subterrestris	EN	Terrestrial			y		
Platymantis taylori	EN	Terrestrial			y		
Platymantis vitiana	EN	Terrestrial			y		
Platypelis alticola	EN	Terrestrial		y			
Platypelis mavomavo	EN	Terrestrial			y		
Platypelis milloti	EN	Terrestrial			y		
Platypelis tetra	EN	Terrestrial			y		
Platypelis tsaratananaensis	VU	Terrestrial			y		
Plectrohyla acanthodes	CR	Freshwater			y		
Plectrohyla arborescandens	EN	Freshwater				y	
Plectrohyla avia	CR	Freshwater			y		
Plectrohyla calthula	CR	Freshwater		y			
Plectrohyla calvicollina	CR	Freshwater	y				
Plectrohyla celata	CR	Freshwater	y				
Plectrohyla cembra	CR	Freshwater	y				
Plectrohyla charadricola	EN	Freshwater				y	
Plectrohyla chryses	CR	Freshwater			y		
Plectrohyla chrysopleura	CR	Freshwater		y			
Plectrohyla crassa	CR	Freshwater			y		
Plectrohyla cyanomma	CR	Freshwater	y				
Plectrohyla cyclada	EN	Freshwater			y		
Plectrohyla dasypus	CR	Freshwater		y			
Plectrohyla ephemera	CR	Freshwater	y				
Plectrohyla exquisita	CR	Freshwater			y		
Plectrohyla glandulosa	EN	Freshwater			y		
Plectrohyla guatemalensis	CR	Freshwater			y		
Plectrohyla hartwegi	CR	Freshwater			y		
Plectrohyla hazelae	CR	Freshwater	y				
Plectrohyla ixil	CR	Freshwater			y		
Plectrohyla lacertosa	EN	Freshwater			y		
Plectrohyla matudai	VU	Freshwater			y		
Plectrohyla mykter	EN	Freshwater			y		
Plectrohyla pachyderma	CR	Freshwater				y	
Plectrohyla pentheter	EN	Freshwater			y		
Plectrohyla pokomchi	CR	Freshwater				y	
Plectrohyla psarosema	CR	Freshwater		y			
Plectrohyla psiloderma	EN	Freshwater			y		
Plectrohyla pycnochila	CR	Freshwater		y			
Plectrohyla quecchi	CR	Freshwater				y	
Plectrohyla robertsorum	EN	Freshwater			y		
Plectrohyla sabrina	CR	Freshwater		y			
Plectrohyla sagorum	EN	Freshwater			y		
Plectrohyla siopela	CR	Freshwater	y				
Plectrohyla tecunumani	CR	Freshwater				y	
Plectrohyla teuchestes	CR	Freshwater		y			
Plectrohyla thorectes	CR	Freshwater	y				
Plethodon amplus	VU	Terrestrial			y		
Plethodon asupak	VU	Freshwater			y		
Plethodon cheoah	VU	Terrestrial		y			
Plethodon fourchensis	VU	Terrestrial			y		
Plethodon hubrichti	VU	Terrestrial			y		
Plethodon meridianus	VU	Terrestrial			y		
Plethodon petraeus	VU	Terrestrial			y		
Plethodon shenandoah	VU	Terrestrial			y		
Plethodon sherando	VU	Terrestrial			y		
Plethodon shermani	VU	Terrestrial			y		
Plethodon stormi	EN	Terrestrial			y		
Plethodon welleri	EN	Terrestrial			y		
Plethodontohyla brevipes	EN	Terrestrial			y		
Plethodontohyla coronata	VU	Terrestrial			y		
Plethodontohyla coudreaui	VU	Terrestrial			y		
Plethodontohyla guentherpetersi	EN	Terrestrial		y			
Plethodontohyla serratopalpebrosa	VU	Terrestrial			y		
Plethodontohyla tuberata	VU	Terrestrial			y		
Pleurodeles nebulosus	VU	Freshwater				y	
Pleurodeles poireti	EN	Freshwater				y	
Polypedates eques	EN	Freshwater				?	
Polypedates fastigo	CR	Freshwater				?	
Polypedates insularis	EN	Freshwater			y		
Polypedates longinasus	EN	Freshwater				y	
Polypedates yaoshanensis	EN	Terrestrial		y			
Praslinia cooperi	VU	Freshwater			y		
Probreviceps macrodactylus	VU	Terrestrial			y		
Probreviceps rhodesianus	EN	Terrestrial		y			
Probreviceps rungwensis	VU	Terrestrial			y		
Probreviceps uluguruensis	VU	Terrestrial		y			
Proteus anguinus	VU	Freshwater				y	
Pseudoamolops sauteri	EN	Freshwater			y		
Pseudoeurycea altamontana	EN	Terrestrial			y		
Pseudoeurycea aquatica	CR	Freshwater	y				
Pseudoeurycea bellii	VU	Terrestrial			y		
Pseudoeurycea boneti	VU	Terrestrial			y		
Pseudoeurycea brunnata	EN	Terrestrial			y		
Pseudoeurycea cochranae	EN	Terrestrial			y		
Pseudoeurycea exspectata	CR	Terrestrial		y			
Pseudoeurycea firscheini	EN	Terrestrial			y		
Pseudoeurycea gadovii	EN	Terrestrial			y		
Pseudoeurycea gigantea	EN	Terrestrial			y		
Pseudoeurycea goebeli	EN	Terrestrial			y		

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Species scientific name	IUCN Red List category (2007)	Primary biome	Scale of conservation				
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Pseudoeurycea juarezi	EN	Terrestrial			y		
Pseudoeurycea leprosa	VU	Terrestrial			y		
Pseudoeurycea longicauda	EN	Terrestrial			y		
Pseudoeurycea lynchi	CR	Terrestrial			y		
Pseudoeurycea melanomolga	EN	Terrestrial			y		
Pseudoeurycea mystax	EN	Terrestrial		y			
Pseudoeurycea naucampatepetl	CR	Terrestrial	y				
Pseudoeurycea nigromaculata	CR	Terrestrial	y				
Pseudoeurycea praecellens	CR	Terrestrial	y				
Pseudoeurycea robertsi	VU	Terrestrial		y			
Pseudoeurycea saltator	EN	Terrestrial		y			
Pseudoeurycea scandens	VU	Terrestrial		y			
Pseudoeurycea smithi	CR	Terrestrial			y		
Pseudoeurycea unguidentis	EN	Terrestrial			y		
Pseudoeurycea werleri	EN	Terrestrial			y		
Pseudophryne australis	VU	Freshwater				y	
Pseudophryne corroboree	CR	Freshwater			y		
Pseudophryne covacevichae	EN	Freshwater			y		
Pseudophryne pengilleyi	EN	Freshwater			y		
Pterorana khare	VU	Freshwater				y	
Ptychadena broadleyi	EN	Terrestrial			y		
Ptychadena newtoni	EN	Freshwater			y		
Ptychohyla dendrophasma	CR	Terrestrial		y			
Ptychohyla erythromma	EN	Freshwater			y		
Ptychohyla hypomykter	CR	Freshwater				y	
Ptychohyla legleri	EN	Freshwater				y	
Ptychohyla leonhardschultzei	EN	Freshwater			y		
Ptychohyla macrotympanum	CR	Freshwater		y			
Ptychohyla panchoi	EN	Freshwater				y	
Ptychohyla salvadorensis	EN	Freshwater			y		
Ptychohyla sanctaecrucis	CR	Freshwater				y	
Ptychohyla spinipollex	EN	Freshwater			y		
Ramanella mormorata	EN	Freshwater			y		
Ramanella nagaoi	VU	Terrestrial		y			
Ramanella palmata	EN	Terrestrial			y		
Ramanella triangularis	VU	Terrestrial			y		
Rana amamiensis	EN	Freshwater				?	
Rana attigua	VU	Freshwater			y		
Rana aurantiaca	VU	Freshwater				?	
Rana bwana	VU	Freshwater			y		
Rana cerigensis	EN	Freshwater				y	
Rana charlesdarwini	CR	Terrestrial			y		
Rana chevronta	CR	Freshwater		y			
Rana chichicuahutla	CR	Freshwater				y	
Rana chiricahuensis	VU	Freshwater				y	
Rana chosenica	VU	Freshwater				y	
Rana cretensis	EN	Freshwater				y	
Rana dunni	EN	Freshwater			y		
Rana epeirotica	VU	Freshwater				y	
Rana hainanensis	VU	Freshwater			y		
Rana holsti	EN	Freshwater				y	
Rana igorota	VU	Freshwater			y		
Rana ishikawae	EN	Freshwater				y	
Rana jingdongensis	VU	Freshwater			y		
Rana johni	EN	Freshwater				y	
Rana junlianensis	VU	Freshwater			y		
Rana kuangwuensis	EN	Freshwater			y		
Rana latastei	VU	Freshwater				y	
Rana longicrus	VU	Freshwater				y	
Rana macroglossa	VU	Freshwater				y	
Rana mangyanum	EN	Freshwater				y	
Rana megapoda	VU	Freshwater				y	
Rana miadis	VU	Freshwater		y			
Rana minima	CR	Freshwater				y	
Rana muscosa	CR	Freshwater				?	
Rana narina	EN	Freshwater				y	
Rana nasuta	VU	Freshwater			y		
Rana okaloosae	VU	Freshwater				y	
Rana okinavana	EN	Freshwater			y		
Rana omiltemana	CR	Freshwater	y				
Rana onca	EN	Freshwater				y	
Rana pretiosa	VU	Freshwater				?	
Rana psaltes	EN	Freshwater			y		
Rana pueblae	CR	Freshwater	y				
Rana pyrenaica	EN	Freshwater				y	
Rana sevosa	CR	Freshwater		y			
Rana shqiperica	EN	Freshwater				y	
Rana sierramadrensis	VU	Freshwater			y		
Rana spinulosa	VU	Freshwater				y	
Rana subaquavocalis	CR	Freshwater		y			
Rana subaspera	EN	Freshwater			y		
Rana supranarina	EN	Freshwater			y		
Rana tarahumarae	VU	Freshwater				y	
Rana tenggerensis	EN	Freshwater				y	
Rana tipanan	VU	Freshwater				y	
Rana tlaloci	CR	Freshwater	y				
Rana utsunomiyaorum	EN	Freshwater			y		
Rana vibicaria	CR	Freshwater			y		
Rana weiningensis	VU	Freshwater				y	
Rana wuchuanensis	CR	Freshwater		y			
Ranodon flavomaculatus	VU	Terrestrial			y		

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Ranodon sibiricus	EN	Freshwater				y	
Ranodon tsinpaensis	VU	Freshwater			y		
Rhacophorus angulirostris	EN	Freshwater			y		
Rhacophorus annamensis	VU	Freshwater			y		
Rhacophorus arvalis	EN	Freshwater				y	
Rhacophorus aurantiventris	EN	Terrestrial			y		
Rhacophorus baliogaster	VU	Freshwater			y		
Rhacophorus bimaculatus	VU	Freshwater				y	
Rhacophorus calcadensis	EN	Freshwater			y		
Rhacophorus exechopygus	VU	Freshwater			y		
Rhacophorus fasciatus	VU	Freshwater			y		
Rhacophorus lateralis	EN	Freshwater			y		
Rhacophorus margaritifer	VU	Freshwater			y		
Rhacophorus pseudomalabaricus	CR	Freshwater		y			
Rhamphophryne macrorhina	EN	Terrestrial			y		
Rhamphophryne nicefori	EN	Terrestrial			y		
Rhamphophryne rostrata	CR	Terrestrial	y				
Rhinoderma darwinii	VU	Freshwater			y		
Rhinoderma rufum	CR	Freshwater			y		
Rhombophryne testudo	VU	Terrestrial			y		
Rhyacotriton olympicus	VU	Freshwater				?	
Salamandra algira	VU	Freshwater				y	
Salamandra lanzai	VU	Terrestrial			y		
Scaphiophryne boribory	EN	Freshwater		y			
Scaphiophryne gottlebei	CR	Freshwater		y			
Scaphiophryne marmorata	VU	Freshwater			y		
Scinax alcatraz	CR	Freshwater		y			
Scutiger chintingensis	EN	Freshwater				y	
Scutiger gongshanensis	VU	Freshwater			y		
Scutiger liupanensis	VU	Freshwater		y			
Scutiger maculatus	CR	Freshwater	y				
Scutiger muliensis	EN	Freshwater		y			
Scutiger nepalensis	VU	Freshwater				y	
Scutiger ningshanensis	EN	Freshwater		y			
Scutiger pingwuensis	EN	Freshwater			y		
Scutiger ruginosus	VU	Freshwater			y		
Scutiger tuberculatus	VU	Freshwater			y		
Smilisca dentata	EN	Freshwater				?	
Smilisca puma	VU	Freshwater			y		
Somuncuria somuncurensis	CR	Freshwater				y	
Sooglossus gardineri	VU	Terrestrial			y		
Sooglossus pipilodryas	VU	Terrestrial		y			
Sooglossus sechellensis	VU	Terrestrial			y		
Speleomantes flavus	VU	Terrestrial			y		
Speleomantes genei	VU	Terrestrial			y		
Speleomantes supramontis	EN	Terrestrial			y		
Spicospina flammocaerulea	VU	Freshwater			y		
Spinophrynoides osgoodi	VU	Freshwater			y		
Stefania ackawaio	VU	Terrestrial		y			
Stefania ayangannae	VU	Terrestrial		y			
Stefania coxi	VU	Terrestrial		y			
Stefania riveroi	VU	Freshwater		y			
Stefania schuberti	VU	Freshwater		y			
Stephopaedes anotis	EN	Terrestrial			y		
Stephopaedes howelli	EN	Terrestrial			y		
Stephopaedes usambarae	EN	Terrestrial		y			
Strongylopus kitumbeine	VU	Freshwater		y			
Strongylopus merumontanus	VU	Freshwater		y			
Strongylopus rhodesianus	VU	Freshwater			y		
Strongylopus springbokensis	VU	Freshwater				y	
Stumpffia helenae	CR	Terrestrial		y			
Stumpffia pygmaea	VU	Terrestrial			y		
Taudactylus acutirostris	CR	Freshwater	y				
Taudactylus eungellensis	CR	Freshwater			y		
Taudactylus pleione	CR	Freshwater		y			
Taudactylus rheophilus	CR	Freshwater			y		
Telmatobius arequipensis	VU	Freshwater				y	
Telmatobius atacamensis	CR	Freshwater				y	
Telmatobius brevipes	EN	Freshwater				?	
Telmatobius brevirostris	EN	Freshwater				y	
Telmatobius carillae	VU	Freshwater			y		
Telmatobius ceiorum	EN	Freshwater				y	
Telmatobius cirrhacelis	CR	Freshwater	y				
Telmatobius colanensis	EN	Freshwater		y			
Telmatobius culeus	CR	Freshwater				y	
Telmatobius degener	EN	Freshwater		y			
Telmatobius edaphonastes	EN	Freshwater			y		
Telmatobius gigas	CR	Freshwater				y	
Telmatobius hauthali	VU	Freshwater		y			
Telmatobius hockingi	VU	Freshwater			y		
Telmatobius huayra	VU	Freshwater			y		
Telmatobius hypselocephalus	EN	Freshwater				y	
Telmatobius ignavus	EN	Freshwater			y		
Telmatobius laticeps	EN	Freshwater				y	
Telmatobius latirostris	EN	Freshwater				y	
Telmatobius marmoratus	VU	Freshwater				?	
Telmatobius mayoloi	EN	Freshwater				y	
Telmatobius necopinus	EN	Freshwater		y			
Telmatobius niger	CR	Freshwater	y				
Telmatobius oxycephalus	VU	Freshwater		y			
Telmatobius pefauri	CR	Freshwater				y	

►

Species scientific name	IUCN Red List category (2007)	Primary biome	Scale of conservation				
			Insufficient information	Single site	Network of sites	Network of sites plus broad-scale conservation action	Broad-scale conservation action
Telmatobius peruvianus	VU	Freshwater				y	
Telmatobius pisanoi	EN	Freshwater				y	
Telmatobius platycephalus	EN	Freshwater				y	
Telmatobius schreiteri	EN	Freshwater				y	
Telmatobius scrocchii	EN	Freshwater				y	
Telmatobius sibiricus	EN	Freshwater				y	
Telmatobius stephani	EN	Freshwater				y	
Telmatobius thompsoni	EN	Freshwater		y			
Telmatobius truebae	EN	Freshwater			y		
Telmatobius vellardi	CR	Freshwater	y				
Telmatobius verrucosus	VU	Freshwater				?	
Telmatobius yuracare	VU	Freshwater				?	
Telmatobius zapahuirensis	CR	Freshwater				y	
Telmatobufo australis	VU	Freshwater				y	
Telmatobufo bullocki	CR	Freshwater				y	
Telmatobufo venustus	EN	Freshwater			y		
Tepuihyla rimarum	VU	Freshwater		y			
Theloderma bicolor	EN	Terrestrial		y			
Thorius arboreus	EN	Terrestrial		y			
Thorius aureus	CR	Terrestrial		y			
Thorius boreas	EN	Terrestrial			y		
Thorius dubitus	EN	Terrestrial			y		
Thorius grandis	EN	Terrestrial		y			
Thorius infernalis	CR	Terrestrial	y				
Thorius lunaris	EN	Terrestrial		y			
Thorius macdougalli	EN	Terrestrial			y		
Thorius magnipes	CR	Terrestrial	y				
Thorius minutissimus	CR	Terrestrial		y			
Thorius minydemus	CR	Terrestrial			y		
Thorius munificus	EN	Terrestrial			y		
Thorius narismagnus	CR	Terrestrial	y				
Thorius narisovalis	CR	Terrestrial	y				
Thorius omiltemi	EN	Terrestrial			y		
Thorius papaloae	EN	Terrestrial		y			
Thorius pennatulus	CR	Terrestrial			y		
Thorius pulmonaris	EN	Terrestrial			y		
Thorius schmidti	EN	Terrestrial			y		
Thorius spilogaster	EN	Terrestrial			y		
Thorius troglodytes	EN	Terrestrial			y		
Thoropa lutzi	EN	Freshwater			y		
Thoropa petropolitana	VU	Freshwater			y		
Tlalocohyla godmani	VU	Freshwater				?	
Tylototriton hainanensis	EN	Freshwater			y		
Tylototriton kweichowensis	VU	Freshwater			y		
Tylototriton wenxianensis	VU	Freshwater			y		
Vibrissaphora boringii	EN	Freshwater				y	
Vibrissaphora echinata	EN	Freshwater			y		
Vibrissaphora leishanensis	EN	Freshwater		y			
Werneria bambutensis	EN	Freshwater			y		
Werneria iboundji	CR	Freshwater				?	
Werneria mertensiana	EN	Freshwater			y		
Werneria preussi	EN	Freshwater		y			
Werneria submontana	EN	Freshwater				?	
Werneria tandyi	EN	Freshwater			y		
Wolterstorffina chirioi	CR	Terrestrial		y			
Wolterstorffina mirei	EN	Freshwater			y		
Wolterstorffina parvipalmata	VU	Freshwater			y		
Xenophrys brachykolos	EN	Freshwater			y		
Xenophrys giganticus	VU	Freshwater			y		
Xenophrys nankiangensis	VU	Freshwater			y		
Xenopus gilli	EN	Freshwater			y		
Xenopus longipes	CR	Freshwater		y			

APPENDIX VIIB. THE NATURE OF THE ECOLOGICAL PROCESS FOR WHICH LANDSCAPE-SCALE CONSERVATION ACTION IS REQUIRED

Scientific Name	Water levels/ flows	Water quality	Other
Adenomus dasi		?	
Adenomus kelaartii		?	
Afrana johnstoni		?	
Afrixalus spinifrons		y	
Alytes dickhilleni	y		
Alytes muletensis	y		
Ambystoma altamirani		y	
Ambystoma amblycephalum		y	
Ambystoma andersoni		y	
Ambystoma bombypellum	y	y	
Ambystoma californiense		?	
Ambystoma dumerilii		y	
Ambystoma granulosum	y	y	
Ambystoma leorae	y	y	
Ambystoma lermaense		y	
Ambystoma mexicanum	y	y	
Ambystoma ordinarium	?	?	
Ambystoma taylori	y	y	
Amolops hainanensis	y		
Amolops jinjiangensis	?		
Amolops loloensis		y	

Scientific Name	Water levels/ flows	Water quality	Other
Andrias davidianus	y	y	
Ansonia anotis		?	
Ansonia guibei		y	
Ansonia latidisca		y	
Ansonia mcgregori		y	
Ansonia muelleri		y	
Ansonia platysoma		?	
Ansonia siamensis		?	
Argenteohyla siemersi	y		
Arthroleptella ngongoniensis	y		
Arthroleptides martiensseni		y	
Arthroleptides yakusini		y	
Astylosternus ranoides		y	
Atelognathus patagonicus		?	
Atelognathus reverberii		y	
Atelopus arsyecue		?	
Atelopus boulengeri		?	
Atelopus carrikeri		?	
Atelopus certus		y	
Atelopus eusebianus	y	?	
Atelopus exiguus	y		

Scientific Name	Water levels/ flows	Water quality	Other
Atelopus famelicus		?	
Atelopus glyphus		?	
Atelopus limosus		y	
Atelopus longibrachius		y	
Atelopus sernai		y	
Atelopus simulatus		y	
Atelopus sonsonensis		y	
Atelopus spurrelli		?	
Atelopus subornatus		y	
Atelopus tricolor		y	
Atelopus walkeri		?	
Atelopus zeteki		y	
Barbourula busuangensis		y	
Barbourula kalimantanensis		y	
Batrachophrynus macrostomus		?	
Batrachoseps campi	y		
Batrachoseps stebbinsi	?		
Batrachuperus mustersi	y		
Batrachuperus pinchonii		y	
Batrachuperus tibetanus		y	
Bolitoglossa heiroreias			Drying of microhabitats
Bolitoglossa mulleri			Drying of microhabitats
Boophis jaegeri	y	?	
Boophis williamsi		?	
Buergeria oxycephalus	y		
Bufo aucoinae		y	
Bufo californicus	y		
Bufo canorus		?	
Bufo cristatus	y	y	
Bufo empusus		?	
Bufo exsul	y		
Bufo gallardoi	?		
Bufo guentheri		?	
Bufo gundlachi		y	
Bufo nelsoni	?		
Bufo quechua		y	
Bufo rumbolli	y		
Bufo spiculatus	y		Drying of microhabitats
Bufo sumatranus		?	
Bufo taladai		?	
Caudiverbera caudiverbera		y	
Centrolene geckoideum		?	
Centrolene lynchi		y	
Centrolene peristictum		y	
Centrolene quindianum		?	
Centrolene robledoi	y	?	
Centrolene tayrona		?	
Chioglossa lusitanica	y	y	
Cochranella balionota		?	
Cochranella cochranae		y	
Cochranella griffithsi		?	
Cochranella megacheira		?	
Cochranella posadae		y	
Cochranella prasina		y	
Cochranella punctulata		y	
Cochranella resplendens		y	
Cochranella rosada		y	
Cochranella ruizi		?	
Cochranella susatamai		y	
Cochranella xanthocheridia		y	
Colostethus awa		?	
Colostethus elachyhistus		y	
Colostethus juanii		y	
Colostethus pulchellus		?	
Colostethus ruthveni		?	
Colostethus saltuensis		y	
Colostethus toachi		?	
Conraua alleni		?	
Conraua derooi		y	
Conraua goliath		y	
Conraua robusta		y	
Craugastor anatipes		?	
Craugastor necerus		?	
Craugastor pygmaeus			Drying of microhabitats
Cryptobatrachus fuhrmanni		?	
Dendropsophus gryllatus		?	
Dendropsophus meridensis		?	
Duellmanohyla ignicolor	y		
Duellmanohyla soralia		y	
Eleutherodactylus albericoi		?	
Eleutherodactylus barlagnei		?	
Eleutherodactylus calcarulatus		?	
Eleutherodactylus diaphonus	y		
Eleutherodactylus insignitus		?	
Eleutherodactylus laevissimus		y	
Eleutherodactylus loustes		?	
Eleutherodactylus rivularis		y	
Eleutherodactylus rivulus		y	
Eleutherodactylus rosadoi		?	
Eleutherodactylus torrenticola		y	
Epipedobates tricolor		y	
Euproctus platycephalus	y	y	
Eurycea chisholmensis		y	

Scientific Name	Water levels/ flows	Water quality	Other
Eurycea junaluska		?	
Eurycea latitans		?	
Eurycea nana	y	?	
Eurycea neotenes	y	y	
Eurycea rathbuni	y	?	
Eurycea sosorum	?	y	
Eurycea tonkawae		y	
Eurycea tridentifera		?	
Eurycea waterlooensis		y	
Exerodonta chimalapa	y		
Fejervarya greenii	y	?	
Gastrotheca angustifrons		y	
Gastrotheca dendronastes		y	
Gastrotheca espeletia		?	
Gastrotheca gracilis	y		
Gastrotheca guentheri		y	
Gastrotheca riobambae		?	
Gastrotheca ruizi		y	
Gyrinophilus gulolineatus	?		
Gyrinophilus palleucus	y	y	
Gyrinophilus subterraneus		?	
Haideotriton wallacei	y	y	
Heleioporus australiacus		y	
Heleophryne hewitti	y	y	
Heleophryne rosei	y		
Hemisus guttatus	y		
Huia masonii		y	
Hyalinobatrachium cardiacalyptum	y	y	
Hyalinobatrachium esmeralda		?	
Hyalinobatrachium guairarepanensis		y	
Hyalinobatrachium ibama		?	
Hyalinobatrachium revocatum		?	
Hydromantes brunus	?		
Hydromantes shastae	y		
Hyloscirtus charazani		y	
Hyloscirtus lindae		?	
Hyloscirtus pantostictus		?	
Hyloscirtus psarolaimus		?	
Hyloscirtus simmonsi		y	
Hyloscirtus torrenticola		?	
Hynobius boulengeri	y		
Hynobius dunni		y	
Hynobius hidamontanus	y	?	
Hynobius okiensis		?	
Hynobius stejnegeri		?	
Hynobius takedai		y	
Hynobius tokyoensis	y	y	
Hynobius yiwuensis		y	
Hyperolius horstockii	?		
Hyperolius pickersgilli		?	
Hypsiboas heilprini		?	
Ichthyophis orthoplicatus		y	
Ichthyophis pseudangularis		y	
Kaloula rigida		y	
Leptobrachella palmata		y	
Leptobrachella parva		y	
Leptodactylus magistris		?	
Leptolalax arayai		y	
Leptopelis xenodactylus	y		
Limnonectes acanthi		y	
Limnonectes arathooni	y		
Limnonectes diuatus		y	
Limnonectes macrodon		y	
Limnonectes namiyei	y		
Limnonectes parvus		y	
Limnonectes toumanoffi	?		
Limnonectes visayanus		y	
Lineatriton lineolus			Drying of microhabitats
Litoria booroolongensis	y		
Litoria cooloolensis	y		
Litoria freycineti	y	y	
Litoria olongburensis	y	y	
Litoria raniformis	y		
Litoria rheocola	y		
Litoria subglandulosa		y	
Mannophryne caquetio		?	
Mannophryne collaris		?	
Mannophryne lamarcai		?	
Mannophryne trinitatis		y	
Mannophryne yustizi		?	
Mantella viridis	?		
Mantidactylus elegans		?	
Mantidactylus pauliani		?	
Megophrys edwardinae		y	
Megophrys ligayae		y	
Megophrys stejnegeri		y	
Melanobatrachus indicus	?		
Melanophryniscus devincenzii		y	
Mertensiella caucasica	y		
Micrixalus gadgili		y	
Micrixalus saxicola	y	?	
Microbatrachella capensis	y		
Microhyla karunaratnei		y	

Scientific Name	Water levels/ flows	Water quality	Other
Nannophrys ceylonensis		y	
Nannophrys marmorata		y	
Natalobatrachus bonebergi		y	
Necturus alabamensis		y	
Nephelobates mayorgai		y	
Nephelobates meridensis		y	
Nephelobates orostoma		?	
Neurergus crocatus	y	?	
Neurergus kaiseri	y		
Neurergus microspilotus		y	
Neurergus strauchii	y	?	
Notophthalmus meridionalis		y	
Nyctibatrachus humayuni		y	
Nyctimystes dayi	y		
Occidozyga borealis		y	
Occidozyga diminutivus		y	
Odontophrynus achalensis		?	
Oedipina poelzi	?		
Oreolalax liangbeiensis	y		
Paa boulengeri		y	
Paa minica	y		
Paa shini	y		
Paa spinosa	y		
Paa yunnanensis		y	
Paramesotriton deloustali		?	
Parvimolge townsendi			Drying of microhabitats
Pedostibes tuberculosus	y		
Pelobates varaldii		?	
Pelophryne lighti		?	
Petropedetes perreti		y	
Philautus macropus		y	
Philautus sarasinorum		?	
Philoria kundagungan	y	?	
Philoria loveridgei	y	?	
Philoria richmondensis	y	?	
Philoria sphagnicolus	y	?	
Phyllobates terribilis		?	
Phyllobates vittatus		y	
Phyllomedusa ayeaye		?	
Pipa myersi		y	
Plectrohyla arborescandens	y		
Plectrohyla charadricola	y		
Plectrohyla pachyderma	y		
Plectrohyla pokomchi	y	?	
Plectrohyla quecchi	y	?	
Plectrohyla tecunumani		y	
Pleurodeles nebulosus		y	
Pleurodeles poireti		y	
Polypedates eques		?	
Polypedates fastigo		?	
Polypedates longinasus		y	
Proteus anguinus		y	
Pseudophryne australis	y	?	
Pterorana khare		y	
Ptychohyla hypomykter		y	
Ptychohyla legleri	y		
Ptychohyla panchoi		y	
Ptychohyla sanctaecrucis		y	
Rana amamiensis		?	
Rana aurantiaca		?	
Rana cerigensis	y	?	
Rana chichicuahutla	y		
Rana chiricahuensis	y	y	
Rana chosenica		y	
Rana cretensis	y		
Rana epeirotica	y	y	
Rana holsti	y		
Rana ishikawae	y		
Rana johni	y		
Rana latastei	y	y	
Rana longicrus		y	
Rana macroglossa		y	
Rana mangyanum		y	
Rana megapoda		y	
Rana minima		y	
Rana muscosa		?	
Rana narina	y		
Rana okaloosae	y	y	
Rana onca	y		
Rana pretiosa	?		
Rana pyrenaica		y	
Rana shqiperica		y	
Rana spinulosa	y		
Rana tarahumarae	y	?	
Rana tenggerensis		y	
Rana tipanan		y	
Rana weiningensis		y	
Ranodon sibiricus	y		
Rhacophorus arvalis		y	
Rhacophorus bimaculatus		y	
Rhyacotriton olympicus		?	
Salamandra algira	y		
Scutiger chintingensis		y	
Scutiger nepalensis	y		
Smilisca dentata		?	
Somuncuria somuncurensis		y	
Strongylopus springbokensis		y	
Telmatobius arequipensis		y	
Telmatobius atacamensis	y	y	
Telmatobius brevipes		?	
Telmatobius brevirostris		y	
Telmatobius ceiorum	y	y	
Telmatobius culeus		y	
Telmatobius gigas	y	y	
Telmatobius hypselocephalus		y	
Telmatobius laticeps		y	
Telmatobius latirostris		y	
Telmatobius marmoratus		?	
Telmatobius mayoloi		y	
Telmatobius pefauri	y		
Telmatobius peruvianus	y	y	
Telmatobius pisanoi		y	
Telmatobius platycephalus		y	
Telmatobius schreiteri		y	
Telmatobius scrocchii	y		
Telmatobius sibiricus		y	
Telmatobius stephani	y		
Telmatobius verrucosus		?	
Telmatobius yuracare		?	
Telmatobius zapahuirensis	y		
Telmatobufo australis		y	
Telmatobufo bullocki		y	
Tlalocohyla godmani		?	
Vibrissaphora boringii	y		
Werneria iboundji			Drying of microhabitats (potential)
Werneria submontana		?	

APPENDIX VIII. LIST OF CRITICALLY ENDANGERED AND ENDANGERED SPECIES FOR WHICH CAPTIVE BREEDING IS AN IMMEDIATELY NECESSARY EX-SITU CONSERVATION ACTION
(prepared by Don Church, Kevin Zippel and Michael Hoffmann)

Note: the following list, while clearly identifying the highest priorities for *ex-situ* conservation action, needs to be used while bearing in mind a few important caveats. In particular, this list does not include species that:

- have been or are being impacted by chytrid and may warrant listing as EW/CR/EN (and likely will be during the next update to the GAA), but are currently classified in a lower category of threat;
- are in areas where chytrid is definitely found and likely to have been impacted, except that this has not been documented in their populations because no one has looked (e.g., *Dendrobates speciosus*);
- are in areas where chytrid has not arrived yet, but that have relatives elsewhere that have succumbed, suggesting they too could be impacted by chytrid if it arrives (any montane-tropical or temperate bufonids, dendrobatids, many leptodactylids, and so forth);
- are currently classified as Critically Endangered (Possibly Extinct); see Appendix IX.
- are being impacted by threats that can, potentially, be mitigated by targeted *in-situ* actions, such as habitat loss and exploitation.

Consequently, this list of 247 species is by no means final or perfect, but it does represent instances of known species that will immediately benefit from *ex-situ* measures, due to the effects specifically of chytrid.

Order	Family	Scientific Name	Has Been Bred
Anura	Bufonidae	*Atelophryniscus chrysophorus*	
Anura	Bufonidae	*Atelopus andinus*	
Anura	Bufonidae	*Atelopus angelito*	
Anura	Bufonidae	*Atelopus arsyecue*	
Anura	Bufonidae	*Atelopus bomolochos*	
Anura	Bufonidae	*Atelopus boulengeri*	
Anura	Bufonidae	*Atelopus carauta*	
Anura	Bufonidae	*Atelopus carrikeri*	
Anura	Bufonidae	*Atelopus certus*	
Anura	Bufonidae	*Atelopus chiriquiensis*	
Anura	Bufonidae	*Atelopus chocoensis*	
Anura	Bufonidae	*Atelopus cruciger*	
Anura	Bufonidae	*Atelopus dimorphus*	
Anura	Bufonidae	*Atelopus ebenoides*	
Anura	Bufonidae	*Atelopus elegans*	
Anura	Bufonidae	*Atelopus erythropus*	
Anura	Bufonidae	*Atelopus eusebianus*	
Anura	Bufonidae	*Atelopus exiguus*	
Anura	Bufonidae	*Atelopus farci*	
Anura	Bufonidae	*Atelopus galactogaster*	
Anura	Bufonidae	*Atelopus glyphus*	
Anura	Bufonidae	*Atelopus guitarraensis*	
Anura	Bufonidae	*Atelopus laetissimus*	
Anura	Bufonidae	*Atelopus limosus*	
Anura	Bufonidae	*Atelopus longibrachius*	
Anura	Bufonidae	*Atelopus mandingues*	
Anura	Bufonidae	*Atelopus minutulus*	
Anura	Bufonidae	*Atelopus monohernandezi*	
Anura	Bufonidae	*Atelopus mucubajiensis*	
Anura	Bufonidae	*Atelopus nahumae*	
Anura	Bufonidae	*Atelopus nepiozomus*	
Anura	Bufonidae	*Atelopus nicefori*	

Order	Family	Scientific Name	Has Been Bred
Anura	Bufonidae	*Atelopus pedimarmoratus*	
Anura	Bufonidae	*Atelopus petriruizi*	
Anura	Bufonidae	*Atelopus pictiventris*	
Anura	Bufonidae	*Atelopus pulcher*	
Anura	Bufonidae	*Atelopus quimbaya*	
Anura	Bufonidae	*Atelopus reticulatus*	
Anura	Bufonidae	*Atelopus seminiferus*	
Anura	Bufonidae	*Atelopus simulatus*	
Anura	Bufonidae	*Atelopus sonsonensis*	
Anura	Bufonidae	*Atelopus subornatus*	
Anura	Bufonidae	*Atelopus tamaense*	
Anura	Bufonidae	*Atelopus varius*	Yes
Anura	Bufonidae	*Atelopus walkeri*	
Anura	Bufonidae	*Atelopus zeteki*	Yes
Anura	Bufonidae	*Bufo amabilis*	
Anura	Bufonidae	*Bufo baxteri*	Yes
Anura	Bufonidae	*Bufo canorus*	
Anura	Bufonidae	*Bufo ibarrai*	
Anura	Bufonidae	*Bufo tacanensis*	
Anura	Bufonidae	*Bufo tutelarius*	
Anura	Bufonidae	*Leptophryne cruentata*	
Anura	Centrolenidae	*Centrolene audax*	
Anura	Centrolenidae	*Centrolene azulae*	
Anura	Centrolenidae	*Centrolene gemmatum*	
Anura	Centrolenidae	*Centrolene lynchi*	
Anura	Centrolenidae	*Centrolene pipilatum*	
Anura	Centrolenidae	*Cochranella megacheira*	
Anura	Centrolenidae	*Cochranella saxiscandens*	
Anura	Centrolenidae	*Hyalinobatrachium guairarepanensis*	
Anura	Dendrobatidae	*Colostethus anthracinus*	
Anura	Dendrobatidae	*Colostethus delatorreae*	
Anura	Dendrobatidae	*Colostethus elachyhistus*	
Anura	Dendrobatidae	*Colostethus leopardalis*	
Anura	Dendrobatidae	*Cryptophyllobates azureiventris*	Yes
Anura	Dendrobatidae	*Dendrobates arboreus*	
Anura	Dendrobatidae	*Epipedobates planipaleae*	
Anura	Dendrobatidae	*Epipedobates tricolor*	Yes
Anura	Dendrobatidae	*Mannophryne caquetio*	
Anura	Dendrobatidae	*Mannophryne lamarcai*	
Anura	Dendrobatidae	*Mannophryne olmonae*	
Anura	Dendrobatidae	*Mannophryne riveroi*	
Anura	Dendrobatidae	*Nephelobates alboguttatus*	
Anura	Hylidae	*Agalychnis annae*	Yes
Anura	Hylidae	*Agalychnis moreletii*	Yes
Anura	Hylidae	*Bromeliohyla bromeliacia*	
Anura	Hylidae	*Duellmanohyla chamulae*	
Anura	Hylidae	*Duellmanohyla ignicolor*	
Anura	Hylidae	*Duellmanohyla lythrodes*	
Anura	Hylidae	*Duellmanohyla salvavida*	
Anura	Hylidae	*Duellmanohyla soralia*	
Anura	Hylidae	*Duellmanohyla uranochroa*	
Anura	Hylidae	*Exerodonta perkinsi*	
Anura	Hylidae	*Hylomantis lemur*	Yes
Anura	Hylidae	*Hyloscirtus colymba*	
Anura	Hylidae	*Hyloscirtus pantostictus*	
Anura	Hylidae	*Hyloscirtus psarolaimus*	
Anura	Hylidae	*Hyloscirtus ptychodactylus*	
Anura	Hylidae	*Hyloscirtus staufferorum*	
Anura	Hylidae	*Isthmohyla angustilineata*	
Anura	Hylidae	*Litoria booroolongensis*	
Anura	Hylidae	*Litoria nannotis*	
Anura	Hylidae	*Litoria raniformis*	Yes
Anura	Hylidae	*Litoria rheocola*	
Anura	Hylidae	*Litoria spenceri*	
Anura	Hylidae	*Nyctimystes dayi*	
Anura	Hylidae	*Osteopilus pulchrilineatus*	
Anura	Hylidae	*Osteopilus vastus*	
Anura	Hylidae	*Phyllomedusa ecuatoriana*	
Anura	Hylidae	*Plectrohyla acanthodes*	
Anura	Hylidae	*Plectrohyla arborescandens*	
Anura	Hylidae	*Plectrohyla avia*	
Anura	Hylidae	*Plectrohyla calthula*	
Anura	Hylidae	*Plectrohyla charadricola*	
Anura	Hylidae	*Plectrohyla chryses*	
Anura	Hylidae	*Plectrohyla chrysopleura*	
Anura	Hylidae	*Plectrohyla crassa*	
Anura	Hylidae	*Plectrohyla cyclada*	
Anura	Hylidae	*Plectrohyla dasypus*	
Anura	Hylidae	*Plectrohyla exquisita*	
Anura	Hylidae	*Plectrohyla glandulosa*	
Anura	Hylidae	*Plectrohyla guatemalensis*	
Anura	Hylidae	*Plectrohyla hartwegi*	
Anura	Hylidae	*Plectrohyla ixil*	
Anura	Hylidae	*Plectrohyla lacertosa*	
Anura	Hylidae	*Plectrohyla mykter*	
Anura	Hylidae	*Plectrohyla pachyderma*	
Anura	Hylidae	*Plectrohyla pentheter*	
Anura	Hylidae	*Plectrohyla pokomchi*	
Anura	Hylidae	*Plectrohyla psarosema*	
Anura	Hylidae	*Plectrohyla psiloderma*	
Anura	Hylidae	*Plectrohyla pycnochila*	
Anura	Hylidae	*Plectrohyla quecchi*	
Anura	Hylidae	*Plectrohyla robertsorum*	

Order	Family	Scientific Name	Has Been Bred
Anura	Hylidae	*Plectrohyla sabrina*	
Anura	Hylidae	*Plectrohyla sagorum*	
Anura	Hylidae	*Plectrohyla tecunumani*	
Anura	Hylidae	*Plectrohyla teuchestes*	
Anura	Hylidae	*Ptychohyla dendrophasma*	
Anura	Hylidae	*Ptychohyla erythromma*	
Anura	Hylidae	*Ptychohyla hypomykter*	
Anura	Hylidae	*Ptychohyla legleri*	
Anura	Hylidae	*Ptychohyla leonhardschultzei*	
Anura	Hylidae	*Ptychohyla macrotympanum*	
Anura	Hylidae	*Ptychohyla panchoi*	
Anura	Hylidae	*Ptychohyla salvadorensis*	
Anura	Hylidae	*Ptychohyla sanctaecrucis*	
Anura	Hylidae	*Ptychohyla spinipollex*	
Anura	Leiopelmatidae	*Leiopelma archeyi*	Yes
Anura	Leiopelmatidae	*Leiopelma hamiltoni*	
Anura	Leptodactylidae	*Craugastor aurilegulus*	
Anura	Leptodactylidae	*Craugastor azueroensis*	
Anura	Leptodactylidae	*Craugastor catalinae*	
Anura	Leptodactylidae	*Craugastor charadra*	
Anura	Leptodactylidae	*Craugastor daryi*	
Anura	Leptodactylidae	*Craugastor emcelae*	
Anura	Leptodactylidae	*Craugastor epochthidius*	
Anura	Leptodactylidae	*Craugastor greggi*	
Anura	Leptodactylidae	*Craugastor inachus*	
Anura	Leptodactylidae	*Craugastor lineatus*	
Anura	Leptodactylidae	*Craugastor obesus*	
Anura	Leptodactylidae	*Craugastor punctariolus*	
Anura	Leptodactylidae	*Craugastor ranoides*	
Anura	Leptodactylidae	*Craugastor rhyacobatrachus*	
Anura	Leptodactylidae	*Craugastor sabrinus*	
Anura	Leptodactylidae	*Craugastor tabasarae*	
Anura	Leptodactylidae	*Eleutherodactylus albericoi*	
Anura	Leptodactylidae	*Eleutherodactylus barlagnei*	
Anura	Leptodactylidae	*Eleutherodactylus cremnobates*	
Anura	Leptodactylidae	*Eleutherodactylus crenunguis*	
Anura	Leptodactylidae	*Eleutherodactylus fallax*	
Anura	Leptodactylidae	*Eleutherodactylus fetosus*	
Anura	Leptodactylidae	*Eleutherodactylus ginesi*	
Anura	Leptodactylidae	*Eleutherodactylus gryllus*	
Anura	Leptodactylidae	*Eleutherodactylus hedricki*	
Anura	Leptodactylidae	*Eleutherodactylus ignicolor*	
Anura	Leptodactylidae	*Eleutherodactylus incanus*	
Anura	Leptodactylidae	*Eleutherodactylus jorgevelosai*	
Anura	Leptodactylidae	*Eleutherodactylus laevissimus*	
Anura	Leptodactylidae	*Eleutherodactylus lancinii*	
Anura	Leptodactylidae	*Eleutherodactylus lichenoides*	
Anura	Leptodactylidae	*Eleutherodactylus locustus*	
Anura	Leptodactylidae	*Eleutherodactylus patriciae*	
Anura	Leptodactylidae	*Eleutherodactylus pechorum*	
Anura	Leptodactylidae	*Eleutherodactylus pituinus*	
Anura	Leptodactylidae	*Eleutherodactylus portoricensis*	
Anura	Leptodactylidae	*Eleutherodactylus prolatus*	
Anura	Leptodactylidae	*Eleutherodactylus richmondi*	
Anura	Leptodactylidae	*Eleutherodactylus ruthae*	
Anura	Leptodactylidae	*Eleutherodactylus sandersoni*	
Anura	Leptodactylidae	*Eleutherodactylus scoloblepharus*	
Anura	Leptodactylidae	*Eleutherodactylus scolodiscus*	
Anura	Leptodactylidae	*Eleutherodactylus sulculus*	
Anura	Leptodactylidae	*Eleutherodactylus symingtoni*	
Anura	Leptodactylidae	*Eleutherodactylus turquinensis*	
Anura	Leptodactylidae	*Eleutherodactylus unicolor*	
Anura	Leptodactylidae	*Eleutherodactylus urichi*	
Anura	Leptodactylidae	*Eleutherodactylus wightmanae*	
Anura	Leptodactylidae	*Eleutherodactylus zophus*	
Anura	Leptodactylidae	*Gastrotheca litonedis*	
Anura	Leptodactylidae	*Gastrotheca orophylax*	
Anura	Leptodactylidae	*Gastrotheca ovifera*	
Anura	Leptodactylidae	*Gastrotheca pseustes*	Yes
Anura	Leptodactylidae	*Gastrotheca riobambae*	Yes
Anura	Leptodactylidae	*Gastrotheca splendens*	
Anura	Leptodactylidae	*Leptodactylus fallax*	Yes
Anura	Leptodactylidae	*Telmatobius atacamensis*	
Anura	Leptodactylidae	*Telmatobius brevipes*	
Anura	Leptodactylidae	*Telmatobius brevirostris*	
Anura	Leptodactylidae	*Telmatobius ceiorum*	
Anura	Leptodactylidae	*Telmatobius colanensis*	
Anura	Leptodactylidae	*Telmatobius culeus*	Yes
Anura	Leptodactylidae	*Telmatobius degener*	
Anura	Leptodactylidae	*Telmatobius edaphonastes*	
Anura	Leptodactylidae	*Telmatobius gigas*	
Anura	Leptodactylidae	*Telmatobius hypselocephalus*	
Anura	Leptodactylidae	*Telmatobius ignavus*	
Anura	Leptodactylidae	*Telmatobius laticeps*	
Anura	Leptodactylidae	*Telmatobius latirostris*	
Anura	Leptodactylidae	*Telmatobius mayoloi*	
Anura	Leptodactylidae	*Telmatobius necopinus*	
Anura	Leptodactylidae	*Telmatobius pefauri*	
Anura	Leptodactylidae	*Telmatobius pisanoi*	
Anura	Leptodactylidae	*Telmatobius platycephalus*	
Anura	Leptodactylidae	*Telmatobius schreiteri*	
Anura	Leptodactylidae	*Telmatobius scrocchii*	
Anura	Leptodactylidae	*Telmatobius sibiricus*	

Order	Family	Scientific Name	Has Been Bred
Anura	Leptodactylidae	*Telmatobius stephani*	
Anura	Leptodactylidae	*Telmatobius thompsoni*	
Anura	Leptodactylidae	*Telmatobius truebae*	
Anura	Leptodactylidae	*Telmatobius zapahuirensis*	
Anura	Leptodactylidae	*Thoropa lutzi*	
Anura	Limnodynastidae	*Mixophyes fleayi*	Yes
Anura	Limnodynastidae	*Philoria frosti*	
Anura	Myobatrachidae	*Pseudophryne corroboree*	Yes
Anura	Myobatrachidae	*Pseudophryne pengilleyi*	
Anura	Myobatrachidae	*Taudactylus eungellensis*	
Anura	Myobatrachidae	*Taudactylus pleione*	
Anura	Myobatrachidae	*Taudactylus rheophilus*	
Anura	Petropedetidae	*Arthroleptides martiensseni*	
Anura	Petropedetidae	*Arthroleptides yakusini*	
Anura	Ranidae	*Rana muscosa*	
Anura	Ranidae	*Rana sevosa*	
Anura	Ranidae	*Rana subaquavocalis*	Yes
Anura	Ranidae	*Rana vibicaria*	
Caudata	Plethodontidae	*Bolitoglossa magnifica*	
Caudata	Plethodontidae	*Bolitoglossa pesrubra*	
Caudata	Plethodontidae	*Bolitoglossa sooyorum*	
Caudata	Plethodontidae	*Bolitoglossa subpalmata*	
Caudata	Plethodontidae	*Chiropterotriton cracens*	
Caudata	Plethodontidae	*Chiropterotriton multidentatus*	
Caudata	Plethodontidae	*Pseudoeurycea smithi*	
Caudata	Plethodontidae	*Pseudoeurycea unguidentis*	
Caudata	Plethodontidae	*Thorius aureus*	
Caudata	Plethodontidae	*Thorius boreas*	
Caudata	Plethodontidae	*Thorius pennatulus*	

APPENDIX IX. AMPHIBIANS LISTED AS CRITICALLY ENDANGERED (POSSIBLY EXTINCT) ON THE 2007 IUCN RED LIST OF THREATENED SPECIES

Order	Family	Species Name	Red List Assessment
Anura	Bufonidae	*Andinophryne colomai*	CR B1ab(iii)
		Atelopus arthuri	CR A2ace; B1ab(iii,v)+2ab(iii,v)
		Atelopus balios	CR A2ace
		Atelopus carbonerensis	CR A2ac; B2ab(v)
		Atelopus chiriquiensis	CR A2ace
		Atelopus chrysocorallus	CR A2ac; B1ab(iii,v)+2ab(iii,v)
		Atelopus coynei	CR A2ace
		Atelopus famelicus	CR A2ace
		Atelopus guanujo	CR A2ace
		Atelopus halihelos	CR A2ac; B1ab(iii)+B2ab(iii)
		Atelopus lozanoi	CR A2ac; B2ab(v)
		Atelopus lynchi	CR A3ce; B1ab(iii,iv,v)
		Atelopus mindoensis	CR A2e
		Atelopus muisca	CR A2ac; B2ab(v)
		Atelopus nanay	CR A2ac; B2ab(v)
		Atelopus oxyrhynchus	CR A2ace
		Atelopus pachydermus	CR A2ace
		Atelopus peruensis	CR A2ace
		Atelopus pinangoi	CR A2ac; B1ab(iii,v)
		Atelopus planispina	CR A2ace
		Atelopus senex	CR A2ace
		Atelopus sernai	CR A2ace
		Atelopus sorianoi	CR A2ac; B2ab(iii,v)
		Bufo fastidiosus	CR A2ace
		Bufo fluviaticus	CR B2ab(iii)
		Bufo holdridgei	CR A2ac; B1ab(v)
		*Melanophryniscus macrogranulosus^*	CR B2ab(iii)
		Nectophrynoides asperginis	CR B1ab(ii,iii,v)+2ab(ii,iii,v)
		Rhamphophryne rostrata	CR B1ab(iii)+2ab(iii)
	Centrolenidae	*Centrolene ballux*	CR A2ac; B2ab(iii,iv,v)
		Centrolene heloderma	CR A2ac
		Hyalinobatrachium crybetes	CR B1ab(iii)+2ab(iii)
	Dendrobatidae	*Aromobates nocturnus*	CR A2a; B2ab(v)
		Colostethus dunni	CR A2ace
		Colostethus edwardsi	CR A2ac; B1ab(iii,iv,v)+2ab(iii,iv,v)
		Colostethus jacobuspetersi	CR B2ab(i,ii,iii,iv,v)
		Colostethus ruizi	CR B1ab(iii,v)+2ab(iii,v)
		Colostethus vertebralis	CR A2ace
		Dendrobates abditus	CR A2ac; B1ab(iii)
		Mannophryne neblina	CR B1ab(v)+2ab(v)
	Hylidae	*Aplastodiscus flumineus**	CR B2ab(iii)
		*Bokermannohyla claresignata**	CR A2ae; B2ab(v)
		Bokermannohyla izecksohni	CR B1ab(iii,v)+2ab(iii,v)
		Bromeliohyla dendroscarta	CR A2ace
		Charadrahyla altipotens	CR A2ace
		Charadrahyla trux	CR B1ab(iii,v)+2ab(iii,v)
		Ecnomiohyla echinata	CR A2ace
		Hyla bocourti	CR A2ace
		Hyla chlorostea	CR B1ab(iii)+2ab(iii)
		Hypsiboas cymbalum	CR B1ab(iii)+2ab(iii)
		Isthmohyla calypsa	CR A2ace
		Isthmohyla debilis	CR A2ace
		Isthmohyla graceae	CR A2ace
		Isthmohyla rivularis	CR A2ace
		Isthmohyla tica	CR A2ace
		Litoria castanea	CR D
		Litoria lorica	CR D
		Litoria nyakalensis	CR D
		Litoria piperata	CR D
		Megastomatohyla pellita	CR A2ace
		Plectrohyla calvicollina	CR B1ab(iii,v)+2ab(iii,v)
		Plectrohyla celata	CR B2ab(iii,v)
		Plectrohyla cembra	CR A2ce
		Plectrohyla cyanomma	CR B1ab(iii,v)+2ab(iii,v)
		Plectrohyla ephemera	CR A4e
		Plectrohyla hazelae	CR A2ace
		Plectrohyla siopela	CR B1ab(iii,v)+2ab(iii,v)
		Plectrohyla thorectes	CR A2ace
		*Scinax heyeri**	CR B2ab(iii,v)
	Leptodactylidae	*Craugastor anciano*	CR B1ab(iii,v)+2ab(iii,v)
		Craugastor andi	CR A2ace
		Craugastor angelicus	CR A2ace
		Craugastor coffeus	CR B1ab(iii)+2ab(iii)
		Craugastor cruzi	CR A2ace; B1ab(iii,v)+2ab(iii,v)
		Craugastor escoces	CR A2ace
		Craugastor fecundus	CR A2ace
		Craugastor fleischmanni	CR A2ace
		Craugastor guerreroensis	CR A2ace
		Craugastor merendonensis	CR A2ace; B1ab(v)+2ab(v)
		Craugastor omoaensis	CR A2ace; B1ab(iii)
		Craugastor polymniae	CR A2ace
		Craugastor saltuarius	CR A2ace
		Craugastor stadelmani	CR A2ace
		Craugastor trachydermus	CR A3ce
		*Crossodactylus trachystomus**	CR B2ab(iii,v)
		Cryptobatrachus nicefori	CR B1ab(iii)+2ab(iii)
		*Cycloramphus ohausi**	CR A2ac; B2ab(v)
		Eleutherodactylus bernali	CR B2ab(iii)
		Eleutherodactylus emleni	CR A2ace; B2ab(v)
		Eleutherodactylus eneidae	CR A2ae
		Eleutherodactylus glanduliferoides	CR B1ab(iii)+2ab(iii)
		Eleutherodactylus jasperi	CR A2ae; B2ab(i,ii,iv,v)
		Eleutherodactylus karlschmidti	CR A2ae
		Eleutherodactylus olanchano	CR A2ace
		Eleutherodactylus orcutti	CR A2ace
		Eleutherodactylus schmidti	CR A2ace
		Eleutherodactylus semipalmatus	CR A3c; B2ab(iii)
		Eleutherodactylus zongoensis	CR B1ab(iii,v)+2ab(iii,v)
		Gastrotheca lauzuricae	CR B1ab(iii)
		Holoaden bradei	CR B2ab(iii,v)
		Odontophrynus moratoi	CR B1ab(iii,v)+2ab(iii,v)
		*Paratelmatobius lutzii**	CR B1ab(v)
		*Paratelmatobius mantiqueira**	CR B1ab(iii,v)+2ab(iii,v)
		Phrynopus spectabilis	CR B1ab(iii)
		Telmatobius cirrhacelis	CR A2ace;B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
		Telmatobius niger	CR A2ace
		Telmatobius vellardi	CR A2ace;B2ab(i,ii,iii,iv,v)
	Megophryidae	*Scutiger maculatus*	CR B2ab(iii,v)
	Myobatrachidae	*Taudactylus acutirostris*	CR A2ace; B2ab(i,ii,iii,iv,v); C2a(i); D
	Petropedetidae	*Arthroleptides dutoiti*	CR B2ab(iii)
	Ranidae	*Conraua derooi*	CR B2ab(iii)
		Rana omiltemana	CR B2ab(iii,v)
		Rana pueblae	CR B1ab(iii,v)+2ab(iii,v)
		Rana tlaloci	CR B1ab(iii,v)+2ab(iii,v)
	Rhacophoridae	*Philautus jacobsoni*	CR B2ab(iii)
	Rhinodermatidae	*Rhinoderma rufum*	CR A2ace
Caudata	Plethodontidae	*Bolitoglossa jacksoni*	CR B1ab(iii)+2ab(iii)
		Bradytriton silus	CR B1ab(iii)+2ab(iii)
		Chiropterotriton magnipes	CR B2ab(iii,v)
		Chiropterotriton mosaueri	CR B2ab(iii,v)
		Ixalotriton parva	CR B1ab(iii)+2ab(iii)
		Oedipina paucidentata	CR B1ab(iii)
		Pseudoeurycea aquatica	CR B1ab(iii)+2ab(iii)
		Pseudoeurycea naucampatepetl	CR B1ab(iii,v)
		Pseudoeurycea nigromaculata	CR B1ab(iii,v)
		Pseudoeurycea praecellens	CR B1ab(iii)
		Thorius infernalis	CR B1ab(iii)
		Thorius magnipes	CR B1ab(iii,v)
		Thorius narismagnus	CR B1ab(iii,v)
		Thorius narisovalis	CR A2ac; B1ab(iii,v)

* These species were assessed as Data Deficient at the GAA workshop in Brazil and this is the official category as listed on the Red List website. They are listed here as Critically Endangered which is the category determined by the GAA coordinating team.

^ This species was assessed as Vulnerable at the GAA workshop in Brazil and this is the official category as listed on the Red List website. It is listed here as Critically Endangered which is the category determined by the GAA coordinating team.

APPENDIX X. AMPHIBIANS LISTED AS VULNERABLE D2 ON THE 2007 IUCN RED LIST OF THREATENED SPECIES

Order	Family	Species Name
Anura	Astylosternidae	*Leptodactylodon bueanus*
	Bufonidae	*Ansonia fuliginea*
		Ansonia penangensis
		Ansonia rubigina
		Ansonia siamensis
		Ansonia tiomanica
		Ansonia torrentis
		Bufo corynetes
		Bufo exsul
		Bufo nyikae
		Bufo perreti
		Bufo scorteccii
		*Melanophryniscus moreirae**
		Melanophryniscus orejasmirandai
		Metaphryniscus sosae
		Oreophrynella cryptica
		Oreophrynella huberi
		Oreophrynella macconnelli
		Oreophrynella nigra
		Oreophrynella quelchii
		Oreophrynella vasquezi
		Osornophryne sumacoensis
	Centrolenidae	*Centrolene quindianum*
		Cochranella armata
		Cochranella riveroi
	Dendrobatidae	*Colostethus chalcopis*
		Colostethus humilis
		Colostethus murisipanensis
		Colostethus vergeli
		Colostethus wayuu
		Dendrobates altobueyensis
		Dendrobates azureus
		Mannophryne cordilleriana
	Discoglossidae	*Alytes muletensis*
	Hylidae	*Dendropsophus stingi*
		Litoria andiirrmalin
		Litoria becki
		Litoria quadrilineata
		Litoria wisselensis
		Nyctimystes avocalis
		*Scinax kautskyi^*
		Tepuihyla rimarum
	Hyperoliidae	*Hyperolius polystictus*
		Leptopelis palmatus
	Leiopelmatidae	*Leiopelma pakeka*
	Leptodactylidae	*Atelognathus nitoi*
		Atelognathus salai
		Atelognathus solitarius
		Batrachyla fitzroya
		Craugastor aphanus
		Craugastor matudai
		*Crossodactylodes izecksohni**
		Eleutherodactylus actites
		Eleutherodactylus affinis
		Eleutherodactylus ashkapara
		Eleutherodactylus briceni
		Eleutherodactylus charlottevillensis
		Eleutherodactylus colostichos
		Eleutherodactylus diaphonus
		Eleutherodactylus diogenes
		Eleutherodactylus ernesti
		Eleutherodactylus kelephas
		Eleutherodactylus lasalleorum
		Eleutherodactylus marahuaka
		Eleutherodactylus monensis
		Eleutherodactylus nivicolimae
		Eleutherodactylus phalarus
		Eleutherodactylus polemistes
		Eleutherodactylus quantus
		Eleutherodactylus repens
		Eleutherodactylus satagius
		Eleutherodactylus signifer
		Eleutherodactylus turpinorum
		Eleutherodactylus xylochobates
		Ischnocnema simmonsi
		Leptodactylus marambaiae#
		Leptodactylus nesiotus
		Phrynopus barthlenae
		Phrynopus iatamasi
		Physalaemus atlanticus
		*Physalaemus rupestris^*
		Stefania ackawaio
		Stefania ayangannae
		Stefania coxi
		Stefania riveroi
		Stefania schuberti
		Telmatobius hauthali
		Telmatobius oxycephalus
	Mantellidae	*Mantidactylus schilfi*
		Mantidactylus tandroka
	Megophryidae	*Leptobrachella brevicrus*
		Leptobrachium gunungense
		Leptolalax kajangensis
		Oreolalax granulosus
		Scutiger liupanensis
		Scutiger ruginosus
	Microhylidae	*Anodonthyla montana*
		Cophixalus aenigma
		Cophixalus hosmeri
		Cophixalus nubicola
		Cophixalus saxatilis
		Copiula minor
		Microhyla maculifera
		Probreviceps uluguruensis
		Ramanella nagaoi
		Rhombophryne testudo
		Stumpffia pygmaea
	Myobatrachidae	*Geocrinia vitellina*
		Spicospina flammocaerulea
	Ranidae	*Amolops tuberodepressus*
		Meristogenys jerboa
		Platymantis banahao
		Platymantis indeprensus
		Platymantis isarog
		Platymantis montana
		Platymantis naomiae
		Platymantis parkeri
		Platymantis pseudodorsalis
		Rana miadis
		Rana okaloosae
		Strongylopus kitumbeine
		Strongylopus merumontanus
	Rhacophoridae	*Philautus acutus*
		Philautus amoenus
		Philautus bobingeri
		Philautus dubois
		Philautus erythrophthalmus
		Philautus graminirupes
		Philautus gunungensis
		Philautus refugii
		Philautus saueri
		Philautus umbra
	Sooglossidae	*Nesomantis thomasseti*
		Sooglossus gardineri
		Sooglossus pipilodryas
		Sooglossus sechellensis
Caudata	Plethodontidae	*Batrachoseps regius*
		Batrachoseps simatus
		Batrachoseps stebbinsi
		Bolitoglossa diminuta
		Bolitoglossa gracilis
		Bolitoglossa guaramacalensis
		Bolitoglossa hiemalis
		Bolitoglossa hypacra
		Bolitoglossa mombachoensis
		Bolitoglossa orestes
		Dendrotriton megarhinus
		Dendrotriton xolocalcae
		Eurycea chisholmensis
		Eurycea nana
		Eurycea neotenes
		Eurycea rathbuni
		Eurycea sosorum
		Eurycea tridentifera
		Eurycea waterlooensis
		Hydromantes brunus
		Hydromantes shastae
		Nototriton gamezi
		Nototriton guanacaste
		Nototriton saslaya
		Plethodon amplus
		Plethodon asupak
		Plethodon cheoah
		Plethodon fourchensis
		Plethodon hubrichti
		Plethodon meridianus
		Plethodon petraeus
		Plethodon shenandoah
		Plethodon sherando
		Plethodon shermani
		Pseudoeurycea robertsi
		Pseudoeurycea scandens
		Speleomantes flavus
	Salamandridae	*Lyciasalamandra helverseni*
		Salamandra lanzai
Gymnophiona	Caeciliidae	*Praslinia cooperi*

* These species were assessed as Near Threatened at the GAA workshop in Brazil and this is the official category as listed on the Red List website. They are listed here as Vulnerable D2 which is the category and criteria determined by the GAA coordinating team.

^ These species were assessed as Data Deficient at the GAA workshop in Brazil and this is the official category as listed on the Red List website. They are listed here as Vulnerable D2 which is the category and criteria determined by the GAA coordinating team.

\# This species was assessed as Least Concern at the GAA workshop in Brazil and this is the official category as listed on the Red List website. It is listed here as Vulnerable D2 which is the category and criteria determined by the GAA coordinating team.

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APPENDIX XI. LIST OF LEAST CONCERN SPECIES LISTED ON THE 2007 IUCN RED LIST OF THREATENED SPECIES, WITH COUNTRY OF OCCURRENCE

ANURA

ALLOPHRYNIDAE

Allophryne ruthveni - Brazil, French Guiana, Guyana, Suriname, Venezuela

ARTHROLEPTIDAE

Arthroleptis adelphus - Cameroon, Equatorial Guinea, Gabon
Arthroleptis adolfifriederici - Burundi, Congo, D.R., Kenya, Rwanda, Tanzania, Uganda
Arthroleptis affinis - Tanzania
Arthroleptis lameerei - Angola, Burundi, Congo, D.R.
Arthroleptis poecilonotus - Benin, Cameroon, Congo, Côte d'Ivoire, Congo, D.R., Equatorial Guinea, Gabon, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Uganda
Arthroleptis schubotzi - Burundi, Congo, D.R., Rwanda, Tanzania, Uganda
Arthroleptis stenodactylus - Angola, Botswana, Congo, D.R., Kenya, Malawi, Mozambique, South Africa, Tanzania, Zambia, Zimbabwe
Arthroleptis sylvatica - Cameroon, Central African Republic, Congo, Congo, D.R., Gabon
Arthroleptis taeniatus - Cameroon, Central African Republic, Congo, D.R., Equatorial Guinea, Gabon
Arthroleptis variabilis - Cameroon, Central African Republic, Congo, Côte d'Ivoire, Congo, D.R., Equatorial Guinea, Gabon, Ghana, Guinea, Liberia, Nigeria
Arthroleptis wahlbergii - South Africa
Arthroleptis xenodactyloides - Malawi, Mozambique, Tanzania, Zambia, Zimbabwe
Cardioglossa elegans - Cameroon, Equatorial Guinea, Gabon
Cardioglossa escalerae - Cameroon, Central African Republic, Congo, D.R., Equatorial Guinea
Cardioglossa gracilis - Cameroon, Central African Republic, Congo, D.R., Equatorial Guinea, Gabon, Nigeria
Cardioglossa gratiosa - Cameroon, Equatorial Guinea, Gabon
Cardioglossa leucomystax - Cameroon, Congo, Côte d'Ivoire, Congo, D.R., Equatorial Guinea, Gabon, Ghana, Guinea, Liberia, Nigeria
Schoutedenella xenochirus - Angola, Congo, D.R., Malawi, Tanzania, Zambia

ASCAPHIDAE

Ascaphus montanus - Canada, United States of America
Ascaphus truei - Canada, United States of America

ASTYLOSTERNIDAE

Astylosternus batesi - Cameroon, Central African Republic, Congo, Congo, D.R., Equatorial Guinea, Gabon
Astylosternus occidentalis - Côte d'Ivoire, Guinea, Sierra Leone
Nyctibates corrugatus - Cameroon, Equatorial Guinea, Nigeria
Scotobleps gabonicus - Cameroon, Congo, Congo, D.R., Equatorial Guinea, Gabon, Nigeria
Trichobatrachus robustus - Cameroon, Congo, D.R., Equatorial Guinea, Gabon, Nigeria

BOMBINATORIDAE

Bombina bombina - Austria, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Germany, Greece, Hungary, Kazakhstan, Latvia, Lithuania, Moldova, Poland, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Slovenia, Sweden (Native and Reintroduced), Turkey, Ukraine, United Kingdom (Introduced)
Bombina maxima - China
Bombina orientalis - China (Native and Introduced), Korea, D.P.R., Korea, Republic, Russian Federation
Bombina pachypus - Italy
Bombina variegata - Albania, Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Macedonia, F.Y.R., France, Germany, Greece, Hungary, Italy, Liechtenstein, Luxembourg, Poland, Romania, Serbia and Montenegro, Slovakia, Slovenia, Switzerland, Ukraine, Belgium (Extinct), United Kingdom (Introduced)

BRACHYCEPHALIDAE

Brachycephalus didactylus - Brazil
Brachycephalus ephippium - Brazil
Brachycephalus hermogenesi - Brazil

BUFONIDAE

Ansonia malayana - Malaysia, Thailand
Bufo abei - Brazil
Bufo acutirostris - Brazil, Colombia, Panama, Venezuela
Bufo alvarius - Mexico, United States of America
Bufo americanus - Canada, United States of America
Bufo anderssoni - Brazil, Colombia
Bufo andrewsi - China
Bufo angusticeps - South Africa
Bufo arabicus - Oman, Saudi Arabia, United Arab Emirates, Yemen
Bufo arenarum - Argentina, Bolivia, Brazil, Uruguay
Bufo arunco - Chile
Bufo asmarae - Eritrea, Ethiopia
Bufo asper - Brunei Darussalam, Indonesia (Native and Introduced), Malaysia, Myanmar, Thailand
Bufo atacamensis - Chile
Bufo atukoralei - Sri Lanka
Bufo bankorensis - Taiwan, Province of China
Bufo beebei - Colombia, Trinidad and Tobago, Venezuela
Bufo beiranus - Malawi, Mozambique, Zambia
Bufo bergi - Argentina, Brazil, Paraguay
Bufo biporcatus - Indonesia (Native and Introduced)
Bufo blanfordii - Djibouti, Eritrea, Ethiopia, Somalia
Bufo bocourti - Guatemala, Mexico
Bufo bufo - Albania, Algeria, Andorra, Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Macedonia, F.Y.R., Finland, France, Germany, Gibraltar, Greece, Hungary, Italy, Kazakhstan, Latvia, Lebanon, Liechtenstein, Lithuania, Luxembourg, Moldova, Monaco, Morocco, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, San Marino, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, Syria, Tunisia, Turkey, Ukraine, United Kingdom
Bufo calamita - Austria, Belarus, Belgium, Czech Republic, Denmark, Estonia, France, Germany, Ireland, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Russian Federation, Slovakia, Spain, Sweden, Switzerland, Ukraine, United Kingdom
Bufo camerunensis - Cameroon, Central African Republic, Congo, D.R., Equatorial Guinea, Gabon, Nigeria
Bufo canaliferus - El Salvador, Guatemala, Mexico
Bufo castaneoticus - Bolivia, Brazil, Colombia, Peru
Bufo celebensis - Indonesia
Bufo ceratophrys - Brazil, Colombia, Ecuador, Peru, Venezuela
Bufo coccifer - Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua
Bufo cognatus - Canada, Mexico, United States of America
Bufo compactilis - Mexico
Bufo coniferus - Colombia, Costa Rica, Ecuador, Nicaragua, Panama
Bufo cophotis - Peru
Bufo crucifer - Brazil
Bufo dapsilis - Brazil, Colombia, Ecuador, Peru
Bufo debilis - Mexico, United States of America
Bufo dhufarensis - Oman, Saudi Arabia, United Arab Emirates, Yemen
Bufo divergens - Brunei Darussalam, Indonesia, Malaysia
Bufo dodsoni - Djibouti, Egypt, Eritrea, Ethiopia, Somalia, Sudan
Bufo dombensis - Angola, Namibia
Bufo dorbignyi - Argentina, Brazil, Uruguay
Bufo fenoulheti - Botswana, Mozambique, Namibia, South Africa, Swaziland, Zambia, Zimbabwe
Bufo fernandezae - Argentina, Brazil, Paraguay, Uruguay
Bufo fissipes - Bolivia, Peru
Bufo fowleri - Canada, United States of America
Bufo fuliginatus - Congo, D.R., Tanzania, Zambia
Bufo funereus - Angola, Burundi, Congo, Congo, D.R., Gabon, Rwanda, Uganda
Bufo fustiger - Cuba
Bufo galeatus - Cambodia, China, Lao P.D.R., Viet Nam
Bufo gargarizans - China, Japan (Native and Introduced), Korea, D.P.R., Korea, Republic, Russian Federation
Bufo gariepensis - Lesotho, Namibia, South Africa, Swaziland
Bufo garmani - Botswana, Ethiopia, Kenya, Mozambique, Namibia, Somalia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe
Bufo glaberrimus - Colombia, Ecuador, Peru, Venezuela
Bufo gracilipes - Cameroon, Congo, Congo, D.R., Equatorial Guinea, Gabon, Nigeria
Bufo granulosus - Argentina, Bolivia, Brazil, Colombia, French Guiana, Guyana, Panama, Paraguay, Suriname, Venezuela
Bufo guttatus - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela
Bufo gutturalis - Angola, Botswana, Congo, D.R., Kenya, Lesotho, Malawi, Mozambique, Namibia, Somalia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe, Mauritius (Introduced), Réunion (Introduced)
Bufo haematiticus - Colombia, Costa Rica, Ecuador, Honduras, Nicaragua, Panama, Venezuela
Bufo hemiophrys - Canada, United States of America
Bufo henseli - Brazil
Bufo himalayanus - China, India, Nepal, Pakistan
Bufo hoeschi - Namibia
Bufo ictericus - Argentina, Brazil, Paraguay
Bufo inca - Peru
Bufo japonicus - Japan (Native and Introduced)
Bufo jimi - Brazil
Bufo juxtasper - Brunei Darussalam, Indonesia, Malaysia
Bufo kassasii - Egypt
Bufo kavangensis - Angola, Botswana, Namibia, Zimbabwe
Bufo kelloggi - Mexico
Bufo kerinyagae - Ethiopia, Kenya, Tanzania, Uganda
Bufo kisoloensis - Congo, D.R., Kenya, Malawi, Rwanda, Tanzania, Uganda, Zambia
Bufo latastii - India, Pakistan
Bufo latifrons - Cameroon, Congo, Congo, D.R., Equatorial Guinea, Gabon
Bufo lemairii - Angola, Botswana, Congo, Congo, D.R., Namibia, Zambia
Bufo limensis - Peru
Bufo lindneri - Malawi, Mozambique, Tanzania
Bufo luetkenii - Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua
Bufo lughensis - Ethiopia, Kenya, Somalia, Sudan
Bufo luristanicus - Iran
Bufo macrotis - Cambodia, India, Lao P.D.R., Malaysia, Myanmar, Thailand, Viet Nam
Bufo maculatus - Angola, Benin, Botswana, Burkina Faso, Cameroon, Central African Republic, Congo, Côte d'Ivoire, Congo, D.R., Ethiopia, Gabon, Ghana, Guinea, Kenya, Liberia, Malawi, Mozambique, Namibia, Nigeria, Sierra Leone, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe
Bufo margaritifer - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Panama, Peru, Suriname, Venezuela
Bufo marinus - Belize, Bolivia, Brazil, Colombia, Costa Rica, Ecuador, El Salvador, French Guiana, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Peru, Suriname, Trinidad and Tobago, United States of America (Native and Introduced), Venezuela, Antigua and Barbuda (Introduced), Australia (Introduced), Barbados (Introduced), Dominican Republic (Introduced), Grenada (Introduced), Guadeloupe (Introduced), Guam (Introduced), Haiti (Introduced), Jamaica (Introduced), Japan (Introduced), Martinique (Introduced), Montserrat (Introduced), Northern Mariana Islands (Introduced), Papua New Guinea (Introduced), Philippines (Introduced), Puerto Rico (Introduced), St Kitts and Nevis (Introduced), St Vincent and the Grenadines (Introduced), Solomon Islands (Introduced), Taiwan, Province of China (Introduced), Virgin Islands (United States) (Introduced)
Bufo marmoreus - Mexico
Bufo mauritanicus - Algeria, Morocco, Spain (Native and Introduced), Tunisia
Bufo mazatlanensis - Mexico
Bufo melanochlorus - Costa Rica
Bufo melanopleura - Angola, Congo, D.R., Zambia
Bufo melanostictus - Bangladesh, Cambodia, China, India, Indonesia (Native and Introduced), Lao P.D.R., Malaysia, Myanmar, Nepal, Pakistan, Singapore, Sri Lanka, Taiwan, Province of China, Thailand, Viet Nam, Papua New Guinea (Introduced)
Bufo microscaphus - United States of America
Bufo minshanicus - China
Bufo nasicus - Guyana, Venezuela
Bufo nebulifer - Mexico, United States of America
Bufo oblongus - Iran, Turkmenistan
Bufo occidentalis - Mexico
Bufo ocellatus - Brazil
Bufo olivaceus - Iran, Pakistan
Bufo ornatus - Brazil
Bufo pardalis - South Africa
Bufo parkeri - Kenya, Tanzania
Bufo parvus - Cambodia, Indonesia, Malaysia, Myanmar, Thailand
Bufo peltocephalus - Cuba
Bufo pentoni - Burkina Faso, Cameroon, Djibouti, Eritrea, Gambia, Ghana, Guinea, Mali, Mauritania, Niger, Nigeria, Senegal, Sudan
Bufo pewzowi - China, Kazakhstan, Kyrgyzstan, Mongolia, Uzbekistan
Bufo philippinicus - Philippines
Bufo poeppigii - Bolivia, Peru
Bufo pombali - Brazil
Bufo poweri - Angola, Botswana, Namibia, South Africa
Bufo proboscideus - Brazil, Colombia, Ecuador, Peru
Bufo pseudoraddei - Pakistan
Bufo punctatus - Mexico, United States of America
Bufo pygmaeus - Brazil
Bufo quadriporcatus - Indonesia, Malaysia, Singapore
Bufo quercicus - United States of America
Bufo raddei - China, Korea, D.P.R., Mongolia, Russian Federation
Bufo rangeri - Lesotho, South Africa, Swaziland
Bufo regularis - Angola, Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Congo, D.R., Egypt, Ethiopia, Gabon, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Mali, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Sudan, Uganda, Cape Verde (Introduced)
Bufo retiformis - Mexico, United States of America
Bufo robinsoni - Namibia, South Africa
Bufo roqueanus - Brazil, Colombia, Ecuador, Peru
Bufo rubescens - Brazil
Bufo scaber - India, Sri Lanka
Bufo schneideri - Argentina, Bolivia, Brazil, Paraguay, Uruguay
Bufo signifer - Panama
Bufo speciosus - Mexico, United States of America
Bufo spinulosus - Argentina, Bolivia, Chile, Peru
Bufo stanlaii - Bolivia
Bufo steindachneri - Cameroon, Central African Republic, Chad, Congo, D.R., Ethiopia, Kenya, Nigeria, Somalia, Sudan, Tanzania, Uganda
Bufo stejnegeri - China, Korea, D.P.R., Korea, Republic
Bufo stomaticus - Afghanistan, Bangladesh, India, Iran, Nepal, Pakistan
Bufo superciliaris - Cameroon, Central African Republic, Congo, Côte d'Ivoire, Congo, D.R., Equatorial Guinea, Gabon, Ghana, Nigeria
Bufo surdus - Iran, Pakistan
Bufo taitanus - Congo, D.R., Kenya, Malawi, Mozambique, Tanzania, Zambia
Bufo terrestris - United States of America
Bufo tibetanus - China
Bufo tihamicus - Saudi Arabia, Yemen
Bufo torrenticola - Japan
Bufo tuberosus - Cameroon, Central African Republic, Congo, Congo, D.R., Equatorial Guinea, Gabon
Bufo valliceps - Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua
Bufo variegatus - Argentina, Chile
Bufo veraguensis - Bolivia, Peru
Bufo verrucosissimus - Azerbaijan, Georgia, Iran, Russian Federation, Turkey
Bufo vertebralis - South Africa
Bufo viridis - Albania, Algeria, Armenia, Austria, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark,

Egypt, Estonia, Macedonia, F.Y.R., France, Georgia, Germany, Greece, Hungary, Iran, Iraq, Israel, Italy, Jordan, Kazakhstan, Kyrgyzstan, Latvia, Lebanon, Libya, Lithuania, Malta, Moldova, Morocco, Poland, Romania, Russian Federation, Saudi Arabia, Serbia and Montenegro, Slovakia, Slovenia, Spain (Native and Introduced), Sweden, Syria, Tajikistan, Tunisia, Turkey, Turkmenistan, Ukraine, Uzbekistan, Western Sahara, Switzerland (Extinct)
Bufo woodhousii - Mexico, United States of America
Bufo xeros - Algeria, Cameroon, Chad, Djibouti, Eritrea, Ethiopia, Gambia, Guinea, Kenya, Libya, Mali, Mauritania, Niger, Senegal, Somalia, Sudan, Tanzania, Uganda, Western Sahara
Capensibufo tradouwi - South Africa
Dendrophryniscus berthalutzae - Brazil
Dendrophryniscus bokermanni - Brazil
Dendrophryniscus brevipollicatus - Brazil
Dendrophryniscus leucomystax - Brazil
Dendrophryniscus minutus - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname
Frostius pernambucensis - Brazil
Leptophryne borbonica - Indonesia, Malaysia, Thailand
Melanophryniscus atroluteus - Argentina, Brazil, Paraguay, Uruguay
Melanophryniscus fulvoguttatus - Argentina, Brazil, Paraguay
Melanophryniscus klappenbachi - Argentina, Paraguay
Melanophryniscus rubriventris - Argentina, Bolivia
Melanophryniscus spectabilis - Argentina, Brazil
Melanophryniscus stelzneri - Argentina
Melanophryniscus tumifrons - Brazil
Mertensophryne micranotis - Kenya, Tanzania
Nectophryne afra - Cameroon, Congo, D.R., Equatorial Guinea, Gabon, Nigeria
Nectophryne batesii - Cameroon, Central African Republic, Congo, D.R., Gabon
Nectophrynoides tornieri - Tanzania
Pedostibes hosii - Brunei Darussalam, Indonesia, Malaysia, Thailand
Pelophryne brevipes - Indonesia, Malaysia, Philippines, Singapore
Pseudobufo subasper - Indonesia, Malaysia
Schismaderma carens - Angola, Botswana, Congo, D.R., Kenya, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe
Stephopaedes loveridgei - Tanzania

CENTROLENIDAE

Centrolene andinum - Colombia, Venezuela
Centrolene grandisonae - Colombia, Ecuador
Centrolene hybrida - Colombia
Centrolene ilex - Colombia, Costa Rica, Nicaragua, Panama
Centrolene notostictum - Colombia
Centrolene prosoblepon - Colombia, Costa Rica, Ecuador, Honduras, Nicaragua, Panama
Centrolene venezuelense - Venezuela
Cochranella albomaculata - Colombia, Costa Rica, Honduras, Panama
Cochranella bejaranoi - Bolivia
Cochranella euknemos - Colombia, Costa Rica, Panama
Cochranella flavopunctata - Colombia, Ecuador
Cochranella granulosa - Costa Rica, Honduras, Nicaragua, Panama
Cochranella midas - Brazil, Ecuador, Peru
Cochranella oyampiensis - Brazil, French Guiana, Guyana, Suriname, Venezuela
Cochranella spinosa - Colombia, Costa Rica, Ecuador, Honduras, Panama
Hyalinobatrachium bergeri - Bolivia, Peru
Hyalinobatrachium colymbiphyllum - Colombia, Costa Rica, Panama
Hyalinobatrachium crurifasciatum - Venezuela
Hyalinobatrachium eurygnathum - Brazil
Hyalinobatrachium fleischmanni - Belize, Colombia, Costa Rica, El Salvador, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Suriname
Hyalinobatrachium mondolfii - Venezuela
Hyalinobatrachium munozorum - Ecuador, Peru
Hyalinobatrachium nouraguensis - French Guiana
Hyalinobatrachium pulveratum - Colombia, Costa Rica, Honduras, Nicaragua, Panama
Hyalinobatrachium ruedai - Colombia
Hyalinobatrachium taylori - French Guiana, Guyana, Suriname, Venezuela
Hyalinobatrachium uranoscopum - Argentina, Brazil
Hyalinobatrachium valerioi - Colombia, Costa Rica, Ecuador, Panama

DENDROBATIDAE

Allobates femoralis - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname
Allobates zaparo - Ecuador, Peru
Colostethus abditaurantius - Colombia
Colostethus argyrogaster - Peru
Colostethus beebei - French Guiana, Guyana, Suriname
Colostethus bocagei - Colombia, Ecuador
Colostethus brunneus - Bolivia, Brazil, French Guiana, Guyana, Peru, Suriname, Venezuela
Colostethus degranvillei - French Guiana, Suriname
Colostethus flotator - Costa Rica, Panama
Colostethus inguinalis - Colombia
Colostethus insperatus - Ecuador
Colostethus littoralis - Peru
Colostethus marchesianus - Brazil, Colombia, Peru, Venezuela
Colostethus nexipus - Ecuador, Peru
Colostethus nubicola - Colombia, Costa Rica, Panama
Colostethus palmatus - Colombia
Colostethus panamensis - Colombia, Panama
Colostethus peruvianus - Brazil, Peru
Colostethus pittieri - Venezuela
Colostethus pratti - Colombia, Panama
Colostethus sauli - Colombia, Ecuador
Colostethus stepheni - Brazil
Colostethus subpunctatus - Colombia
Colostethus talamancae - Colombia, Costa Rica, Ecuador, Nicaragua, Panama
Colostethus trilineatus - Bolivia, Colombia, Ecuador, Peru
Dendrobates auratus - Colombia, Costa Rica, Nicaragua, Panama, United States of America (Introduced)
Dendrobates biolat - Peru
Dendrobates castaneoticus - Brazil
Dendrobates duellmani - Ecuador, Peru
Dendrobates fantasticus - Peru
Dendrobates fulguritus - Colombia, Panama
Dendrobates galactonotus - Brazil
Dendrobates histrionicus - Colombia
Dendrobates imitator - Peru
Dendrobates lamasi - Peru
Dendrobates leucomelas - Brazil, Colombia, Guyana, Venezuela
Dendrobates minutus - Colombia, Panama
Dendrobates pumilio - Costa Rica, Nicaragua, Panama
Dendrobates quinquevittatus - Brazil, Peru
Dendrobates reticulatus - Ecuador, Peru
Dendrobates tinctorius - Brazil, French Guiana, Guyana, Suriname
Dendrobates truncatus - Colombia
Dendrobates vanzolinii - Brazil, Peru
Dendrobates ventrimaculatus - Brazil, Colombia, Ecuador, French Guiana, Peru
Epipedobates bilinguis - Colombia, Ecuador
Epipedobates bolivianus - Bolivia
Epipedobates boulengeri - Colombia, Ecuador
Epipedobates braccatus - Brazil
Epipedobates flavopictus - Bolivia, Brazil
Epipedobates hahneli - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname
Epipedobates macero - Brazil, Peru
Epipedobates myersi - Colombia
Epipedobates parvulus - Ecuador, Peru
Epipedobates petersi - Brazil, Peru
Epipedobates pictus - Bolivia, Brazil, Peru, Venezuela
Epipedobates simulans - Peru
Epipedobates trivittatus - Bolivia, Brazil, Colombia, Guyana, Peru, Suriname, Venezuela
Phyllobates lugubris - Costa Rica, Nicaragua, Panama

DISCOGLOSSIDAE

Alytes obstetricans - Belgium, France, Germany, Luxembourg, Netherlands, Portugal, Spain, Switzerland, United Kingdom (Introduced)
Discoglossus galganoi - Portugal, Spain
Discoglossus pictus - Algeria, Italy, Malta, Tunisia, France (Introduced), Spain (Introduced)
Discoglossus sardus - France, Italy
Discoglossus scovazzi - Morocco, Spain

HELEOPHRYNIDAE

Heleophryne natalensis - Lesotho, South Africa, Swaziland
Heleophryne orientalis - South Africa
Heleophryne purcelli - South Africa
Heleophryne regis - South Africa

HEMISOTIDAE

Hemisus guineensis - Angola, Benin, Cameroon, Chad, Côte d'Ivoire, Congo, D.R., Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Mozambique, Nigeria, Senegal, Sierra Leone, South Africa, Tanzania, Uganda, Zambia, Zimbabwe
Hemisus marmoratus - Angola, Benin, Botswana, Burkina Faso, Cameroon, Central African Republic, Chad, Côte d'Ivoire, Congo, D.R., Eritrea, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Malawi, Mozambique, Namibia, Nigeria, Senegal, Somalia, South Africa, Sudan, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe
Hemisus microscaphus - Ethiopia
Hemisus olivaceus - Congo, D.R.

HYLIDAE

Acris crepitans - Canada, Mexico, United States of America
Acris gryllus - United States of America
Agalychnis callidryas - Belize, Colombia, Costa Rica, Guatemala, Honduras, Mexico, Nicaragua, Panama
Agalychnis spurrelli - Colombia, Costa Rica, Ecuador, Panama
Aparasphenodon brunoi - Brazil
Aparasphenodon venezolanus - Brazil, Colombia, Venezuela
Aplastodiscus albofrenatus - Brazil
Aplastodiscus albosignatus - Brazil
Aplastodiscus arildae - Brazil
Aplastodiscus callipygius - Brazil
Aplastodiscus cochranae - Brazil
Aplastodiscus ehrhardti - Brazil
Aplastodiscus ibiripitanga - Brazil
Aplastodiscus leucopygius - Brazil
Aplastodiscus perviridis - Argentina, Brazil
Bokermannohyla alvarengai - Brazil
Bokermannohyla astartea - Brazil
Bokermannohyla caramaschii - Brazil
Bokermannohyla carvalhoi - Brazil
Bokermannohyla circumdata - Brazil
Bokermannohyla hylax - Brazil
Bokermannohyla luctuosa - Brazil
Bokermannohyla martinsi - Brazil
Bokermannohyla nanuzae - Brazil
Bokermannohyla pseudopseudis - Brazil
Bokermannohyla saxicola - Brazil
Corythomantis greeningi - Brazil
Cruziohyla calcarifer - Colombia, Costa Rica, Ecuador, Honduras, Nicaragua, Panama
Cruziohyla craspedopus - Brazil, Colombia, Ecuador, Peru
Cyclorana alboguttata - Australia
Cyclorana australis - Australia
Cyclorana brevipes - Australia
Cyclorana cryptotis - Australia
Cyclorana cultripes - Australia
Cyclorana longipes - Australia
Cyclorana maculosa - Australia
Cyclorana maini - Australia
Cyclorana manya - Australia
Cyclorana novaehollandiae - Australia
Cyclorana platycephala - Australia
Cyclorana vagitus - Australia
Cyclorana verrucosa - Australia
Dendropsophus acreanus - Bolivia, Brazil, Peru
Dendropsophus allenorum - Peru
Dendropsophus anataliasiasi - Brazil
Dendropsophus anceps - Brazil
Dendropsophus aperomeus - Peru
Dendropsophus baileyi - Brazil
Dendropsophus berthalutzae - Brazil
Dendropsophus bifurcus - Bolivia, Brazil, Colombia, Ecuador, Peru
Dendropsophus bipunctatus - Brazil
Dendropsophus bogerti - Colombia
Dendropsophus bokermanni - Brazil, Colombia, Ecuador, Peru
Dendropsophus branneri - Brazil
Dendropsophus brevifrons - Brazil, Colombia, Ecuador, French Guiana, Peru
Dendropsophus carnifex - Ecuador
Dendropsophus coffeus - Bolivia
Dendropsophus columbianus - Colombia
Dendropsophus cruzi - Brazil
Dendropsophus decipiens - Brazil
Dendropsophus delarivai - Bolivia
Dendropsophus ebraccatus - Belize, Colombia, Costa Rica, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Panama
Dendropsophus elegans - Brazil
Dendropsophus elianeae - Brazil
Dendropsophus garagoensis - Colombia
Dendropsophus gaucheri - French Guiana, Suriname
Dendropsophus giesleri - Brazil
Dendropsophus haddadi - Brazil
Dendropsophus haraldschultzi - Brazil, Peru
Dendropsophus jimi - Brazil
Dendropsophus koechlini - Bolivia, Brazil, Peru
Dendropsophus labialis - Colombia
Dendropsophus leali - Bolivia, Brazil, Peru
Dendropsophus leucophyllatus - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname
Dendropsophus luteoocellatus - Venezuela
Dendropsophus marmoratus - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela
Dendropsophus mathiassoni - Colombia
Dendropsophus melanargyreus - Bolivia, Brazil, French Guiana, Paraguay, Suriname
Dendropsophus meridianus - Brazil
Dendropsophus microcephalus - Belize, Brazil, Colombia, Costa Rica, French Guiana, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Suriname, Trinidad and Tobago, Venezuela
Dendropsophus microps - Brazil
Dendropsophus minusculus - Colombia, French Guiana, Guyana, Suriname, Trinidad and Tobago, Venezuela
Dendropsophus minutus - Argentina, Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay, Venezuela
Dendropsophus miyatai - Brazil, Colombia, Ecuador, Peru
Dendropsophus nahdereri - Brazil
Dendropsophus nanus - Argentina, Bolivia, Brazil, Paraguay, Uruguay
Dendropsophus oliveirai - Brazil
Dendropsophus padreluna - Colombia
Dendropsophus parviceps - Bolivia, Brazil, Colombia, Ecuador, Peru, Venezuela
Dendropsophus pauiniensis - Brazil
Dendropsophus pelidna - Colombia, Venezuela
Dendropsophus phlebodes - Colombia, Costa Rica, Nicaragua, Panama
Dendropsophus praestans - Colombia
Dendropsophus pseudomeridianus - Brazil
Dendropsophus rhodopeplus - Bolivia, Brazil, Colombia, Ecuador, Peru
Dendropsophus riveroi - Bolivia, Brazil, Colombia, Ecuador, Peru
Dendropsophus robertmertensi - El Salvador, Guatemala, Mexico
Dendropsophus rossalleni - Brazil, Colombia, Ecuador, Peru
Dendropsophus rubicundulus - Bolivia, Brazil, Paraguay
Dendropsophus sanborni - Argentina, Brazil, Paraguay, Uruguay
Dendropsophus sarayacuensis - Bolivia, Brazil, Colombia, Ecuador, Peru, Venezuela

Dendropsophus sartori - Mexico
Dendropsophus schubarti - Bolivia, Brazil, Peru
Dendropsophus seniculus - Brazil
Dendropsophus soaresi - Brazil
Dendropsophus subocularis - Colombia, Panama
Dendropsophus timbeba - Brazil
Dendropsophus triangulum - Bolivia, Brazil, Colombia, Ecuador, Peru
Dendropsophus tritaeniatus - Bolivia, Brazil
Dendropsophus virolinensis - Colombia
Dendropsophus walfordi - Brazil
Dendropsophus werneri - Brazil
Dendropsophus xapuriensis - Brazil
Ecnomiohyla tuberculosa - Brazil, Colombia, Ecuador, Peru
Exerodonta smaragdina - Mexico
Exerodonta sumichrasti - Mexico
Hyla alboguttata - Ecuador
Hyla annectans - China, India, Myanmar, Thailand, Viet Nam
Hyla arborea - Albania, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Macedonia, F.Y.R., France, Georgia, Germany, Greece, Hungary, Italy, Liechtenstein, Lithuania, Luxembourg, Moldova, Netherlands, Poland, Portugal, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom (Native Extinct and Introduced), Latvia (Reintroduced)
Hyla arenicolor - Mexico, United States of America
Hyla avivoca - United States of America
Hyla chinensis - China, Taiwan, Province of China
Hyla chrysoscelis - Canada, United States of America
Hyla cinerea - United States of America, Puerto Rico (Introduced)
Hyla eximia - Mexico
Hyla femoralis - United States of America
Hyla gratiosa - United States of America
Hyla hallowellii - Japan
Hyla immaculata - China
Hyla intermedia - Italy, Slovenia, Switzerland
Hyla japonica - China, Japan, Korea, D.P.R., Korea, Republic, Mongolia, Russian Federation
Hyla meridionalis - Algeria, France, Gibraltar, Italy, Monaco, Morocco, Portugal, Spain (Native and Introduced), Tunisia
Hyla plicata - Mexico
Hyla sanchiangensis - China
Hyla sarda - France, Italy
Hyla savignyi - Armenia, Azerbaijan, Cyprus, Egypt, Georgia, Iran, Iraq, Israel, Jordan, Lebanon, Saudi Arabia, Syria, Turkey, Yemen
Hyla simplex - China, Viet Nam
Hyla squirella - United States of America, Bahamas (Introduced)
Hyla tsinlingensis - China
Hyla versicolor - Canada, United States of America
Hyla vigilans - Colombia, Venezuela
Hyla wrightorum - Mexico, United States of America
Hylomantis aspera - Brazil
Hylomantis buckleyi - Colombia, Ecuador
Hylomantis granulosa - Brazil
Hylomantis hulli - Ecuador, Peru
Hyloscirtus albopunctulatus - Colombia, Ecuador, Peru
Hyloscirtus armatus - Bolivia, Peru
Hyloscirtus lascinius - Colombia, Venezuela
Hyloscirtus palmeri - Colombia, Costa Rica, Ecuador, Panama
Hyloscirtus phyllognathus - Colombia, Ecuador, Peru
Hypsiboas albomarginatus - Brazil
Hypsiboas albopunctatus - Argentina, Bolivia, Brazil, Paraguay, Uruguay
Hypsiboas andinus - Argentina, Bolivia
Hypsiboas atlanticus - Brazil
Hypsiboas balzani - Bolivia, Peru
Hypsiboas benitezi - Brazil, Venezuela
Hypsiboas bischoffi - Brazil
Hypsiboas boans - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Panama, Peru, Suriname, Trinidad and Tobago, Venezuela
Hypsiboas caingua - Argentina, Brazil, Paraguay
Hypsiboas calcaratus - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela
Hypsiboas callipleura - Bolivia
Hypsiboas cinerascens - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela
Hypsiboas crepitans - Brazil, Colombia, French Guiana, Guyana, Panama, Suriname, Trinidad and Tobago, Venezuela
Hypsiboas dentei - Brazil, French Guiana
Hypsiboas faber - Argentina, Brazil, Paraguay
Hypsiboas fasciatus - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname
Hypsiboas geographicus - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Trinidad and Tobago, Venezuela
Hypsiboas goianus - Brazil
Hypsiboas guentheri - Brazil
Hypsiboas hobbsi - Colombia, Venezuela
Hypsiboas hutchinsi - Colombia
Hypsiboas joaquini - Brazil
Hypsiboas lanciformis - Bolivia, Brazil, Colombia, Ecuador, Peru, Venezuela
Hypsiboas lemai - Guyana, Venezuela
Hypsiboas leptolineatus - Brazil
Hypsiboas lundii - Brazil
Hypsiboas marginatus - Brazil
Hypsiboas marianitae - Argentina, Bolivia
Hypsiboas microderma - Brazil, Colombia, Peru
Hypsiboas multifasciatus - Brazil, French Guiana, Guyana, Suriname, Venezuela
Hypsiboas ornatissimus - Brazil, Colombia, French Guiana, Guyana, Suriname, Venezuela
Hypsiboas pardalis - Brazil
Hypsiboas pellucens - Colombia, Ecuador
Hypsiboas picturatus - Colombia, Ecuador
Hypsiboas polytaenius - Brazil
Hypsiboas pombali - Brazil
Hypsiboas prasinus - Brazil
Hypsiboas pugnax - Colombia, Panama, Venezuela
Hypsiboas pulchellus - Argentina, Brazil, Paraguay, Uruguay
Hypsiboas punctatus - Argentina, Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Paraguay, Peru, Suriname, Trinidad and Tobago, Venezuela
Hypsiboas raniceps - Argentina, Bolivia, Brazil, Colombia, French Guiana, Paraguay
Hypsiboas rosenbergi - Colombia, Costa Rica, Ecuador, Panama
Hypsiboas rubracylus - Colombia
Hypsiboas rufitelus - Costa Rica, Nicaragua, Panama
Hypsiboas semiguttatus - Argentina, Brazil
Hypsiboas semilineatus - Brazil
Hypsiboas sibleszi - Guyana, Venezuela
Hypsiboas wavrini - Brazil, Colombia, Venezuela
Isthmohyla lancasteri - Costa Rica, Panama
Isthmohyla pseudopuma - Costa Rica, Panama
Itapotihyla langsdorffii - Argentina, Brazil, Paraguay
Litoria adelaidensis - Australia
Litoria amboinensis - Indonesia, Papua New Guinea
Litoria angiana - Indonesia, Papua New Guinea
Litoria arfakiana - Indonesia, Papua New Guinea
Litoria auae - Papua New Guinea
Litoria bicolor - Australia, Indonesia
Litoria burrowsae - Australia
Litoria caerulea - Australia, Indonesia, Papua New Guinea
Litoria chloris - Australia
Litoria citropa - Australia
Litoria congenita - Indonesia, Papua New Guinea
Litoria coplandi - Australia
Litoria cyclorhynchus - Australia
Litoria dahlii - Australia
Litoria darlingtoni - Papua New Guinea
Litoria dentata - Australia
Litoria dorsalis - Papua New Guinea
Litoria electrica - Australia
Litoria eucnemis - Australia, Indonesia, Papua New Guinea
Litoria ewingii - Australia, New Zealand (Introduced)
Litoria exophthalmia - Papua New Guinea
Litoria fallax - Australia
Litoria genimaculata - Australia, Indonesia, Papua New Guinea
Litoria gilleni - Australia
Litoria gracilenta - Australia
Litoria graminea - Indonesia, Papua New Guinea
Litoria havina - Indonesia, Papua New Guinea
Litoria impura - Papua New Guinea
Litoria inermis - Australia
Litoria infrafrenata - Australia, Indonesia, Papua New Guinea, Solomon Islands, Timor-Leste
Litoria iris - Indonesia, Papua New Guinea
Litoria jervisiensis - Australia
Litoria latopalmata - Australia
Litoria lesueuri - Australia
Litoria littlejohni - Australia
Litoria longirostris - Australia
Litoria louisiadensis - Papua New Guinea
Litoria meiriana - Australia
Litoria microbelos - Australia
Litoria micromembrana - Indonesia, Papua New Guinea
Litoria modica - Indonesia, Papua New Guinea
Litoria moorei - Australia
Litoria multiplica - Papua New Guinea
Litoria napaea - Indonesia
Litoria nasuta - Australia, Indonesia, Papua New Guinea
Litoria nigrofrenata - Australia, Papua New Guinea
Litoria nigropunctata - Indonesia, Papua New Guinea
Litoria pallida - Australia
Litoria paraewingi - Australia
Litoria peronii - Australia
Litoria personata - Australia
Litoria phyllochroa - Australia
Litoria pronimia - Papua New Guinea
Litoria prora - Papua New Guinea
Litoria pygmaea - Indonesia, Papua New Guinea
Litoria revelata - Australia
Litoria rothii - Australia, Papua New Guinea
Litoria rubella - Australia, Indonesia, Papua New Guinea, Timor-Leste
Litoria spinifera - Papua New Guinea
Litoria splendida - Australia
Litoria thesaurensis - Indonesia, Papua New Guinea, Solomon Islands
Litoria timida - Papua New Guinea
Litoria tornieri - Australia
Litoria tyleri - Australia
Litoria verreauxii - Australia
Litoria vocivincens - Papua New Guinea
Litoria watjulumensis - Australia
Litoria wilcoxii - Australia
Litoria wollastoni - Indonesia, Papua New Guinea
Litoria xanthomera - Australia
Lysapsus caraya - Brazil
Lysapsus laevis - Bolivia, Brazil, Guyana
Lysapsus limellum - Argentina, Bolivia, Brazil, Paraguay, Uruguay
Myersiohyla kanaima - Guyana
Nyctimantis rugiceps - Ecuador, Peru
Nyctimystes cheesmani - Papua New Guinea
Nyctimystes disruptus - Papua New Guinea
Nyctimystes foricula - Papua New Guinea
Nyctimystes humeralis - Indonesia, Papua New Guinea
Nyctimystes kubori - Papua New Guinea
Nyctimystes narinosus - Papua New Guinea
Nyctimystes perimetri - Papua New Guinea
Nyctimystes pulcher - Indonesia, Papua New Guinea
Nyctimystes semipalmatus - Papua New Guinea
Nyctimystes trachydermis - Papua New Guinea
Osteocephalus buckleyi - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela
Osteocephalus cabrerai - Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela
Osteocephalus deridens - Ecuador, Peru
Osteocephalus elkejungingerae - Peru
Osteocephalus heyeri - Colombia
Osteocephalus leoniae - Peru
Osteocephalus leprieurii - Bolivia, Brazil, Colombia, French Guiana, Guyana, Peru, Suriname, Venezuela
Osteocephalus mutabor - Ecuador, Peru
Osteocephalus oophagus - Brazil, Colombia, French Guiana
Osteocephalus pearsoni - Bolivia, Brazil, Peru
Osteocephalus planiceps - Colombia, Ecuador, Peru
Osteocephalus subtilis - Brazil
Osteocephalus taurinus - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela
Osteocephalus verruciger - Colombia, Ecuador
Osteocephalus yasuni - Colombia, Ecuador, Peru
Osteopilus brunneus - Jamaica
Osteopilus dominicensis - Dominican Republic, Haiti
Osteopilus septentrionalis - Bahamas, Cayman Islands, Cuba, Anguilla (Introduced), Virgin Islands (British) (Introduced), Costa Rica (Introduced), Guadeloupe (Introduced), Puerto Rico (Introduced), Turks and Caicos Islands (Introduced), United States of America (Introduced), Virgin Islands (United States) (Introduced)
Pachymedusa dacnicolor - Mexico
Phasmahyla cochranae - Brazil
Phasmahyla exilis - Brazil
Phasmahyla guttata - Brazil
Phasmahyla jandaia - Brazil
Phrynomedusa marginata - Brazil
Phyllodytes acuminatus - Brazil
Phyllodytes kautskyi - Brazil
Phyllodytes luteolus - Brazil
Phyllodytes melanomystax - Brazil
Phyllomedusa atelopoides - Bolivia, Brazil, Peru
Phyllomedusa bicolor - Bolivia, Brazil, Colombia, French Guiana, Guyana, Peru, Suriname, Venezuela
Phyllomedusa boliviana - Argentina, Bolivia, Brazil
Phyllomedusa burmeisteri - Brazil
Phyllomedusa camba - Bolivia, Brazil, Peru
Phyllomedusa coelestis - Colombia, Ecuador, Peru
Phyllomedusa distincta - Brazil
Phyllomedusa hypochondrialis - Argentina, Bolivia, Brazil, Colombia, French Guiana, Guyana, Paraguay, Suriname, Venezuela
Phyllomedusa iheringii - Brazil, Uruguay
Phyllomedusa palliata - Bolivia, Brazil, Ecuador, Peru
Phyllomedusa rohdei - Brazil
Phyllomedusa sauvagii - Argentina, Bolivia, Brazil, Paraguay
Phyllomedusa tarsius - Brazil, Colombia, Ecuador, Peru, Venezuela
Phyllomedusa tetraploidea - Argentina, Brazil, Paraguay
Phyllomedusa tomopterna - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela
Phyllomedusa trinitatis - Trinidad and Tobago, Venezuela
Phyllomedusa vaillantii - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela
Phyllomedusa venusta - Colombia, Panama
Plectrohyla bistincta - Mexico
Pseudacris brachyphona - United States of America
Pseudacris brimleyi - United States of America
Pseudacris cadaverina - Mexico, United States of America
Pseudacris clarkii - Mexico, United States of America
Pseudacris crucifer - Canada, United States of America
Pseudacris feriarum - United States of America
Pseudacris nigrita - United States of America
Pseudacris ocularis - United States of America
Pseudacris ornata - United States of America
Pseudacris regilla - Canada (Native and Introduced), Mexico, United States of America
Pseudacris streckeri - United States of America
Pseudacris triseriata - Canada, United States of America
Pseudis bolbodactyla - Brazil
Pseudis cardosoi - Brazil
Pseudis fusca - Brazil
Pseudis minuta - Argentina, Brazil, Uruguay
Pseudis paradoxa - Argentina, Bolivia, Brazil, Colombia, French Guiana, Guyana, Paraguay, Peru, Suriname, Trinidad and Tobago, Venezuela
Pseudis tocantins - Brazil
Scarthyla goinorum - Bolivia, Brazil, Colombia, Peru
Scinax acuminatus - Argentina, Bolivia, Brazil, Paraguay

Scinax agilis - Brazil
Scinax albicans - Brazil
Scinax altae - Panama
Scinax alter - Brazil
Scinax angrensis - Brazil
Scinax argyreornatus - Brazil
Scinax auratus - Brazil
Scinax berthae - Argentina, Brazil, Paraguay, Uruguay
Scinax blairi - Colombia
Scinax boesemani - Brazil, French Guiana, Guyana, Suriname, Venezuela
Scinax boulengeri - Colombia, Costa Rica, Nicaragua, Panama
Scinax brieni - Brazil
Scinax caldarum - Brazil
Scinax cardosoi - Brazil
Scinax carnevallii - Brazil
Scinax catharinae - Brazil
Scinax centralis - Brazil
Scinax chiquitanus - Bolivia, Peru
Scinax constrictus - Brazil
Scinax crospedospilus - Brazil
Scinax cruentommus - Brazil, Colombia, Ecuador, Peru
Scinax cuspidatus - Brazil
Scinax duartei - Brazil
Scinax elaeochraoa - Colombia, Costa Rica, Nicaragua, Panama
Scinax eurydice - Brazil
Scinax exiguus - Venezuela
Scinax flavidus - Colombia, Venezuela
Scinax flavoguttatus - Brazil
Scinax funereus - Brazil, Ecuador, Peru
Scinax fuscomarginatus - Argentina, Bolivia, Brazil, Paraguay
Scinax fuscovarius - Argentina, Bolivia, Brazil, Paraguay, Uruguay
Scinax garbei - Bolivia, Brazil, Colombia, Ecuador, Peru, Venezuela
Scinax granulatus - Argentina, Brazil, Paraguay, Uruguay
Scinax hayii - Brazil
Scinax hiemalis - Brazil
Scinax humilis - Brazil
Scinax ictericus - Colombia, Peru
Scinax karenanneae - Colombia
Scinax kennedyi - Colombia, Venezuela
Scinax lindsayi - Brazil, Colombia
Scinax littoralis - Brazil
Scinax littoreus - Brazil
Scinax longilineus - Brazil
Scinax luizotavioi - Brazil
Scinax machadoi - Brazil
Scinax nasicus - Argentina, Bolivia, Brazil, Paraguay, Uruguay
Scinax nebulosus - Bolivia, Brazil, French Guiana, Guyana, Suriname, Venezuela
Scinax obtriangulatus - Brazil
Scinax pachycrus - Brazil
Scinax parkeri - Bolivia
Scinax pedromedinae - Peru
Scinax perereca - Argentina, Brazil, Paraguay
Scinax perpusillus - Brazil
Scinax proboscideus - French Guiana, Guyana, Suriname
Scinax quinquefasciatus - Colombia, Ecuador (Native and Introduced)
Scinax rizibilis - Brazil
Scinax rostratus - Colombia, Guyana, Panama, Suriname, Venezuela
Scinax ruber - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Panama, Peru, Suriname, Trinidad and Tobago, Venezuela, Martinique (Introduced), Puerto Rico (Introduced), St Lucia (Introduced)
Scinax similis - Brazil
Scinax squalirostris - Argentina, Bolivia, Brazil, Paraguay, Uruguay
Scinax staufferi - Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua
Scinax sugillatus - Colombia, Ecuador
Scinax trilineatus - Brazil, Guyana, Suriname, Venezuela
Scinax uruguayus - Argentina, Brazil, Uruguay
Scinax v-signatus - Brazil
Scinax wandae - Colombia, Venezuela
Scinax x-signatus - Brazil, Colombia, Guyana, Suriname, Venezuela
Smilisca baudinii - Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, United States of America
Smilisca fodiens - Mexico, United States of America
Smilisca phaeota - Colombia, Costa Rica, Ecuador, Honduras, Nicaragua, Panama
Smilisca sila - Colombia, Costa Rica, Panama
Smilisca sordida - Colombia, Costa Rica, Honduras, Nicaragua, Panama
Sphaenorhynchus carneus - Brazil, Colombia, Ecuador, Peru
Sphaenorhynchus dorisae - Brazil, Colombia, Ecuador, Peru
Sphaenorhynchus lacteus - Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Trinidad and Tobago, Venezuela
Sphaenorhynchus orophilus - Brazil
Sphaenorhynchus palustris - Brazil
Sphaenorhynchus planicola - Brazil
Sphaenorhynchus prasinus - Brazil
Sphaenorhynchus surdus - Brazil
Tepuihyla edelcae - Venezuela
Tlalocohyla loquax - Belize, Costa Rica, Guatemala, Honduras, Mexico, Nicaragua
Tlalocohyla picta - Belize, Guatemala, Honduras, Mexico
Tlalocohyla smithii - Mexico
Trachycephalus atlas - Brazil
Trachycephalus coriaceus - Bolivia, Brazil, Ecuador, French Guiana, Peru, Suriname
Trachycephalus hadroceps - French Guiana, Guyana, Suriname
Trachycephalus imitatrix - Argentina, Brazil
Trachycephalus jordani - Colombia, Ecuador, Peru
Trachycephalus mesophaeus - Brazil
Trachycephalus nigromaculatus - Brazil
Trachycephalus resinifictrix - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Peru, Suriname, Venezuela
Trachycephalus venulosus - Argentina, Belize, Bolivia, Brazil, Colombia, Costa Rica, Ecuador, El Salvador, French Guiana, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Venezuela
Triprion petasatus - Belize, Guatemala, Honduras, Mexico
Triprion spatulatus - Mexico

HYPEROLIIDAE

Acanthixalus spinosus - Cameroon, Congo, Congo, D.R., Gabon, Nigeria
Afrixalus aureus - Mozambique, South Africa, Swaziland
Afrixalus brachycnemis - Malawi, Mozambique, Tanzania
Afrixalus crotalus - Malawi, Mozambique, Zimbabwe
Afrixalus delicatus - Kenya, Malawi, Mozambique, Somalia, South Africa, Tanzania
Afrixalus dorsalis - Angola, Cameroon, Congo, Côte d'Ivoire, Congo, D.R., Equatorial Guinea, Gabon, Ghana, Guinea, Liberia, Nigeria, Sierra Leone
Afrixalus equatorialis - Congo, D.R.
Afrixalus fornasini - Kenya, Malawi, Mozambique, South Africa, Tanzania, Zimbabwe
Afrixalus fulvovittatus - Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone
Afrixalus laevis - Cameroon, Congo, D.R., Equatorial Guinea, Gabon, Uganda
Afrixalus leucostictus - Congo, D.R.
Afrixalus osorioi - Angola, Congo, D.R., Kenya, Uganda
Afrixalus paradorsalis - Cameroon, Equatorial Guinea, Gabon, Nigeria
Afrixalus quadrivittatus - Burundi, Cameroon, Central African Republic, Chad, Congo, Congo, D.R., Equatorial Guinea, Ethiopia, Gabon, Kenya, Nigeria, Rwanda, Sudan, Tanzania, Uganda
Afrixalus septentrionalis - Kenya, Tanzania
Afrixalus stuhlmanni - Tanzania
Afrixalus vittiger - Benin, Burkina Faso, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Nigeria, Sierra Leone
Afrixalus weidholzi - Benin, Cameroon, Congo, Côte d'Ivoire, Congo, D.R., Gambia, Ghana, Mali, Nigeria, Senegal, Sierra Leone
Afrixalus wittei - Angola, Congo, D.R., Tanzania, Zambia
Alexteroon hypsiphonus - Cameroon, Congo, Gabon
Alexteroon obstetricans - Cameroon, Equatorial Guinea, Gabon
Chlorolius koehleri - Cameroon, Gabon, Nigeria
Cryptothylax greshoffii - Angola, Cameroon, Central African Republic, Congo, D.R., Equatorial Guinea, Gabon
Heterixalus alboguttatus - Madagascar
Heterixalus andrakata - Madagascar
Heterixalus betsileo - Madagascar
Heterixalus boettgeri - Madagascar
Heterixalus luteostriatus - Madagascar
Heterixalus madagascariensis - Madagascar
Heterixalus punctatus - Madagascar
Heterixalus tricolor - Madagascar
Heterixalus variabilis - Madagascar
Hyperolius acuticeps - Burundi, Congo, D.R., Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Somalia, South Africa, Sudan, Tanzania, Uganda, Zambia, Zimbabwe
Hyperolius adspersus - Unknown
Hyperolius argus - Kenya, Malawi, Mozambique, Somalia, South Africa, Tanzania, Zimbabwe
Hyperolius balfouri - Cameroon, Central African Republic, Congo, D.R., Ethiopia, Kenya, Sudan, Uganda
Hyperolius baumanni - Ghana, Togo
Hyperolius benguellensis - Angola, Botswana, Congo, D.R., Malawi, Zambia, Zimbabwe
Hyperolius bolifambae - Cameroon, Central African Republic, Nigeria
Hyperolius camerunensis - Cameroon
Hyperolius cinnamomeoventris - Angola, Cameroon, Congo, Congo, D.R., Equatorial Guinea, Gabon, Kenya, Uganda, Zambia
Hyperolius concolor - Benin, Cameroon, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Sierra Leone, Togo
Hyperolius fusciventris - Benin, Cameroon, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Sierra Leone, Togo
Hyperolius glandicolor - Kenya, Somalia, Tanzania
Hyperolius guttulatus - Cameroon, Côte d'Ivoire, Gabon, Ghana, Guinea, Liberia, Nigeria, Sierra Leone
Hyperolius igbettensis - Cameroon, Côte d'Ivoire, Ghana, Nigeria
Hyperolius kachalolae - Malawi, Zambia
Hyperolius kivuensis - Angola, Burundi, Congo, D.R., Ethiopia, Kenya, Rwanda, Tanzania, Uganda, Zambia
Hyperolius kuligae - Cameroon, Gabon, Uganda
Hyperolius lamottei - Côte d'Ivoire (Native and Introduced), Guinea, Liberia, Senegal, Sierra Leone
Hyperolius langi - Congo, D.R.
Hyperolius lateralis - Burundi, Congo, D.R., Kenya, Rwanda, Tanzania, Uganda
Hyperolius major - Congo, D.R., Zambia
Hyperolius marginatus - Congo, D.R., Malawi, Mozambique, Tanzania, Zambia, Zimbabwe
Hyperolius mariae - Congo, D.R., Kenya, Tanzania, Zambia
Hyperolius marmoratus - Malawi, Mozambique, South Africa, Swaziland, Zimbabwe
Hyperolius mitchelli - Malawi, Mozambique, Tanzania
Hyperolius molleri - São Tomé and Príncipe
Hyperolius montanus - Kenya
Hyperolius mosaicus - Cameroon, Gabon
Hyperolius nasutus - Angola, Botswana, Congo, Gabon, Namibia, Zambia
Hyperolius nitidulus - Benin, Burkina Faso, Cameroon, Central African Republic, Côte d'Ivoire, Gambia, Ghana, Guinea, Mali, Nigeria, Senegal, Sierra Leone
Hyperolius occidentalis - Gambia, Guinea, Guinea-Bissau, Senegal, Sierra Leone
Hyperolius ocellatus - Angola, Cameroon, Central African Republic, Congo, Congo, D.R., Equatorial Guinea, Gabon, Nigeria, Uganda
Hyperolius parallelus - Angola, Botswana, Congo, Congo, D.R., Namibia, Zambia
Hyperolius pardalis - Cameroon, Central African Republic, Congo, Equatorial Guinea, Gabon
Hyperolius parkeri - Kenya, Mozambique, Tanzania
Hyperolius phantasticus - Cameroon, Central African Republic, Congo, Congo, D.R., Gabon
Hyperolius picturatus - Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone
Hyperolius pictus - Malawi, Tanzania, Zambia
Hyperolius platyceps - Angola, Cameroon, Central African Republic, Congo, Congo, D.R., Equatorial Guinea, Gabon
Hyperolius pseudargus - Tanzania
Hyperolius puncticulatus - Kenya, Malawi, Tanzania
Hyperolius pusillus - Botswana, Kenya, Malawi, Mozambique, Somalia, South Africa, Swaziland, Tanzania, Zimbabwe
Hyperolius pyrrhodictyon - Zambia
Hyperolius quinquevittatus - Angola, Congo, D.R., Malawi, Tanzania, Zambia
Hyperolius reesi - Tanzania
Hyperolius rhodesianus - Zimbabwe
Hyperolius schoutedeni - Congo, D.R.
Hyperolius semidiscus - South Africa, Swaziland
Hyperolius sheldricki - Kenya
Hyperolius spinigularis - Malawi, Tanzania
Hyperolius steindachneri - Angola, Congo, D.R., Zambia
Hyperolius swynnertoni - Mozambique, Zimbabwe
Hyperolius sylvaticus - Cameroon, Côte d'Ivoire, Ghana, Nigeria
Hyperolius tuberculatus - Cameroon, Central African Republic, Congo, Congo, D.R., Equatorial Guinea, Gabon, Nigeria
Hyperolius tuberilinguis - Kenya, Malawi, Mozambique, South Africa, Swaziland, Tanzania, Zimbabwe
Hyperolius viridiflavus - Burundi, Congo, D.R., Ethiopia, Kenya, Rwanda, Sudan, Tanzania, Uganda
Kassina cassinoides - Burkina Faso, Cameroon, Côte d'Ivoire, Gambia, Ghana, Mali
Kassina fusca - Burkina Faso, Côte d'Ivoire, Ghana, Mali, Niger, Nigeria, Senegal
Kassina kuvangensis - Angola, Zambia
Kassina maculata - Kenya, Malawi, Mozambique, South Africa, Swaziland, Tanzania, Zimbabwe
Kassina maculifer - Ethiopia, Kenya, Somalia
Kassina maculosa - Cameroon, Central African Republic, Congo, D.R.
Kassina schioetzi - Côte d'Ivoire, Guinea
Kassina senegalensis - Angola, Botswana, Burkina Faso, Cameroon, Central African Republic, Chad, Côte d'Ivoire, Congo, D.R., Ethiopia, Gambia, Ghana, Guinea, Kenya, Lesotho, Malawi, Mali, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe
Kassina somalica - Eritrea, Ethiopia, Kenya, Somalia, Tanzania
Kassinula wittei - Congo, D.R., Zambia
Leptopelis anchietae - Angola
Leptopelis argenteus - Tanzania
Leptopelis aubryi - Angola, Cameroon, Central African Republic, Congo, Congo, D.R., Equatorial Guinea, Gabon, Nigeria
Leptopelis bocagii - Angola, Burundi, Cameroon, Congo, D.R., Ethiopia, Kenya, Namibia, Rwanda, Tanzania, Zambia, Zimbabwe
Leptopelis boulengeri - Cameroon, Congo, Congo, D.R., Equatorial Guinea, Gabon, Nigeria
Leptopelis brevirostris - Cameroon, Equatorial Guinea, Gabon, Nigeria
Leptopelis broadleyi - Malawi, Mozambique, Zimbabwe
Leptopelis bufonides - Burkina Faso, Cameroon, Chad, Gambia, Ghana, Nigeria, Senegal
Leptopelis calcaratus - Cameroon, Central African Republic, Congo, D.R., Equatorial Guinea, Gabon, Nigeria
Leptopelis christyi - Cameroon, Congo, D.R., Gabon, Tanzania, Uganda
Leptopelis concolor - Kenya, Somalia, Tanzania
Leptopelis cynnamomeus - Angola, Congo, D.R., Zambia
Leptopelis flavomaculatus - Kenya, Malawi, Mozambique, Tanzania, Zimbabwe
Leptopelis gramineus - Ethiopia
Leptopelis hyloides - Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Sierra Leone, Togo
Leptopelis millsoni - Cameroon, Central African Republic, Congo, Congo, D.R., Equatorial Guinea, Gabon, Nigeria
Leptopelis modestus - Cameroon, Congo, D.R., Equatorial Guinea, Kenya, Nigeria
Leptopelis mossambicus - Malawi, Mozambique, South Africa, Swaziland, Zimbabwe
Leptopelis natalensis - South Africa
Leptopelis nordequatorialis - Cameroon, Nigeria
Leptopelis notatus - Angola, Cameroon, Congo, Congo, D.R., Equatorial Guinea, Gabon, Nigeria
Leptopelis ocellatus - Cameroon, Congo, Congo, D.R., Equatorial Guinea, Gabon
Leptopelis omissus - Cameroon, Congo, Gabon, Nigeria

Leptopelis oryi - Congo, D.R., Uganda
Leptopelis parbocagii - Angola, Congo, D.R., Malawi, Mozambique, Tanzania, Zambia
Leptopelis rufus - Cameroon, Congo, Congo, D.R., Equatorial Guinea, Gabon, Nigeria
Leptopelis viridis - Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Congo, D.R., Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Niger, Nigeria, Senegal, Sierra Leone, Togo
Opisthothylax immaculatus - Cameroon, Congo, D.R., Equatorial Guinea, Gabon, Nigeria
Paracassina kounhiensis - Ethiopia
Paracassina obscura - Ethiopia
Phlyctimantis boulengeri - Cameroon, Côte d'Ivoire, Equatorial Guinea, Ghana, Guinea, Liberia, Nigeria
Phlyctimantis leonardi - Congo, Congo, D.R., Equatorial Guinea, Gabon
Phlyctimantis verrucosus - Congo, D.R., Rwanda, Uganda
Semnodactylus wealii - Lesotho, South Africa, Swaziland
Tachycnemis seychellensis - Seychelles

LEPTODACTYLIDAE

Adelophryne adiastola - Colombia, Peru
Adelophryne gutturosa - Brazil, French Guiana, Guyana, Suriname, Venezuela
Adenomera andreae - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela
Adenomera araucaria - Brazil
Adenomera bokermanni - Brazil
Adenomera diptyx - Argentina, Bolivia, Paraguay
Adenomera heyeri - French Guiana
Adenomera hylaedactyla - Argentina, Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Paraguay, Peru, Suriname, Trinidad and Tobago, Venezuela
Adenomera marmorata - Brazil
Adenomera martinezi - Brazil
Alsodes gargola - Argentina
Barycholos pulcher - Ecuador
Barycholos ternetzi - Brazil
Batrachyla antartandica - Argentina, Chile
Batrachyla leptopus - Argentina, Chile
Batrachyla taeniata - Argentina, Chile
Ceratophrys aurita - Brazil
Ceratophrys calcarata - Colombia, Venezuela
Ceratophrys cornuta - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname
Ceratophrys cranwelli - Argentina, Bolivia, Brazil, Paraguay
Chacophrys pierottii - Argentina, Bolivia, Paraguay
Craugastor anomalus - Colombia, Ecuador
Craugastor augusti - Mexico, United States of America
Craugastor bransfordii - Costa Rica, Nicaragua, Panama
Craugastor bufoniformis - Colombia, Costa Rica, Panama
Craugastor cerasinus - Costa Rica, Honduras, Nicaragua, Panama
Craugastor crassidigitus - Colombia, Costa Rica, Panama
Craugastor fitzingeri - Colombia, Costa Rica, Honduras, Nicaragua, Panama
Craugastor gollmeri - Costa Rica, Panama
Craugastor loki - Belize, El Salvador, Guatemala, Honduras, Mexico
Craugastor longirostris - Colombia, Ecuador, Panama
Craugastor megacephalus - Costa Rica, Honduras, Nicaragua, Panama
Craugastor mexicanus - Mexico
Craugastor mimus - Costa Rica, Honduras, Nicaragua
Craugastor noblei - Costa Rica, Honduras, Nicaragua, Panama
Craugastor opimus - Colombia, Panama
Craugastor polyptychus - Costa Rica, Nicaragua, Panama
Craugastor raniformis - Colombia, Panama
Craugastor rugosus - Costa Rica, Panama
Craugastor rugulosus - Mexico
Craugastor rupinius - El Salvador, Guatemala, Mexico
Craugastor stejnegerianus - Costa Rica, Panama
Craugastor talamancae - Costa Rica, Nicaragua, Panama
Craugastor underwoodi - Costa Rica, Panama
Craugastor vocalis - Mexico
Craugastor zygodactylus - Colombia
Crossodactylus caramaschii - Brazil
Crossodactylus gaudichaudii - Brazil
Cycloramphus boraceiensis - Brazil
Cycloramphus dubius - Brazil
Cycloramphus fulginosus - Brazil
Cycloramphus rhyakonastes - Brazil
Edalorhina perezi - Brazil, Colombia, Ecuador, Peru
Eleutherodactylus aaptus - Colombia, Peru
Eleutherodactylus abbotti - Dominican Republic, Haiti
Eleutherodactylus acatallelus - Colombia
Eleutherodactylus achatinus - Colombia, Ecuador, Panama
Eleutherodactylus acuminatus - Brazil, Colombia, Ecuador, Peru
Eleutherodactylus altamazonicus - Brazil, Colombia, Ecuador, Peru
Eleutherodactylus antillensis - Virgin Islands (British), Puerto Rico, Virgin Islands (United States), Panama (Introduced)
Eleutherodactylus appendiculatus - Colombia, Ecuador
Eleutherodactylus atkinsi - Cuba
Eleutherodactylus auriculatus - Cuba
Eleutherodactylus babax - Colombia, Ecuador
Eleutherodactylus bilineatus - Brazil
Eleutherodactylus binotatus - Brazil
Eleutherodactylus bogotensis - Colombia
Eleutherodactylus bolbodactylus - Brazil
Eleutherodactylus boulengeri - Colombia
Eleutherodactylus brevifrons - Colombia
Eleutherodactylus brittoni - Puerto Rico
Eleutherodactylus buccinator - Brazil, Peru
Eleutherodactylus buckleyi - Colombia, Ecuador
Eleutherodactylus cajamarcensis - Ecuador, Peru
Eleutherodactylus caprifer - Colombia, Ecuador
Eleutherodactylus carvalhoi - Brazil, Colombia, Ecuador, Peru
Eleutherodactylus caryophyllaceus - Colombia, Costa Rica, Panama
Eleutherodactylus cerastes - Colombia, Ecuador
Eleutherodactylus chalceus - Colombia, Ecuador
Eleutherodactylus chiastonotus - Brazil, French Guiana, Suriname
Eleutherodactylus chloronotus - Colombia, Ecuador
Eleutherodactylus cochranae - Virgin Islands (British), Puerto Rico, Virgin Islands (United States)
Eleutherodactylus conspicillatus - Brazil, Colombia, Ecuador, Peru
Eleutherodactylus coqui - Puerto Rico, United States of America (Introduced), Virgin Islands (United States) (Introduced)
Eleutherodactylus croceoinguinis - Colombia, Ecuador, Peru
Eleutherodactylus cruentus - Costa Rica, Panama
Eleutherodactylus cruralis - Bolivia, Peru
Eleutherodactylus cuneatus - Cuba
Eleutherodactylus curtipes - Colombia, Ecuador
Eleutherodactylus cystignathoides - Mexico, United States of America (Native and Introduced)
Eleutherodactylus danae - Bolivia, Peru
Eleutherodactylus diadematus - Brazil, Ecuador, Peru
Eleutherodactylus diastema - Costa Rica, Honduras, Nicaragua, Panama
Eleutherodactylus discoidalis - Argentina, Bolivia
Eleutherodactylus erythropleura - Colombia
Eleutherodactylus eurydactylus - Brazil, Peru
Eleutherodactylus factiosus - Colombia
Eleutherodactylus fenestratus - Bolivia, Brazil, Peru
Eleutherodactylus fraudator - Bolivia
Eleutherodactylus gaigeae - Colombia, Costa Rica, Panama
Eleutherodactylus gossei - Jamaica
Eleutherodactylus gualteri - Brazil
Eleutherodactylus guentheri - Argentina, Brazil
Eleutherodactylus gularis - Colombia, Ecuador
Eleutherodactylus guttilatus - Mexico, United States of America
Eleutherodactylus gutturalis - Brazil, French Guiana, Suriname
Eleutherodactylus hoehnei - Brazil
Eleutherodactylus ibischi - Bolivia
Eleutherodactylus imitatrix - Peru
Eleutherodactylus inguinalis - French Guiana, Guyana, Suriname
Eleutherodactylus inoptatus - Dominican Republic, Haiti
Eleutherodactylus johnstonei - Anguilla, Antigua and Barbuda, Barbados, Dominica, Grenada, Guadeloupe, Martinique, Montserrat, Netherlands Antilles, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, Colombia (Introduced), French Guiana (Introduced), Guyana (Introduced), Jamaica (Introduced), Panama (Introduced), Trinidad and Tobago (Introduced), Venezuela (Introduced)
Eleutherodactylus juipoca - Brazil
Eleutherodactylus labiosus - Colombia, Ecuador
Eleutherodactylus lacrimosus - Brazil, Colombia, Ecuador, Peru
Eleutherodactylus lacteus - Brazil
Eleutherodactylus lanthanites - Brazil, Colombia, Ecuador, Peru
Eleutherodactylus latidiscus - Colombia, Ecuador
Eleutherodactylus leoni - Colombia, Ecuador
Eleutherodactylus leptolophus - Colombia
Eleutherodactylus llojsintuta - Bolivia
Eleutherodactylus lymani - Ecuador, Peru
Eleutherodactylus lythrodes - Peru
Eleutherodactylus madidi - Bolivia
Eleutherodactylus malkini - Brazil, Colombia, Ecuador, Peru
Eleutherodactylus mantipus - Colombia
Eleutherodactylus marmoratus - Brazil, French Guiana, Guyana, Suriname, Venezuela
Eleutherodactylus marnockii - United States of America
Eleutherodactylus martiae - Brazil, Colombia, Ecuador, Peru
Eleutherodactylus medemi - Colombia
Eleutherodactylus mendax - Peru
Eleutherodactylus moro - Colombia, Costa Rica, Panama
Eleutherodactylus myersi - Colombia
Eleutherodactylus nasutus - Brazil
Eleutherodactylus nervicus - Colombia
Eleutherodactylus nicefori - Colombia, Venezuela
Eleutherodactylus nigrovittatus - Colombia, Ecuador, Peru
Eleutherodactylus nitidus - Mexico
Eleutherodactylus obmutescens - Colombia
Eleutherodactylus ockendeni - Brazil, Colombia, Ecuador, Peru
Eleutherodactylus octavioi - Brazil
Eleutherodactylus orcesi - Ecuador
Eleutherodactylus paisa - Colombia
Eleutherodactylus palmeri - Colombia
Eleutherodactylus parvillus - Colombia, Ecuador
Eleutherodactylus parvus - Brazil
Eleutherodactylus paulodutrai - Brazil
Eleutherodactylus paululus - Ecuador
Eleutherodactylus peraticus - Colombia
Eleutherodactylus permixtus - Colombia
Eleutherodactylus peruvianus - Brazil, Colombia, Ecuador, Peru
Eleutherodactylus phoxocephalus - Ecuador, Peru
Eleutherodactylus piceus - Colombia
Eleutherodactylus pipilans - Guatemala, Mexico
Eleutherodactylus planirostris - Bahamas, Cayman Islands, Cuba, Jamaica (Introduced), United States of America (Introduced)
Eleutherodactylus platydactylus - Bolivia, Peru
Eleutherodactylus pluvicanorus - Bolivia
Eleutherodactylus prolixodiscus - Colombia, Venezuela
Eleutherodactylus pseudoacuminatus - Colombia, Ecuador
Eleutherodactylus pulvinatus - French Guiana, Guyana, Venezuela
Eleutherodactylus quaquaversus - Colombia, Ecuador, Peru
Eleutherodactylus quidditus - Colombia, Panama
Eleutherodactylus racemus - Colombia
Eleutherodactylus ramagii - Brazil
Eleutherodactylus restrepoi - Colombia
Eleutherodactylus rhabdolaemus - Bolivia, Peru
Eleutherodactylus ridens - Colombia, Costa Rica, Honduras, Nicaragua, Panama
Eleutherodactylus riparius - Cuba
Eleutherodactylus samaipatae - Bolivia
Eleutherodactylus skydmainos - Brazil, Peru
Eleutherodactylus subsigillatus - Colombia, Ecuador
Eleutherodactylus sulcatus - Brazil, Colombia, Ecuador, Peru
Eleutherodactylus taeniatus - Colombia, Panama
Eleutherodactylus terraebolivaris - Venezuela
Eleutherodactylus thectopternus - Colombia
Eleutherodactylus thymelensis - Colombia, Ecuador
Eleutherodactylus tinker - Colombia
Eleutherodactylus toftae - Bolivia, Brazil, Peru
Eleutherodactylus unistrigatus - Colombia, Ecuador
Eleutherodactylus uranobates - Colombia
Eleutherodactylus variabilis - Brazil, Colombia, Ecuador, Peru
Eleutherodactylus varleyi - Cuba
Eleutherodactylus venancioi - Brazil
Eleutherodactylus ventrimarmoratus - Bolivia, Ecuador, Peru
Eleutherodactylus viejas - Colombia
Eleutherodactylus vilarsi - Brazil, Colombia, Peru, Venezuela
Eleutherodactylus vinhai - Brazil
Eleutherodactylus vocator - Costa Rica, Panama
Eleutherodactylus walkeri - Ecuador
Eleutherodactylus weinlandi - Dominican Republic, Haiti
Eleutherodactylus w-nigrum - Colombia, Ecuador
Eleutherodactylus zeuctotylus - Brazil, Colombia, French Guiana, Guyana, Suriname, Venezuela
Eleutherodactylus zimmermanae - Brazil
Euparkerella brasiliensis - Brazil
Euparkerella cochranae - Brazil
Eupsophus calcaratus - Argentina, Chile
Eupsophus emiliopugini - Argentina, Chile
Flectonotus fissilis - Brazil
Flectonotus goeldii - Brazil
Flectonotus ohausi - Brazil
Flectonotus pygmaeus - Colombia, Venezuela
Gastrotheca albolineata - Brazil
Gastrotheca argenteovirens - Colombia
Gastrotheca cornuta - Colombia, Costa Rica, Ecuador, Panama
Gastrotheca dunni - Colombia
Gastrotheca fissipes - Brazil
Gastrotheca griswoldi - Peru
Gastrotheca longipes - Ecuador, Peru
Gastrotheca marsupiata - Bolivia, Peru
Gastrotheca microdiscus - Brazil
Gastrotheca monticola - Ecuador, Peru
Gastrotheca nicefori - Colombia, Panama, Venezuela
Gastrotheca peruana - Peru
Gastrotheca piperata - Bolivia
Gastrotheca testudinea - Bolivia, Ecuador, Peru
Hemiphractus helioi - Colombia, Ecuador, Peru
Hemiphractus proboscideus - Colombia, Ecuador, Peru
Hemiphractus scutatus - Brazil, Colombia, Ecuador, Peru
Hydrolaetare dantasi - Brazil
Hydrolaetare schmidti - Brazil, Colombia, French Guiana, Peru
Hylodes asper - Brazil
Hylodes lateristrigatus - Brazil
Hylodes meridionalis - Brazil
Hylodes nasus - Brazil
Hylodes ornatus - Brazil
Hylodes perplicatus - Brazil
Hylodes phyllodes - Brazil
Hylorina sylvatica - Argentina, Chile
Ischnocnema quixensis - Bolivia, Brazil, Colombia, Ecuador, Peru
Ischnocnema sanctaecrucis - Bolivia
Ischnocnema sanderi - Bolivia
Lepidobatrachus laevis - Argentina, Bolivia, Paraguay
Lepidobatrachus llanensis - Argentina, Paraguay
Leptodactylus albilabris - Virgin Islands (British), Puerto Rico, Virgin Islands (United States)
Leptodactylus bolivianus - Bolivia, Brazil, Colombia, Costa Rica, Ecuador, French Guiana, Guyana, Nicaragua, Panama, Peru, Suriname, Trinidad and Tobago, Venezuela
Leptodactylus bufonius - Argentina, Bolivia, Brazil, Paraguay
Leptodactylus caatingae - Brazil
Leptodactylus chaquensis - Argentina, Bolivia, Brazil, Paraguay, Uruguay
Leptodactylus colombiensis - Colombia, Venezuela
Leptodactylus cunicularius - Brazil
Leptodactylus didymus - Bolivia, Peru
Leptodactylus diedrus - Brazil, Colombia, Venezuela
Leptodactylus elenae - Argentina, Bolivia, Brazil, Paraguay
Leptodactylus flavopictus - Brazil
Leptodactylus fragilis - Belize, Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, United States of America, Venezuela

Leptodactylus furnarius - Brazil, Uruguay
Leptodactylus fuscus - Argentina, Bolivia, Brazil, Colombia, French Guiana, Guyana, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Venezuela
Leptodactylus gracilis - Argentina, Bolivia, Brazil, Paraguay, Uruguay
Leptodactylus griseigularis - Bolivia, Peru
Leptodactylus jolyi - Brazil
Leptodactylus knudseni - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela
Leptodactylus labrosus - Ecuador, Peru
Leptodactylus labyrinthicus - Argentina, Bolivia, Brazil, Paraguay, Venezuela
Leptodactylus latinasus - Argentina, Bolivia, Brazil, Paraguay, Uruguay
Leptodactylus leptodactyloides - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela
Leptodactylus lithonaetes - Colombia, Venezuela
Leptodactylus longirostris - Brazil, Colombia, French Guiana, Guyana, Suriname, Venezuela
Leptodactylus marambaiae - Brazil
Leptodactylus melanonotus - Belize, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama
Leptodactylus myersi - Brazil, French Guiana, Suriname
Leptodactylus mystaceus - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela
Leptodactylus mystacinus - Argentina, Bolivia, Brazil, Paraguay, Uruguay
Leptodactylus natalensis - Brazil
Leptodactylus notoaktites - Brazil
Leptodactylus ocellatus - Argentina, Bolivia, Brazil, Colombia, French Guiana, Guyana, Paraguay, Suriname, Trinidad and Tobago, Uruguay, Venezuela
Leptodactylus pallidirostris - Brazil, French Guiana, Guyana, Suriname, Venezuela
Leptodactylus pentadactylus - Bolivia, Brazil, Colombia, Costa Rica, Ecuador, French Guiana, Guyana, Honduras, Nicaragua, Panama, Peru, Suriname, Venezuela
Leptodactylus petersii - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela
Leptodactylus plaumanni - Argentina, Brazil
Leptodactylus podicipinus - Argentina, Bolivia, Brazil, Paraguay, Uruguay
Leptodactylus poecilochilus - Colombia, Costa Rica, Panama, Venezuela
Leptodactylus pustulatus - Brazil
Leptodactylus rhodomystax - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname
Leptodactylus rhodonotus - Bolivia, Brazil, Colombia, Peru
Leptodactylus riveroi - Brazil, Colombia, Venezuela
Leptodactylus rugosus - Guyana, Venezuela
Leptodactylus sabanensis - Venezuela
Leptodactylus spixi - Brazil
Leptodactylus stenodema - Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname
Leptodactylus syphax - Bolivia, Brazil, Paraguay
Leptodactylus troglodytes - Brazil
Leptodactylus validus - Grenada, St Vincent and the Grenadines, Trinidad and Tobago
Leptodactylus ventrimaculatus - Colombia, Ecuador
Leptodactylus wagneri - Brazil, Colombia, Ecuador, Peru
Limnomedusa macroglossa - Argentina, Brazil, Uruguay
Lithodytes lineatus - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela
Macrogenioglottus alipioi - Brazil
Megaelosia goeldii - Brazil
Odontophrynus americanus - Argentina, Brazil, Paraguay, Uruguay
Odontophrynus carvalhoi - Brazil
Odontophrynus cordobae - Argentina
Odontophrynus cultripes - Brazil
Odontophrynus lavillai - Argentina
Odontophrynus occidentalis - Argentina
Phrynopus laplacai - Bolivia
Phyllonastes carrascoicola - Bolivia
Phyllonastes myrmecoides - Bolivia, Brazil, Colombia, Peru
Physalaemus aguirrei - Brazil
Physalaemus albifrons - Brazil
Physalaemus albonotatus - Argentina, Bolivia, Brazil, Paraguay
Physalaemus biligonigerus - Argentina, Bolivia, Brazil, Paraguay, Uruguay
Physalaemus centralis - Bolivia, Brazil, Paraguay
Physalaemus cicada - Brazil
Physalaemus crombiei - Brazil
Physalaemus cuqui - Argentina, Bolivia
Physalaemus cuvieri - Argentina, Brazil, Paraguay
Physalaemus ephippifer - Brazil, French Guiana, Guyana, Suriname, Venezuela
Physalaemus erikae - Brazil
Physalaemus fernandezae - Argentina, Uruguay
Physalaemus fischeri - Colombia, Venezuela
Physalaemus fuscomaculatus - Brazil, Paraguay
Physalaemus gracilis - Argentina, Brazil, Uruguay
Physalaemus henselii - Argentina, Brazil, Uruguay
Physalaemus kroyeri - Brazil
Physalaemus lisei - Brazil
Physalaemus maculiventris - Brazil
Physalaemus montubio - Ecuador
Physalaemus nanus - Brazil
Physalaemus nattereri - Bolivia, Brazil, Paraguay
Physalaemus olfersii - Brazil
Physalaemus petersi - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Peru
Physalaemus pustulatus - Ecuador, Peru
Physalaemus pustulosus - Belize, Colombia, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Trinidad and Tobago, Venezuela
Physalaemus randi - Ecuador
Physalaemus riograndensis - Argentina, Brazil, Paraguay, Uruguay
Physalaemus santafecinus - Argentina
Physalaemus signifer - Brazil
Physalaemus spinigerus - Brazil
Physzelaphryne miriamae - Brazil
Pleurodema borellii - Argentina
Pleurodema brachyops - Brazil, Colombia, Guyana, Panama, Venezuela, Netherlands Antilles (Introduced)
Pleurodema bufonina - Argentina, Chile
Pleurodema cinerea - Argentina, Bolivia, Peru
Pleurodema diplolistris - Brazil
Pleurodema guayapae - Argentina, Bolivia
Pleurodema marmorata - Argentina, Bolivia, Chile, Peru
Pleurodema nebulosa - Argentina
Pleurodema thaul - Argentina, Chile
Pleurodema tucumana - Argentina
Proceratophrys appendiculata - Brazil
Proceratophrys avelinoi - Argentina, Brazil
Proceratophrys boiei - Brazil
Proceratophrys brauni - Brazil
Proceratophrys cristiceps - Brazil
Proceratophrys fryi - Brazil
Proceratophrys goyana - Brazil
Proceratophrys laticeps - Brazil
Proceratophrys melanopogon - Brazil
Proceratophrys schirchi - Brazil
Proceratophrys subguttata - Brazil
Pseudopaludicola boliviana - Argentina, Bolivia, Brazil, Colombia, Guyana, Paraguay, Suriname, Venezuela
Pseudopaludicola ceratophryes - Brazil, Colombia, Peru
Pseudopaludicola falcipes - Argentina, Brazil, Paraguay, Uruguay
Pseudopaludicola llanera - Colombia, Venezuela
Pseudopaludicola mystacalis - Argentina, Bolivia, Brazil, Paraguay
Pseudopaludicola pusilla - Colombia, Venezuela
Pseudopaludicola saltica - Brazil
Pseudopaludicola ternetzi - Brazil
Scythrophrys sawayae - Brazil
Stefania evansi - Guyana
Stefania ginesi - Venezuela
Stefania scalae - Guyana, Venezuela
Stefania woodleyi - Guyana
Telmatobius rimac - Peru
Thoropa megatympanum - Brazil
Thoropa miliaris - Brazil
Vanzolinius discodactylus - Bolivia, Brazil, Colombia, Ecuador, Peru
Zachaenus parvulus - Brazil

LIMNODYNASTIDAE

Heleioporus albopunctatus - Australia
Heleioporus barycragus - Australia
Heleioporus eyrei - Australia
Heleioporus inornatus - Australia
Heleioporus psammophilus - Australia
Lechriodus aganoposis - Indonesia, Papua New Guinea
Lechriodus fletcheri - Australia
Lechriodus melanopyga - Indonesia, Papua New Guinea
Lechriodus platyceps - Indonesia
Limnodynastes convexiusculus - Australia, Indonesia, Papua New Guinea
Limnodynastes depressus - Australia
Limnodynastes dorsalis - Australia
Limnodynastes dumerilii - Australia
Limnodynastes fletcheri - Australia
Limnodynastes interioris - Australia
Limnodynastes lignarius - Australia
Limnodynastes ornatus - Australia
Limnodynastes peronii - Australia
Limnodynastes salmini - Australia
Limnodynastes spenceri - Australia
Limnodynastes tasmaniensis - Australia
Limnodynastes terraereginae - Australia
Mixophyes fasciolatus - Australia
Mixophyes schevilli - Australia
Neobatrachus albipes - Australia
Neobatrachus aquilonius - Australia
Neobatrachus centralis - Australia
Neobatrachus fulvus - Australia
Neobatrachus kunapalari - Australia
Neobatrachus pelobatoides - Australia
Neobatrachus pictus - Australia
Neobatrachus sudelli - Australia
Neobatrachus sutor - Australia
Neobatrachus wilsmorei - Australia
Notaden bennettii - Australia
Notaden melanoscaphus - Australia
Notaden nichollsi - Australia

MANTELLIDAE

Aglyptodactylus madagascariensis - Madagascar
Aglyptodactylus securifer - Madagascar
Boophis albilabris - Madagascar
Boophis albipunctatus - Madagascar
Boophis ankaratra - Madagascar
Boophis boehmei - Madagascar
Boophis bottae - Madagascar
Boophis doulioti - Madagascar
Boophis erythrodactylus - Madagascar
Boophis goudotii - Madagascar
Boophis guibei - Madagascar
Boophis idae - Madagascar
Boophis lichenoides - Madagascar
Boophis luteus - Madagascar
Boophis madagascariensis - Madagascar
Boophis marojezensis - Madagascar
Boophis microtympanum - Madagascar
Boophis miniatus - Madagascar
Boophis opisthodon - Madagascar
Boophis pauliani - Madagascar
Boophis picturatus - Madagascar
Boophis pyrrhus - Madagascar
Boophis rappiodes - Madagascar
Boophis reticulatus - Madagascar
Boophis tasymena - Madagascar
Boophis tephraeomystax - Madagascar
Boophis viridis - Madagascar
Boophis vittatus - Madagascar
Laliostoma labrosum - Madagascar
Mantella baroni - Madagascar
Mantella betsileo - Madagascar
Mantella nigricans - Madagascar
Mantidactylus aerumnalis - Madagascar
Mantidactylus aglavei - Madagascar
Mantidactylus alutus - Madagascar
Mantidactylus ambreensis - Madagascar
Mantidactylus argenteus - Madagascar
Mantidactylus asper - Madagascar
Mantidactylus betsileanus - Madagascar
Mantidactylus bicalcaratus - Madagascar
Mantidactylus biporus - Madagascar
Mantidactylus blommersae - Madagascar
Mantidactylus boulengeri - Madagascar
Mantidactylus brevipalmatus - Madagascar
Mantidactylus charlotteae - Madagascar
Mantidactylus curtus - Madagascar
Mantidactylus depressiceps - Madagascar
Mantidactylus domerguei - Madagascar
Mantidactylus femoralis - Madagascar
Mantidactylus fimbriatus - Madagascar
Mantidactylus flavobrunneus - Madagascar
Mantidactylus grandidieri - Madagascar
Mantidactylus grandisonae - Madagascar
Mantidactylus granulatus - Madagascar
Mantidactylus guttulatus - Madagascar
Mantidactylus kely - Madagascar
Mantidactylus liber - Madagascar
Mantidactylus lugubris - Madagascar
Mantidactylus luteus - Madagascar
Mantidactylus majori - Madagascar
Mantidactylus malagasius - Madagascar
Mantidactylus melanopleura - Madagascar
Mantidactylus mocquardi - Madagascar
Mantidactylus moseri - Madagascar
Mantidactylus opiparis - Madagascar
Mantidactylus peraccae - Madagascar
Mantidactylus phantasticus - Madagascar
Mantidactylus pseudoasper - Madagascar
Mantidactylus pulcher - Madagascar
Mantidactylus redimitus - Madagascar
Mantidactylus sculpturatus - Madagascar
Mantidactylus timidus - Madagascar
Mantidactylus tornieri - Madagascar
Mantidactylus ulcerosus - Madagascar
Mantidactylus ventrimaculatus - Madagascar
Mantidactylus wittei - Madagascar
Mantidactylus zipperi - Madagascar

MEGOPHRYIDAE

Brachytarsophrys carinensis - Myanmar, Thailand
Brachytarsophrys feae - China, Myanmar, Thailand, Viet Nam
Brachytarsophrys platyparietus - China
Leptobrachella mjobergi - Brunei Darussalam, Indonesia, Malaysia
Leptobrachium abbotti - Brunei Darussalam, Indonesia, Malaysia
Leptobrachium chapaense - China, Lao P.D.R., Thailand, Viet Nam
Leptobrachium hasseltii - Indonesia, Philippines
Leptobrachium hendricksoni - Indonesia, Malaysia, Thailand
Leptobrachium huashen - China
Leptobrachium montanum - Indonesia, Malaysia
Leptobrachium nigrops - Indonesia, Malaysia, Singapore
Leptobrachium smithi - Bangladesh, India, Thailand
Leptolalax heteropus - Malaysia, Thailand
Leptolalax liui - China
Leptolalax oshanensis - China
Leptolalax pelodytoides - China, Lao P.D.R., Malaysia, Myanmar, Thailand, Viet Nam
Megophrys montana - Indonesia
Megophrys nasuta - Brunei Darussalam, Indonesia, Malaysia, Singapore, Thailand
Ophryophryne microstoma - China, Lao P.D.R., Thailand, Viet Nam
Ophryophryne pachyproctus - China, Lao P.D.R., Viet Nam

Oreolalax popei - China
Oreolalax xiangchengensis - China
Scutiger boulengeri - China, Nepal
Scutiger glandulatus - China
Scutiger mammatus - China
Scutiger nyingchiensis - China, India, Nepal, Pakistan
Scutiger sikimmensis - China, India, Nepal
Vibrissaphora liui - China
Xenophrys aceras - Indonesia, Malaysia, Thailand
Xenophrys boettgeri - China, India
Xenophrys glandulosa - China, India
Xenophrys jingdongensis - China, Viet Nam
Xenophrys kuatunensis - China, Viet Nam
Xenophrys major - China, India, Lao P.D.R., Myanmar, Thailand, Viet Nam
Xenophrys minor - China, Thailand, Viet Nam
Xenophrys palpebralespinosa - China, Viet Nam
Xenophrys parva - Bangladesh, Bhutan, China, India, Lao P.D.R., Myanmar, Nepal, Thailand, Viet Nam
Xenophrys shapingensis - China
Xenophrys spinata - China
Xenophrys wushanensis - China

MICROHYLIDAE

Albericus brunhildae - Papua New Guinea
Albericus darlingtoni - Papua New Guinea
Albericus swanhildae - Papua New Guinea
Albericus tuberculus - Papua New Guinea
Albericus valkuriarum - Papua New Guinea
Anodonthyla boulengerii - Madagascar
Aphantophryne pansa - Papua New Guinea
Arcovomer passarellii - Brazil
Asterophrys turpicola - Indonesia, Papua New Guinea
Austrochaperina adelphe - Australia
Austrochaperina basipalmata - Indonesia, Papua New Guinea
Austrochaperina blumi - Indonesia
Austrochaperina derongo - Indonesia, Papua New Guinea
Austrochaperina fryi - Australia
Austrochaperina gracilipes - Australia, Papua New Guinea
Austrochaperina guttata - Papua New Guinea
Austrochaperina hooglandi - Papua New Guinea
Austrochaperina macrorhyncha - Indonesia
Austrochaperina palmipes - Papua New Guinea
Austrochaperina pluvialis - Australia
Austrochaperina rivularis - Papua New Guinea
Austrochaperina robusta - Australia
Barygenys atra - Papua New Guinea
Barygenys exsul - Papua New Guinea
Barygenys nana - Papua New Guinea
Breviceps acutirostris - South Africa
Breviceps adspersus - Angola, Botswana, Mozambique, Namibia, South Africa, Swaziland, Zambia, Zimbabwe
Breviceps fichus - Tanzania
Breviceps fuscus - South Africa
Breviceps montanus - South Africa
Breviceps mossambicus - Botswana, Congo, D.R., Malawi, Mozambique, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe
Breviceps namaquensis - South Africa
Breviceps poweri - Angola, Congo, D.R., Malawi, Mozambique, Zambia
Breviceps rosei - South Africa
Breviceps verrucosus - Lesotho, South Africa, Swaziland
Calluella guttulata - Lao P.D.R., Malaysia, Myanmar, Thailand, Viet Nam
Calluella yunnanensis - China, Viet Nam
Callulina kreffti - Kenya, Tanzania
Callulops comptus - Papua New Guinea
Callulops doriae - Papua New Guinea
Callulops humicola - Papua New Guinea
Callulops personatus - Indonesia, Papua New Guinea
Callulops robustus - Indonesia, Papua New Guinea
Callulops slateri - Papua New Guinea
Callulops stictogaster - Papua New Guinea
Callulops wilhelmanus - Papua New Guinea
Chaperina fusca - Indonesia, Malaysia, Philippines, Thailand
Chiasmocleis albopunctata - Bolivia, Brazil, Paraguay
Chiasmocleis anatipes - Ecuador, Peru
Chiasmocleis atlantica - Brazil
Chiasmocleis bassleri - Bolivia, Brazil, Colombia, Ecuador, Peru
Chiasmocleis capixaba - Brazil
Chiasmocleis hudsoni - Brazil, French Guiana, Guyana, Suriname, Venezuela
Chiasmocleis leucosticta - Brazil
Chiasmocleis panamensis - Colombia, Panama
Chiasmocleis schubarti - Brazil
Chiasmocleis shudikarensis - Brazil, French Guiana, Guyana, Suriname
Chiasmocleis ventrimaculata - Bolivia, Brazil, Colombia, Ecuador, Peru
Choerophryne proboscidea - Indonesia, Papua New Guinea
Choerophryne rostellifer - Papua New Guinea
Cophixalus biroi - Indonesia, Papua New Guinea
Cophixalus cheesmanae - Papua New Guinea
Cophixalus infacetus - Australia
Cophixalus ornatus - Australia
Cophixalus parkeri - Papua New Guinea
Cophixalus pipilans - Papua New Guinea
Cophixalus riparius - Papua New Guinea
Cophixalus shellyi - Papua New Guinea
Cophixalus sphagnicola - Papua New Guinea
Cophixalus verrucosus - Papua New Guinea
Cophyla phyllodactyla - Madagascar
Copiula fistulans - Papua New Guinea
Copiula oxyrhina - Papua New Guinea
Copiula tyleri - Indonesia, Papua New Guinea
Ctenophryne geayi - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela
Dermatonotus muelleri - Argentina, Bolivia, Brazil, Paraguay
Dyscophus guineti - Madagascar
Dyscophus insularis - Madagascar
Elachistocleis bicolor - Argentina, Bolivia, Brazil, Paraguay, Uruguay
Elachistocleis ovalis - Bolivia, Brazil, Colombia, French Guiana, Guyana, Panama, Paraguay, Suriname, Trinidad and Tobago, Venezuela
Elachistocleis piauiensis - Brazil
Elachistocleis surinamensis - Suriname, Trinidad and Tobago, Venezuela
Gastrophryne carolinensis - United States of America, Bahamas (Introduced), Cayman Islands (Introduced)
Gastrophryne elegans - Belize, Guatemala, Honduras, Mexico
Gastrophryne olivacea - Mexico, United States of America
Gastrophryne pictiventris - Costa Rica, Nicaragua
Gastrophryne usta - El Salvador, Guatemala, Mexico
Genyophryne thomsoni - Papua New Guinea
Hamptophryne boliviana - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Venezuela
Hylophorbus rufescens - Indonesia, Papua New Guinea
Hypopachus variolosus - Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, United States of America
Kalophrynus heterochirus - Indonesia, Malaysia
Kalophrynus interlineatus - Cambodia, China, Lao P.D.R., Myanmar, Thailand, Viet Nam
Kalophrynus pleurostigma - Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore, Thailand
Kaloula baleata - India, Indonesia, Malaysia, Philippines, Thailand, Timor-Leste
Kaloula borealis - China, Korea, D.P.R., Korea, Republic
Kaloula conjuncta - Philippines
Kaloula picta - Philippines
Kaloula pulchra - Bangladesh, Cambodia, China, India, Indonesia, Lao P.D.R., Malaysia, Myanmar, Singapore, Thailand, Viet Nam, Taiwan, Province of China (Introduced)
Kaloula rugifera - China
Kaloula taprobanica - Bangladesh, India, Sri Lanka
Kaloula verrucosa - China
Liophryne dentata - Papua New Guinea
Liophryne schlaginhaufeni - Indonesia, Papua New Guinea
Mantophryne lateralis - Indonesia, Papua New Guinea
Metaphrynella pollicaris - Indonesia, Malaysia
Metaphrynella sundana - Brunei Darussalam, Indonesia, Malaysia
Microhyla achatina - Indonesia
Microhyla annamensis - Cambodia, Lao P.D.R., Thailand, Viet Nam
Microhyla berdmorei - Bangladesh, Cambodia, China, India, Indonesia, Lao P.D.R., Malaysia, Myanmar, Thailand, Viet Nam
Microhyla borneensis - Brunei Darussalam, Indonesia, Malaysia, Singapore, Thailand
Microhyla butleri - Cambodia, China, Lao P.D.R., Malaysia, Myanmar, Singapore, Taiwan, Province of China, Thailand, Viet Nam
Microhyla heymonsi - Cambodia, China, India, Indonesia, Lao P.D.R., Malaysia, Myanmar, Singapore, Taiwan, Province of China, Thailand, Viet Nam
Microhyla marmorata - Lao P.D.R., Viet Nam
Microhyla mixtura - China
Microhyla ornata - Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Japan, Lao P.D.R., Malaysia, Myanmar, Nepal, Pakistan, Sri Lanka, Taiwan, Province of China, Thailand, Viet Nam
Microhyla palmipes - Indonesia, Malaysia
Microhyla pulchra - Cambodia, China, Lao P.D.R., Thailand, Viet Nam
Microhyla rubra - Bangladesh, India, Sri Lanka
Micryletta inornata - Cambodia, China, India, Indonesia, Lao P.D.R., Malaysia, Thailand, Viet Nam
Myersiella microps - Brazil
Nelsonophryne aequatorialis - Ecuador
Nelsonophryne aterrima - Colombia, Costa Rica, Ecuador, Panama
Oreophryne anthonyi - Papua New Guinea
Oreophryne biroi - Indonesia, Papua New Guinea
Oreophryne brachypus - Papua New Guinea
Oreophryne geislerorum - Papua New Guinea
Oreophryne hypsiops - Papua New Guinea
Oreophryne inornata - Papua New Guinea
Oreophryne kapisa - Indonesia
Otophryne pyburni - Brazil, Colombia, French Guiana, Guyana, Suriname, Venezuela
Otophryne robusta - Guyana, Venezuela
Otophryne steyermarki - Guyana, Venezuela
Oxydactyla alpestris - Papua New Guinea
Oxydactyla stenodactyla - Papua New Guinea
Paradoxophyla palmata - Madagascar
Phrynella pulchra - Indonesia, Malaysia, Thailand
Phrynomantis affinis - Angola, Congo, D.R., Namibia, Zambia
Phrynomantis annectens - Angola, Namibia, South Africa
Phrynomantis bifasciatus - Angola, Botswana, Congo, D.R., Kenya, Malawi, Mozambique, Namibia, Somalia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe
Phrynomantis microps - Benin, Burkina Faso, Cameroon, Central African Republic, Côte d'Ivoire, Congo, D.R., Ghana, Mali, Nigeria, Senegal, Sierra Leone, Togo
Phrynomantis somalicus - Ethiopia, Somalia
Platypelis barbouri - Madagascar
Platypelis grandis - Madagascar
Platypelis tuberifera - Madagascar
Plethodontohyla alluaudi - Madagascar
Plethodontohyla bipunctata - Madagascar
Plethodontohyla inguinalis - Madagascar
Plethodontohyla laevipes - Madagascar
Plethodontohyla mihanika - Madagascar
Plethodontohyla notosticta - Madagascar
Plethodontohyla ocellata - Madagascar
Ramanella variegata - India, Sri Lanka
Relictivomer pearsei - Colombia, Panama, Venezuela
Scaphiophryne brevis - Madagascar
Scaphiophryne calcarata - Madagascar
Scaphiophryne spinosa - Madagascar
Spelaeophryne methneri - Tanzania
Sphenophryne cornuta - Indonesia, Papua New Guinea
Stereocyclops incrassatus - Brazil
Stereocyclops parkeri - Brazil
Stumpffia gimmeli - Madagascar
Synapturanus mirandaribeiroi - Brazil, Colombia, French Guiana, Guyana, Suriname, Venezuela
Synapturanus rabus - Colombia, Ecuador
Synapturanus salseri - Brazil, Colombia, Venezuela
Syncope antenori - Ecuador, Peru
Syncope carvalhoi - Colombia, Peru
Syncope tridactyla - Brazil, Colombia, Peru
Uperodon globulosus - Bangladesh, India
Uperodon systoma - India, Nepal, Pakistan, Sri Lanka
Xenobatrachus bidens - Indonesia, Papua New Guinea
Xenobatrachus fuscigula - Papua New Guinea
Xenobatrachus macrops - Indonesia
Xenobatrachus mehelyi - Papua New Guinea
Xenobatrachus obesus - Indonesia, Papua New Guinea
Xenobatrachus rostratus - Indonesia, Papua New Guinea
Xenorhina bouwensi - Indonesia
Xenorhina oxycephala - Indonesia, Papua New Guinea
Xenorhina parkerorum - Indonesia, Papua New Guinea
Xenorhina similis - Indonesia, Papua New Guinea

MYOBATRACHIDAE

Arenophryne rotunda - Australia
Assa darlingtoni - Australia
Crinia bilingua - Australia
Crinia deserticola - Australia
Crinia georgiana - Australia
Crinia glauerti - Australia
Crinia insignifera - Australia
Crinia nimbus - Australia
Crinia parinsignifera - Australia
Crinia pseudinsignifera - Australia
Crinia remota - Australia, Indonesia, Papua New Guinea
Crinia riparia - Australia
Crinia signifera - Australia
Crinia subinsignifera - Australia
Crinia tasmaniensis - Australia
Geocrinia laevis - Australia
Geocrinia leai - Australia
Geocrinia rosea - Australia
Geocrinia victoriana - Australia
Metacrinia nichollsi - Australia
Myobatrachus gouldii - Australia
Paracrinia haswelli - Australia
Pseudophryne coriacea - Australia
Pseudophryne dendyi - Australia
Pseudophryne douglasi - Australia
Pseudophryne guentheri - Australia
Pseudophryne major - Australia
Pseudophryne occidentalis - Australia
Pseudophryne raveni - Australia
Pseudophryne semimarmorata - Australia
Uperoleia altissima - Australia
Uperoleia aspera - Australia
Uperoleia borealis - Australia
Uperoleia capitulata - Australia
Uperoleia crassa - Australia
Uperoleia fusca - Australia
Uperoleia glandulosa - Australia
Uperoleia inundata - Australia
Uperoleia laevigata - Australia
Uperoleia lithomoda - Australia, Papua New Guinea
Uperoleia littlejohni - Australia
Uperoleia micromeles - Australia
Uperoleia mimula - Australia
Uperoleia minima - Australia
Uperoleia mjobergi - Australia
Uperoleia rugosa - Australia
Uperoleia russelli - Australia
Uperoleia talpa - Australia
Uperoleia trachyderma - Australia

PELOBATIDAE

Pelobates fuscus - Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, France, Germany, Hungary, Italy, Kazakhstan, Latvia, Lithuania, Moldova, Netherlands,

Poland, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Slovenia, Sweden, Ukraine, Switzerland (Extinct)
Pelobates syriacus - Armenia, Azerbaijan, Bulgaria, Macedonia, F.Y.R., Georgia, Greece, Iran, Israel, Lebanon, Romania, Russian Federation, Serbia and Montenegro, Syria, Turkey, Jordan (Extinct)

PELODYTIDAE

Pelodytes caucasicus - Azerbaijan, Georgia, Russian Federation, Turkey
Pelodytes ibericus - Portugal, Spain
Pelodytes punctatus - France, Italy, Portugal, Spain

PETROPEDETIDAE

Arthroleptella bicolor - South Africa
Arthroleptella hewitti - South Africa
Arthroleptella villiersi - South Africa
Cacosternum boettgeri - Botswana, Ethiopia, Kenya, Lesotho, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe
Cacosternum namaquense - Namibia, South Africa
Cacosternum nanum - South Africa, Swaziland
Cacosternum parvum - Lesotho, South Africa, Swaziland
Cacosternum platys - South Africa
Dimorphognathus africanus - Cameroon, Central African Republic, Congo, Equatorial Guinea, Gabon
Petropedetes newtoni - Cameroon, Equatorial Guinea, Gabon
Petropedetes parkeri - Cameroon, Equatorial Guinea, Gabon, Nigeria
Phrynobatrachus accraensis - Burkina Faso, Cameroon, Côte d'Ivoire, Gambia, Ghana, Guinea, Liberia, Mali, Nigeria, Senegal, Sierra Leone, Togo
Phrynobatrachus acridoides - Kenya, Malawi, Mozambique, Somalia, South Africa, Tanzania, Zimbabwe
Phrynobatrachus auritus - Cameroon, Central African Republic, Congo, Congo, D.R., Equatorial Guinea, Gabon, Nigeria, Rwanda, Uganda
Phrynobatrachus batesii - Cameroon, Gabon, Ghana, Nigeria
Phrynobatrachus bullans - Tanzania
Phrynobatrachus calcaratus - Cameroon, Central African Republic, Côte d'Ivoire, Equatorial Guinea, Ghana, Guinea, Liberia, Nigeria, Senegal
Phrynobatrachus cornutus - Cameroon, Central African Republic, Congo, Equatorial Guinea, Gabon
Phrynobatrachus dendrobates - Congo, D.R., Uganda
Phrynobatrachus dispar - São Tomé and Príncipe
Phrynobatrachus francisci - Burkina Faso, Côte d'Ivoire, Gambia, Ghana, Mali, Nigeria, Senegal
Phrynobatrachus fraterculus - Côte d'Ivoire, Guinea, Liberia, Sierra Leone
Phrynobatrachus graueri - Congo, D.R., Kenya, Rwanda, Uganda
Phrynobatrachus gutturosus - Côte d'Ivoire, Congo, D.R., Ghana, Liberia, Nigeria
Phrynobatrachus hylaios - Cameroon, Congo
Phrynobatrachus keniensis - Kenya, Tanzania
Phrynobatrachus kinangopensis - Kenya
Phrynobatrachus mababiensis - Angola, Botswana, Congo, D.R., Kenya, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe
Phrynobatrachus minutus - Ethiopia, Kenya, Tanzania, Uganda
Phrynobatrachus natalensis - Angola, Benin, Botswana, Burundi, Cameroon, Central African Republic, Congo, Côte d'Ivoire, Congo, D.R., Eritrea, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Malawi, Mali, Mozambique, Namibia, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe
Phrynobatrachus parkeri - Congo, D.R.
Phrynobatrachus parvulus - Angola, Botswana, Congo, D.R., Malawi, Tanzania, Uganda, Zambia, Zimbabwe
Phrynobatrachus perpalmatus - Congo, D.R., Malawi, Mozambique, Sudan, Tanzania, Zambia
Phrynobatrachus plicatus - Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria
Phrynobatrachus rungwensis - Congo, D.R., Malawi, Tanzania
Phrynobatrachus scapularis - Congo, D.R.
Phrynobatrachus tokba - Côte d'Ivoire, Ghana, Guinea, Liberia, Sierra Leone
Phrynobatrachus werneri - Cameroon, Nigeria
Phrynodon sandersoni - Cameroon, Equatorial Guinea
PIPIDAE
Hymenochirus boettgeri - Cameroon, Central African Republic, Congo, D.R., Equatorial Guinea, Gabon, Nigeria
Hymenochirus curtipes - Congo, D.R.
Pipa arrabali - Brazil, Guyana, Suriname, Venezuela
Pipa aspera - French Guiana, Suriname
Pipa carvalhoi - Brazil
Pipa parva - Colombia, Venezuela (Native and Introduced)
Pipa pipa - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Trinidad and Tobago, Venezuela
Pipa snethlageae - Brazil, Colombia, Peru
Pseudhymenochirus merlini - Guinea, Guinea-Bissau, Sierra Leone
Silurana epitropicalis - Angola, Cameroon, Central African Republic, Congo, Congo, D.R., Equatorial Guinea, Gabon
Silurana tropicalis - Benin, Burkina Faso, Cameroon, Côte d'Ivoire, Equatorial Guinea, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone, Togo
Xenopus andrei - Cameroon, Central African Republic, Gabon
Xenopus borealis - Kenya, Tanzania
Xenopus clivii - Eritrea, Ethiopia, Kenya, Sudan
Xenopus fraseri - Angola, Cameroon, Central African Republic, Congo, Congo, D.R., Equatorial Guinea, Gabon
Xenopus laevis - Angola, Botswana, Burundi, Cameroon, Central African Republic, Congo, D.R., Kenya, Lesotho, Malawi, Mozambique, Namibia, Nigeria, Rwanda, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe, Chile (Introduced), France (Introduced), Indonesia (Introduced), Mexico (Introduced), United Kingdom (Introduced), United States of America (Introduced)
Xenopus muelleri - Angola, Benin, Botswana, Burkina Faso, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Congo, D.R., Ghana, Kenya, Malawi, Mozambique, Namibia, Nigeria, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe
Xenopus petersii - Angola, Botswana, Congo, Congo, D.R., Gabon, Namibia, Zambia, Zimbabwe
Xenopus pygmaeus - Central African Republic, Congo, D.R., Uganda
Xenopus vestitus - Congo, D.R., Rwanda, Uganda
Xenopus wittei - Congo, D.R., Rwanda, Uganda

RANIDAE

Afrana angolensis - Angola, Botswana, Burundi, Congo, D.R., Eritrea, Ethiopia, Kenya, Lesotho, Malawi, Mozambique, Rwanda, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe
Afrana dracomontana - Lesotho
Afrana fuscigula - Lesotho, Namibia, South Africa, Swaziland
Amietia vertebralis - Lesotho, South Africa
Amnirana albolabris - Angola, Cameroon, Central African Republic, Congo, Côte d'Ivoire, Congo, D.R., Equatorial Guinea, Gabon, Ghana, Guinea, Kenya, Liberia, Nigeria, Sierra Leone, Tanzania, Togo, Uganda
Amnirana amnicola - Cameroon, Equatorial Guinea, Gabon
Amnirana darlingi - Angola, Botswana, Congo, D.R., Malawi, Mozambique, Namibia, Zambia, Zimbabwe
Amnirana galamensis - Benin, Burkina Faso, Cameroon, Central African Republic, Côte d'Ivoire, Congo, D.R., Eritrea, Ethiopia, Gambia, Ghana, Guinea-Bissau, Kenya, Malawi, Mali, Mozambique, Nigeria, Senegal, Sierra Leone, Somalia, Tanzania, Uganda, Zambia
Amnirana lemairei - Angola, Congo, D.R., Zambia
Amnirana lepus - Cameroon, Central African Republic, Congo, Congo, D.R., Equatorial Guinea, Gabon
Amolops chunganensis - China, Viet Nam
Amolops formosus - Bangladesh, India, Nepal
Amolops gerbillus - India
Amolops granulosus - China
Amolops larutensis - Malaysia, Thailand
Amolops mantzorum - China
Amolops marmoratus - Bangladesh, Bhutan, China, India, Myanmar, Nepal, Thailand
Amolops monticola - China, India, Nepal
Amolops ricketti - China, Viet Nam
Amolops wuyiensis - China
Aubria masako - Cameroon, Central African Republic, Congo, Congo, D.R., Gabon
Aubria occidentalis - Cameroon, Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria
Aubria subsigillata - Cameroon, Equatorial Guinea, Gabon
Batrachylodes elegans - Papua New Guinea
Batrachylodes mediodiscus - Papua New Guinea
Batrachylodes minutus - Papua New Guinea
Batrachylodes montanus - Papua New Guinea
Batrachylodes trossulus - Papua New Guinea, Solomon Islands
Batrachylodes vertebralis - Papua New Guinea, Solomon Islands
Batrachylodes wolfi - Papua New Guinea, Solomon Islands
Ceratobatrachus guentheri - Papua New Guinea, Solomon Islands
Chaparana sikimensis - India, Nepal
Conraua beccarii - Eritrea, Ethiopia
Conraua crassipes - Cameroon, Congo, Congo, D.R., Equatorial Guinea, Gabon, Nigeria
Discodeles bufoniformis - Papua New Guinea, Solomon Islands
Discodeles guppyi - Papua New Guinea, Solomon Islands
Discodeles vogti - Papua New Guinea
Euphlyctis cyanophlyctis - Afghanistan, Bangladesh, India, Iran, Nepal, Pakistan, Sri Lanka
Euphlyctis ehrenbergii - Saudi Arabia, Yemen
Euphlyctis hexadactylus - Bangladesh, India, Sri Lanka
Fejervarya andamanensis - India
Fejervarya cancrivora - Brunei Darussalam, Cambodia, China, India, Indonesia (Native and Introduced), Lao P.D.R., Malaysia, Philippines, Singapore, Thailand, Viet Nam
Fejervarya iskandari - Indonesia
Fejervarya keralensis - India
Fejervarya kirtisinghei - Sri Lanka
Fejervarya limnocharis - Bangladesh, Brunei Darussalam, Cambodia, China, India, Indonesia, Japan (Native and Introduced), Lao P.D.R., Malaysia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Province of China, Thailand, Viet Nam
Fejervarya nepalensis - India, Nepal
Fejervarya nicobariensis - Brunei Darussalam, India, Indonesia, Malaysia, Philippines, Thailand
Fejervarya orissaensis - India
Fejervarya pierrei - Nepal
Fejervarya rufescens - India
Fejervarya syhadrensis - Bangladesh, India, Nepal, Pakistan
Fejervarya teraiensis - India, Nepal
Fejervarya verruculosa - Indonesia, Timor-Leste
Fejervarya vittigera - Philippines
Hildebrandtia macrotympanum - Ethiopia, Kenya, Somalia
Hildebrandtia ornata - Angola, Botswana, Cameroon, Central African Republic, Côte d'Ivoire, Congo, D.R., Gambia, Ghana, Kenya, Malawi, Mali, Mozambique, Namibia, Nigeria, Senegal, South Africa, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe
Hoplobatrachus crassus - Bangladesh, India, Nepal, Sri Lanka
Hoplobatrachus occipitalis - Algeria, Angola, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Congo, D.R., Equatorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Libya, Mali, Mauritania, Morocco, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Sudan, Tanzania, Togo, Uganda, Western Sahara, Zambia
Hoplobatrachus rugulosus - Cambodia, China, Lao P.D.R., Myanmar, Taiwan, Province of China, Thailand, Viet Nam, Malaysia (Introduced), Philippines (Introduced)
Hoplobatrachus tigerinus - Afghanistan, Bangladesh, India, Myanmar, Nepal, Pakistan, Madagascar (Introduced), Maldives (Introduced)
Huia cavitympanum - Indonesia, Malaysia
Huia nasica - China, Lao P.D.R., Thailand, Viet Nam
Huia sumatrana - Indonesia
Indirana beddomii - India
Indirana semipalmata - India
Ingerana baluensis - Brunei Darussalam, Indonesia, Malaysia
Ingerana tenasserimensis - Malaysia, Myanmar, Thailand
Lankanectes corrugatus - Sri Lanka
Limnonectes finchi - Indonesia, Malaysia
Limnonectes fujianensis - China, Taiwan, Province of China
Limnonectes grunniens - Indonesia, Papua New Guinea
Limnonectes gyldenstolpei - Cambodia, Lao P.D.R., Thailand
Limnonectes hascheanus - Indonesia, Lao P.D.R., Malaysia, Myanmar, Thailand, Viet Nam
Limnonectes kadarsani - Indonesia
Limnonectes kohchangae - Cambodia, Thailand
Limnonectes kuhlii - Brunei Darussalam, China, India, Indonesia, Lao P.D.R., Malaysia, Myanmar, Thailand, Viet Nam
Limnonectes laticeps - Brunei Darussalam, India, Indonesia, Malaysia, Myanmar, Thailand
Limnonectes leporinus - Brunei Darussalam, Indonesia, Malaysia
Limnonectes leytensis - Philippines
Limnonectes microdiscus - Indonesia
Limnonectes modestus - Indonesia
Limnonectes palavanensis - Brunei Darussalam, Indonesia, Malaysia, Philippines
Limnonectes plicatellus - Malaysia, Singapore, Thailand
Limnonectes shompenorum - India, Indonesia, Malaysia, Singapore
Limnonectes woodworthi - Philippines
Meristogenys orphnocnemis - Indonesia, Malaysia
Nanorana parkeri - China, Nepal
Nanorana ventripunctata - China
Nyctibatrachus petraeus - India
Occidozyga celebensis - Indonesia
Occidozyga laevis - Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore, Thailand
Occidozyga lima - Bangladesh, Cambodia, China, India, Indonesia, Lao P.D.R., Malaysia, Myanmar, Thailand, Viet Nam
Occidozyga magnapustulosus - Lao P.D.R., Thailand, Viet Nam
Occidozyga martensii - Cambodia, China, Lao P.D.R., Malaysia, Thailand, Viet Nam
Occidozyga semipalmatus - Indonesia
Occidozyga sumatrana - Indonesia
Paa blanfordii - China, India, Nepal
Paa hazarensis - India, Pakistan
Paa liebigii - Bhutan, China, India, Nepal
Paa polunini - China, Nepal
Paa sternosignata - Afghanistan, Pakistan
Paa vicina - India, Pakistan
Platymantis aculeodactyla - Papua New Guinea, Solomon Islands
Platymantis boulengeri - Papua New Guinea
Platymantis browni - Papua New Guinea
Platymantis corrugata - Philippines
Platymantis cryptotis - Indonesia
Platymantis dorsalis - Philippines
Platymantis guppyi - Papua New Guinea, Solomon Islands
Platymantis magna - Papua New Guinea
Platymantis neckeri - Papua New Guinea, Solomon Islands
Platymantis papuensis - Indonesia, Papua New Guinea
Platymantis pelewensis - Palau
Platymantis punctata - Indonesia
Platymantis schmidti - Papua New Guinea
Platymantis solomonis - Papua New Guinea, Solomon Islands
Platymantis weberi - Papua New Guinea, Solomon Islands
Pseudoamolops multidenticulatus - Taiwan, Province of China
Ptychadena aequiplicata - Benin, Cameroon, Central African Republic, Congo, Côte d'Ivoire, Congo, D.R., Equatorial Guinea, Gabon, Ghana, Guinea, Liberia, Nigeria
Ptychadena anchietae - Angola, Botswana, Congo, Congo, D.R., Djibouti, Eritrea, Ethiopia, Kenya, Malawi, Mozambique, Namibia, Somalia, South Africa, Sudan, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe
Ptychadena ansorgii - Angola, Congo, D.R., Malawi, Zambia
Ptychadena bibroni - Burkina Faso, Cameroon, Central African Republic, Chad, Côte d'Ivoire, Congo, D.R., Gambia, Ghana, Guinea, Liberia, Mali, Nigeria, Senegal, Sierra Leone, Togo
Ptychadena bunoderma - Angola, Zambia
Ptychadena chrysogaster - Burundi, Congo, D.R., Rwanda, Tanzania, Uganda
Ptychadena cooperi - Ethiopia
Ptychadena gansi - Somalia
Ptychadena grandisonae - Angola, Congo, D.R., Rwanda, Tanzania, Zambia
Ptychadena guibei - Angola, Botswana, Congo, D.R., Malawi, Mozambique, Namibia, Zambia, Zimbabwe
Ptychadena keilingi - Angola, Congo, D.R., Zambia
Ptychadena longirostris - Côte d'Ivoire, Ghana, Guinea, Liberia, Nigeria, Sierra Leone

Ptychadena mahnerti - Kenya
Ptychadena mascareniensis - Angola, Botswana, Cameroon, Central African Republic, Côte d'Ivoire, Congo, D.R., Egypt, Equatorial Guinea, Ethiopia, Gabon, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Madagascar, Malawi, Mozambique, Namibia, Nigeria, Rwanda, Senegal, Sierra Leone, South African, Sudan, Tanzania, Zambia, Zimbabwe, Mauritius (Introduced), Réunion (Introduced), Seychelles (Introduced)
Ptychadena mossambica - Botswana, Kenya, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe
Ptychadena neumanni - Ethiopia
Ptychadena obscura - Congo, D.R., Zambia
Ptychadena oxyrhynchus - Angola, Benin, Botswana, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Congo, D.R., Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Malawi, Mali, Mozambique, Namibia, Nigeria, Senegal, South African, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe
Ptychadena perplicata - Angola, Zambia
Ptychadena perreti - Cameroon, Central African Republic, Congo, Congo, D.R., Gabon
Ptychadena porosissima - Angola, Congo, D.R., Ethiopia, Kenya, Malawi, Rwanda, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe
Ptychadena pumilio - Benin, Cameroon, Central African Republic, Côte d'Ivoire, Congo, D.R., Ethiopia, Mali, Nigeria, Senegal, Sierra Leone
Ptychadena schillukorum - Angola, Burkina Faso, Cameroon, Congo, D.R., Egypt, Eritrea, Ethiopia, Ghana, Kenya, Malawi, Mozambique, Senegal, Somalia, Sudan, Tanzania
Ptychadena stenocephala - Cameroon, Côte d'Ivoire, Guinea, Uganda
Ptychadena straeleni - Cameroon, Central African Republic, Congo, D.R.
Ptychadena subpunctata - Angola, Botswana, Congo, D.R., Namibia, Zambia, Zimbabwe
Ptychadena taenioscelis - Angola, Botswana, Congo, Congo, D.R., Gabon, Kenya, Malawi, Mozambique, Namibia, South Africa, Tanzania, Zambia
Ptychadena tellinii - Burkina Faso, Cameroon, Central African Republic, Côte d'Ivoire, Congo, D.R., Eritrea, Ethiopia, Ghana, Mali, Nigeria, Sierra Leone, Togo
Ptychadena tournieri - Côte d'Ivoire, Gambia, Guinea, Guinea-Bissau, Liberia, Senegal, Sierra Leone
Ptychadena trinodis - Cameroon, Central African Republic, Chad, Côte d'Ivoire, Congo, D.R., Gambia, Ghana, Guinea, Mali, Nigeria, Senegal
Ptychadena upembae - Angola, Congo, D.R., Malawi, Mozambique, Zambia
Ptychadena uzungwensis - Angola, Burundi, Congo, D.R., Malawi, Mozambique, Rwanda, South Africa, Tanzania, Zambia, Zimbabwe
Pyxicephalus adspersus - Angola, Botswana, Kenya, Malawi, Mozambique, Namibia, South Africa, Tanzania, Zambia, Zimbabwe, Swaziland (Extinct)
Pyxicephalus edulis - Botswana, Cameroon, Gambia, Kenya, Malawi, Mozambique, Nigeria, Senegal, Somalia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe
Pyxicephalus obbianus - Somalia
Rana adenopleura - China, Taiwan, Province of China
Rana alticola - Bangladesh, India, Myanmar, Thailand
Rana amurensis - China, Korea, D.P.R., Korea, Republic, Mongolia, Russian Federation
Rana andersonii - China, Lao P.D.R., Myanmar, Thailand, Viet Nam
Rana archotaphus - Lao P.D.R., Thailand
Rana arfaki - Indonesia, Papua New Guinea
Rana arvalis - Austria, Belarus, Belgium, China, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Kazakhstan, Latvia, Lithuania, Moldova, Netherlands, Norway, Romania, Russian Federation, Slovakia, Slovenia, Ukraine, Switzerland (Extinct)
Rana asiatica - China, Kazakhstan, Kyrgyzstan
Rana baramica - Brunei Darussalam, Indonesia, Malaysia, Singapore
Rana bedriagae - Cyprus, Egypt, Greece, Israel, Jordan, Lebanon, Syria, Turkey
Rana bergeri - France, Italy
Rana berlandieri - Belize, Guatemala, Honduras, Mexico, Nicaragua, United States of America (Native and Introduced)
Rana blairi - United States of America
Rana catesbeiana - Canada (Native and Introduced), Mexico (Native and Introduced), United States of America (Native and Introduced), Belgium (Introduced), Brazil (Introduced), China (Introduced), Colombia (Introduced), Cuba (Introduced), Dominican Republic (Introduced), Ecuador (Introduced), France (Introduced), Germany (Introduced), Greece (Introduced), Indonesia (Introduced), Italy (Introduced), Jamaica (Introduced), Japan (Introduced), Malaysia (Introduced), Netherlands (Introduced), Peru (Introduced), Philippines (Introduced), Puerto Rico (Introduced), Singapore (Introduced), Spain (Introduced), Taiwan, Province of China (Introduced), Thailand (Introduced), United Kingdom (Introduced), Venezuela (Introduced)
Rana celebensis - Indonesia
Rana chalconota - Indonesia
Rana chaochiaoensis - China
Rana chapaensis - Thailand, Viet Nam
Rana chensinensis - China, Mongolia
Rana chloronota - Cambodia, China, India, Lao P.D.R., Myanmar, Thailand, Viet Nam
Rana clamitans - Canada (Native and Introduced), United States of America (Native and Introduced)
Rana cubitalis - Myanmar, Thailand
Rana daemeli - Australia, Indonesia, Papua New Guinea
Rana dalmatina - Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Macedonia, F.Y.R., France, Germany, Greece, Hungary, Italy, Luxembourg, Romania, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom
Rana daunchina - China
Rana dybowskii - Japan, Korea, D.P.R., Korea, Republic, Russian Federation
Rana elberti - Indonesia, Timor-Leste
Rana emeljanovi - China, Korea, D.P.R., Korea, Republic
Rana erythraea - Brunei Darussalam, Cambodia, Indonesia (Native and Introduced), Lao P.D.R., Malaysia, Myanmar, Singapore, Thailand, Viet Nam, Philippines (Introduced)
Rana esculenta - Austria, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, France, Germany, Hungary, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Moldova, Netherlands, Poland, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Slovenia, Sweden (Native and Introduced), Switzerland, Ukraine, Spain (Introduced), United Kingdom (Introduced)
Rana exiliversabilis - China
Rana faber - Cambodia
Rana florensis - Indonesia
Rana forreri - Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua
Rana fukienensis - China, Taiwan, Province of China
Rana garoensis - India
Rana garritor - Indonesia, Papua New Guinea
Rana glandulosa - Brunei Darussalam, Indonesia, Malaysia, Thailand
Rana gracilis - Sri Lanka
Rana graeca - Albania, Bosnia and Herzegovina, Bulgaria, Macedonia, F.Y.R., Greece, Serbia and Montenegro
Rana grandocula - Philippines
Rana grisea - Indonesia, Papua New Guinea
Rana grylio - United States of America, Bahamas (Introduced), Puerto Rico (Introduced)
Rana guentheri - China, Taiwan, Province of China, Viet Nam
Rana heckscheri - United States of America
Rana hispanica - Italy
Rana hosii - Brunei Darussalam, Indonesia, Malaysia, Thailand
Rana huanrenensis - China, Korea, Republic
Rana hubeiensis - China
Rana humeralis - Bangladesh, India, Myanmar, Nepal
Rana italica - Italy, San Marino
Rana japonica - Japan (Native and Introduced)
Rana jimiensis - Indonesia, Papua New Guinea
Rana johnsi - China, Lao P.D.R., Thailand, Viet Nam
Rana kampeni - Indonesia
Rana kreffti - Papua New Guinea, Solomon Islands
Rana kukunoris - China
Rana kurtmuelleri - Albania, Greece, Italy (Introduced)
Rana lateralis - Cambodia, Lao P.D.R., Myanmar, Thailand, Viet Nam
Rana laterimaculata - Indonesia, Malaysia, Singapore, Thailand
Rana latouchii - China, Taiwan, Province of China
Rana leptoglossa - Bangladesh, India, Myanmar, Thailand
Rana lessonae - Austria, Belarus, Belgium, Bosnia and Herzegovina, Croatia, Czech Republic, Estonia, France, Germany, Hungary, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Moldova, Netherlands, Norway, Poland, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Slovenia, Sweden, Switzerland, Ukraine, United Kingdom (Extinct), Spain (Introduced)
Rana luctuosa - Indonesia, Malaysia, Thailand
Rana luteiventris - Canada, United States of America
Rana macrocnemis - Armenia, Azerbaijan, Georgia, Iran, Russian Federation, Turkey, Turkmenistan (Extinct)
Rana macrodactyla - Cambodia, China, Lao P.D.R., Malaysia, Myanmar, Thailand, Viet Nam
Rana maculata - El Salvador, Guatemala, Honduras, Mexico, Nicaragua
Rana magnaocularis - Mexico
Rana malabarica - India
Rana maosonensis - Lao P.D.R., Viet Nam
Rana margaretae - China
Rana milleti - Cambodia, Thailand, Viet Nam
Rana miopus - Malaysia, Thailand
Rana mocquardii - Indonesia
Rana moluccana - Indonesia
Rana montezumae - Mexico
Rana montivaga - Thailand, Viet Nam
Rana nigrolineata - China
Rana nigrotympanica - China
Rana nigrovittata - Cambodia, China, India, Indonesia, Lao P.D.R., Malaysia, Myanmar, Thailand, Viet Nam
Rana novaeguineae - Indonesia, Papua New Guinea
Rana omeimontis - China
Rana ornativentris - Japan
Rana palmipes - Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Peru, Suriname, Trinidad and Tobago, Venezuela
Rana palustris - Canada, United States of America
Rana papua - Indonesia, Papua New Guinea
Rana perezi - France, Portugal (Native and Introduced), Spain (Native and Introduced), United Kingdom (Introduced)
Rana picturata - Brunei Darussalam, Indonesia, Malaysia
Rana pipiens - Canada, Panama, United States of America (Native and Introduced)
Rana pirica - Japan, Russian Federation
Rana plancyi - China
Rana pleuraden - China
Rana porosa - Japan
Rana pustulosa - Mexico
Rana raniceps - Brunei Darussalam, India, Indonesia, Malaysia, Singapore, Thailand
Rana ridibunda - Afghanistan, Armenia, Austria, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Bulgaria, China (Native and Introduced), Croatia, Czech Republic, Denmark, Macedonia, F.Y.R., France, Georgia, Germany, Greece, Hungary, Iran, Iraq, Kazakhstan (Native and Introduced), Kyrgyzstan, Latvia, Lithuania, Moldova, Netherlands, Poland, Russian Federation (Native and Introduced), Saudi Arabia (Native and Introduced), Slovakia, Slovenia, Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan, Estonia (Extinct), Belgium (Introduced), Spain (Introduced), Switzerland (Introduced), United Kingdom (Introduced)
Rana rugosa - Japan, United States of America (Introduced)
Rana saharica - Algeria, Egypt, Libya, Morocco, Spain (Native and Introduced), Tunisia, Western Sahara
Rana sakuraii - Japan
Rana sanguinea - Indonesia, Philippines
Rana schmackeri - China
Rana septentrionalis - Canada, United States of America
Rana shuchinae - China
Rana siberu - Indonesia, Malaysia
Rana signata - Brunei Darussalam, Indonesia, Malaysia, Thailand
Rana spectabilis - Mexico
Rana sphenocephala - United States of America, Bahamas (Introduced)
Rana supragrisea - Indonesia, Papua New Guinea
Rana swinhoana - Taiwan, Province of China
Rana sylvatica - Canada, United States of America
Rana tagoi - Japan
Rana taipehensis - Bangladesh, Cambodia, China, Lao P.D.R., Myanmar, Taiwan, Province of China, Thailand, Viet Nam
Rana temporaria - Albania, Andorra, Austria, Belarus, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Macedonia, F.Y.R., Finland, France, Germany, Greece, Hungary, Ireland, Italy, Liechtenstein, Luxembourg, Netherlands, Norway, Poland, Romania, San Marino, Serbia and Montenegro, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom
Rana tsushimensis - Japan
Rana tytleri - Bangladesh, India, Nepal
Rana vaillanti - Belize, Colombia, Costa Rica, Ecuador, Guatemala, Honduras, Mexico, Nicaragua, Panama
Rana versabilis - China
Rana virgatipes - United States of America
Rana yavapaiensis - Mexico, United States of America
Rana zhenhaiensis - China
Rana zweifeli - Mexico
Sphaerotheca breviceps - India, Myanmar, Nepal, Pakistan, Sri Lanka
Sphaerotheca dobsoni - India
Sphaerotheca maskeyi - Nepal
Sphaerotheca rolandae - India, Sri Lanka
Staurois latopalmatus - Brunei Darussalam, Indonesia, Malaysia
Staurois natator - Brunei Darussalam, Indonesia, Malaysia, Philippines
Strongylopus bonaespei - South Africa
Strongylopus fasciatus - Lesotho, Mozambique, South Africa, Swaziland, Zambia, Zimbabwe
Strongylopus fuelleborni - Malawi, Tanzania, Zambia
Strongylopus grayii - Lesotho, South Africa, Swaziland, Saint Helena (Introduced)
Strongylopus hymenopus - Lesotho, South Africa
Tomopterna cryptotis - Angola, Botswana, Cameroon, Djibouti, Eritrea, Ethiopia, Kenya, Lesotho, Malawi, Mali, Mauritania, Mozambique, Namibia, Niger, Nigeria, Senegal, Somalia, South Africa, Sudan, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe
Tomopterna delalandii - South Africa
Tomopterna krugerensis - Angola, Botswana, Mozambique, Namibia, South Africa, Swaziland, Zimbabwe
Tomopterna luganga - Tanzania
Tomopterna marmorata - Botswana, Kenya, Malawi, Mozambique, South Africa, Zambia, Zimbabwe
Tomopterna natalensis - Mozambique, South Africa, Swaziland
Tomopterna tandyi - Angola, Botswana, Kenya, Namibia, South Africa, Tanzania
Tomopterna tuberculosa - Angola, Congo, D.R., Namibia, Tanzania, Zambia, Zimbabwe

RHACOPHORIDAE

Buergeria buergeri - Japan
Buergeria japonica - Japan, Taiwan, Province of China
Buergeria robusta - Taiwan, Province of China
Chirixalus doriae - Cambodia, China, India, Lao P.D.R., Myanmar, Thailand, Viet Nam
Chirixalus nongkhorensis - Cambodia, Lao P.D.R., Myanmar, Thailand, Viet Nam
Chirixalus simus - Bangladesh, India
Chirixalus vittatus - Cambodia, China, India, Lao P.D.R., Myanmar, Thailand, Viet Nam
Chiromantis kelleri - Ethiopia, Kenya, Somalia
Chiromantis petersii - Kenya, Tanzania
Chiromantis rufescens - Cameroon, Central African Republic, Congo, Côte d'Ivoire, Congo, D.R., Equatorial Guinea, Gabon, Ghana, Guinea, Nigeria, Sierra Leone, Uganda
Chiromantis xerampelina - Angola, Botswana, Kenya, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe
Kurixalus eiffingeri - Japan, Taiwan, Province of China
Kurixalus idiootocus - Taiwan, Province of China
Philautus abundus - Sri Lanka
Philautus andersoni - China, India, Myanmar
Philautus anili - India
Philautus annandalii - India, Nepal
Philautus aurifasciatus - Indonesia
Philautus fergusonianus - Sri Lanka
Philautus gracilipes - China, Lao P.D.R., Thailand, Viet Nam
Philautus hoipolloi - Sri Lanka
Philautus longchuanensis - China

Philautus odontotarsus - China, Viet Nam
Philautus parvulus - Cambodia, Myanmar, Thailand, Viet Nam
Philautus petersi - Indonesia, Malaysia, Thailand
Philautus popularis - Sri Lanka
Philautus surdus - Philippines
Philautus vermiculatus - Malaysia, Thailand
Polypedates chenfui - China
Polypedates colletti - Indonesia, Malaysia, Thailand
Polypedates cruciger - Sri Lanka
Polypedates dugritei - China, Viet Nam
Polypedates feae - China, Lao P.D.R., Myanmar, Thailand, Viet Nam
Polypedates leucomystax - Bangladesh, Brunei Darussalam, Cambodia, China, India, Indonesia, Lao P.D.R., Malaysia, Myanmar, Nepal, Philippines (Native and Introduced), Singapore, Thailand, Viet Nam, Japan (Introduced)
Polypedates macrotis - Brunei Darussalam, Indonesia, Malaysia, Philippines, Thailand
Polypedates maculatus - Bangladesh, Bhutan, India, Nepal, Sri Lanka
Polypedates megacephalus - China, India, Taiwan, Province of China
Polypedates mutus - China, Myanmar, Viet Nam
Polypedates omeimontis - China
Polypedates otilophus - Brunei Darussalam, Indonesia, Malaysia
Polypedates pseudocruciger - India
Polypedates taeniatus - Bangladesh, India, Nepal
Rhacophorus appendiculatus - Brunei Darussalam, India, Indonesia, Malaysia, Philippines
Rhacophorus arboreus - Japan (Native and Introduced)
Rhacophorus bipunctatus - Bangladesh, Cambodia, China, India, Malaysia, Myanmar, Thailand, Viet Nam
Rhacophorus bisacculus - Cambodia, India, Thailand
Rhacophorus cyanopunctatus - Indonesia, Malaysia, Singapore, Thailand, Viet Nam
Rhacophorus dennysi - China, Lao P.D.R., Myanmar, Viet Nam
Rhacophorus htunwini - Myanmar
Rhacophorus malabaricus - India
Rhacophorus maximus - Bangladesh, China, India, Myanmar, Nepal, Thailand
Rhacophorus moltrechti - Taiwan, Province of China
Rhacophorus nigropalmatus - Brunei Darussalam, Indonesia, Malaysia, Thailand
Rhacophorus owstoni - Japan
Rhacophorus pardalis - Brunei Darussalam, Indonesia, Malaysia, Philippines
Rhacophorus prominanus - Indonesia, Malaysia, Thailand
Rhacophorus reinwardtii - China, Indonesia, Lao P.D.R., Malaysia, Thailand, Viet Nam
Rhacophorus schlegelii - Japan
Rhacophorus verrucosus - Lao P.D.R., Myanmar, Thailand, Viet Nam
Rhacophorus viridis - Japan
Theloderma asperum - Cambodia, China, India, Indonesia, Lao P.D.R., Malaysia, Myanmar, Thailand, Viet Nam
Theloderma gordoni - Thailand, Viet Nam
Theloderma horridum - Indonesia, Malaysia, Singapore, Thailand
Theloderma leporosum - Indonesia, Malaysia

RHINOPHRYNIDAE

Rhinophrynus dorsalis - Belize, Costa Rica, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, United States of America

SCAPHIOPODIDAE

Scaphiopus couchii - Mexico, United States of America
Scaphiopus holbrookii - United States of America
Scaphiopus hurterii - United States of America
Spea bombifrons - Canada, Mexico, United States of America
Spea intermontana - Canada, United States of America
Spea multiplicata - Mexico, United States of America

CAUDATA

AMBYSTOMATIDAE

Ambystoma annulatum - United States of America
Ambystoma gracile - Canada, United States of America
Ambystoma jeffersonianum - Canada, United States of America
Ambystoma laterale - Canada, United States of America
Ambystoma mabeei - United States of America
Ambystoma macrodactylum - Canada, United States of America
Ambystoma maculatum - Canada, United States of America
Ambystoma opacum - United States of America
Ambystoma rosaceum - Mexico
Ambystoma talpoideum - United States of America
Ambystoma texanum - Canada, United States of America
Ambystoma tigrinum - Canada, Mexico, United States of America (Native and Introduced)
Ambystoma velasci - Mexico

AMPHIUMIDAE

Amphiuma means - United States of America
Amphiuma tridactylum - United States of America

DICAMPTODONTIDAE

Dicamptodon aterrimus - United States of America
Dicamptodon copei - United States of America
Dicamptodon tenebrosus - Canada, United States of America

HYNOBIIDAE

Hynobius kimurae - Japan
Hynobius leechii - China, Korea, D.P.R., Korea, Republic
Hynobius lichenatus - Japan
Hynobius naevius - Japan
Hynobius nebulosus - Japan
Hynobius nigrescens - Japan
Hynobius retardatus - Japan
Hynobius tsuensis - Japan
Onychodactylus fischeri - China, Korea, D.P.R., Korea, Republic, Russian Federation
Onychodactylus japonicus - Japan
Salamandrella keyserlingii - China, Japan, Kazakhstan, Korea, D.P.R., Mongolia, Russian Federation

PLETHODONTIDAE

Aneides hardii - United States of America
Aneides lugubris - Mexico, United States of America
Batrachoseps attenuatus - United States of America
Batrachoseps gavilanensis - United States of America
Batrachoseps gregarius - United States of America
Batrachoseps luciae - United States of America
Batrachoseps major - Mexico, United States of America
Batrachoseps nigriventris - United States of America
Batrachoseps pacificus - United States of America
Bolitoglossa adspersa - Colombia
Bolitoglossa alberchi - Mexico
Bolitoglossa altamazonica - Bolivia, Brazil, Colombia, Ecuador, Peru, Venezuela
Bolitoglossa biseriata - Colombia, Panama
Bolitoglossa cerroensis - Costa Rica
Bolitoglossa colonnea - Costa Rica, Panama
Bolitoglossa equatoriana - Colombia, Ecuador
Bolitoglossa mexicana - Belize, Guatemala, Honduras, Mexico
Bolitoglossa morio - Guatemala
Bolitoglossa nicefori - Colombia
Bolitoglossa occidentalis - Guatemala, Honduras, Mexico
Bolitoglossa peruviana - Ecuador, Peru
Bolitoglossa ramosi - Colombia
Bolitoglossa robusta - Costa Rica, Panama
Bolitoglossa rufescens - Belize, Guatemala, Honduras, Mexico
Bolitoglossa schizodactyla - Costa Rica, Panama
Bolitoglossa striatula - Costa Rica, Honduras, Nicaragua
Bolitoglossa vallecula - Colombia
Bolitoglossa yucatana - Belize, Mexico
Desmognathus apalachicolae - United States of America
Desmognathus auriculatus - United States of America
Desmognathus brimleyorum - United States of America
Desmognathus carolinensis - United States of America
Desmognathus fuscus - Canada, United States of America
Desmognathus imitator - United States of America
Desmognathus marmoratus - United States of America
Desmognathus monticola - United States of America
Desmognathus ochrophaeus - Canada, United States of America
Desmognathus ocoee - United States of America
Desmognathus orestes - United States of America
Desmognathus quadramaculatus - United States of America
Desmognathus santeetlah - United States of America
Desmognathus welteri - United States of America
Desmognathus wrighti - United States of America
Ensatina eschscholtzii - Canada, Mexico, United States of America
Eurycea bislineata - Canada, United States of America
Eurycea cirrigera - United States of America
Eurycea guttolineata - United States of America
Eurycea longicauda - United States of America
Eurycea lucifuga - United States of America
Eurycea multiplicata - United States of America
Eurycea quadridigitata - United States of America
Eurycea wilderae - United States of America
Gyrinophilus porphyriticus - Canada, United States of America
Hemidactylium scutatum - Canada, United States of America
Hydromantes platycephalus - United States of America
Karsenia koreana - Korea, Republic
Oedipina alleni - Costa Rica, Panama
Oedipina complex - Colombia, Ecuador, Panama
Oedipina cyclocauda - Costa Rica, Honduras, Nicaragua, Panama
Oedipina elongata - Belize, Guatemala, Mexico
Oedipina pacificensis - Costa Rica, Panama
Oedipina parvipes - Colombia, Panama
Plethodon albagula - United States of America
Plethodon angusticlavius - United States of America
Plethodon cinereus - Canada, United States of America
Plethodon cylindraceus - United States of America
Plethodon dorsalis - United States of America
Plethodon dunni - United States of America
Plethodon electromorphus - United States of America
Plethodon glutinosus - United States of America
Plethodon hoffmani - United States of America
Plethodon idahoensis - Canada, United States of America
Plethodon kentucki - United States of America
Plethodon kisatchie - United States of America
Plethodon metcalfi - United States of America
Plethodon montanus - United States of America
Plethodon richmondi - United States of America
Plethodon serratus - United States of America
Plethodon teyahalee - United States of America
Plethodon vandykei - United States of America
Plethodon vehiculum - Canada, United States of America
Plethodon ventralis - United States of America
Plethodon websteri - United States of America
Plethodon wehrlei - United States of America
Plethodon yonahlossee - United States of America
Pseudoeurycea mixteca - Mexico
Pseudoeurycea rex - Guatemala, Mexico
Pseudotriton montanus - United States of America
Pseudotriton ruber - United States of America
Stereochilus marginatus - United States of America
Typhlotriton spelaeus - United States of America

PROTEIDAE

Necturus beyeri - United States of America
Necturus maculosus - Canada, United States of America
Necturus punctatus - United States of America

RHYACOTRITONIDAE

Rhyacotriton variegatus - United States of America

SALAMANDRIDAE

Cynops cyanurus - China
Cynops orientalis - China
Cynops pyrrhogaster - Japan
Euproctus montanus - France
Notophthalmus viridescens - Canada, United States of America
Pachytriton brevipes - China
Pachytriton labiatus - China
Paramesotriton chinensis - China
Salamandra atra - Albania, Austria, Bosnia and Herzegovina, Croatia, France, Germany, Italy, Liechtenstein, Serbia and Montenegro, Slovenia, Switzerland
Salamandra corsica - France
Salamandra salamandra - Albania, Andorra, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Macedonia, F.Y.R., France, Germany, Greece, Hungary, Italy, Liechtenstein, Luxembourg, Netherlands, Poland, Portugal, Romania, San Marino, Serbia and Montenegro, Slovakia, Slovenia, Spain, Switzerland, Ukraine
Salamandrina terdigitata - Italy
Taricha granulosa - Canada, United States of America
Taricha rivularis - United States of America
Taricha torosa - United States of America
Triturus alpestris - Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Macedonia, F.Y.R., France, Germany, Greece, Hungary, Italy, Liechtenstein, Luxembourg, Netherlands, Poland, Romania, Serbia and Montenegro, Slovakia, Slovenia, Spain (Native and Introduced), Switzerland, Ukraine, United Kingdom (Introduced)
Triturus boscai - Portugal, Spain
Triturus carnifex - Albania, Austria, Bosnia and Herzegovina, Croatia, Czech Republic, Macedonia, F.Y.R., Germany (Native and Introduced), Greece, Hungary, Italy, Serbia and Montenegro, Slovenia, Switzerland (Native and Introduced), Netherlands (Introduced), Portugal (Introduced), United Kingdom (Introduced)
Triturus cristatus - Austria, Belarus, Belgium, Czech Republic, Denmark, Estonia, France, Germany, Hungary, Latvia, Liechtenstein, Lithuania, Luxembourg, Moldova, Netherlands, Norway, Poland, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Sweden, Switzerland, Ukraine, United Kingdom
Triturus helveticus - Belgium, Czech Republic, France, Germany, Luxembourg, Netherlands, Portugal, Spain, Switzerland, United Kingdom
Triturus italicus - Italy
Triturus karelinii - Azerbaijan, Bulgaria, Macedonia, F.Y.R., Georgia, Greece, Iran, Russian Federation (Native and Reintroduced), Serbia and Montenegro, Turkey, Ukraine
Triturus marmoratus - France, Portugal, Spain (Native and Reintroduced)
Triturus montandoni - Czech Republic, Poland, Romania, Slovakia, Ukraine, Germany (Introduced)
Triturus vittatus - Armenia, Georgia, Iraq, Israel, Jordan, Lebanon, Russian Federation (Native and Reintroduced), Syria, Turkey
Triturus vulgaris - Albania, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Macedonia, F.Y.R., Finland, France, Georgia, Germany, Greece, Hungary, Ireland, Italy, Kazakhstan, Latvia, Luxembourg, Moldova, Netherlands, Norway, Poland, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Slovenia, Sweden, Switzerland, Turkey, Ukraine, United Kingdom
Tylototriton verrucosus - China, India, Myanmar, Nepal, Thailand, Viet Nam

SIRENIDAE

Pseudobranchus axanthus - United States of America
Pseudobranchus striatus - United States of America
Siren intermedia - Mexico, United States of America
Siren lacertina - Mexico, United States of America

GYMNOPHIONA

CAECILIIDAE

Boulengerula boulengeri - Tanzania
Boulengerula taitana - Kenya

Boulengerula uluguruensis - Tanzania
Brasilotyphlus braziliensis - Brazil
Caecilia disossea - Ecuador, Peru
Caecilia gracilis - Brazil, French Guiana, Peru, Suriname
Caecilia leucocephala - Colombia, Ecuador, Panama
Caecilia marcusi - Bolivia
Caecilia nigricans - Colombia, Ecuador, Panama
Caecilia orientalis - Colombia, Ecuador
Caecilia perdita - Colombia
Caecilia subdermalis - Colombia
Caecilia subnigricans - Colombia, Venezuela
Caecilia tentaculata - Brazil, Colombia, Ecuador, French Guiana, Peru, Suriname, Venezuela
Chthonerpeton indistinctum - Argentina, Brazil, Paraguay, Uruguay
Dermophis mexicanus - El Salvador, Guatemala, Honduras, Mexico, Nicaragua
Dermophis parviceps - Costa Rica, Panama
Gegeneophis ramaswamii - India
Geotrypetes seraphini - Cameroon, Côte d'Ivoire, Congo, D.R., Equatorial Guinea, Gabon, Ghana, Guinea, Liberia, Nigeria, Sierra Leone
Grandisonia alternans - Seychelles
Grandisonia larvata - Seychelles
Grandisonia sechellensis - Seychelles
Gymnopis multiplicata - Costa Rica, Honduras, Nicaragua, Panama
Herpele squalostoma - Cameroon, Central African Republic, Congo, Congo, D.R., Equatorial Guinea, Gabon, Nigeria
Hypogeophis rostratus - Seychelles
Microcaecilia albiceps - Colombia, Ecuador
Microcaecilia taylori - Suriname
Microcaecilia unicolor - French Guiana
Nectocaecilia petersii - Venezuela
Oscaecilia bassleri - Ecuador, Peru
Oscaecilia ochrocephala - Colombia, Panama
Parvicaecilia nicefori - Colombia
Parvicaecilia pricei - Colombia
Potomotyphlus kaupii - Brazil, Colombia, Ecuador, Peru, Venezuela
Schistometopum gregorii - Kenya, Tanzania
Schistometopum thomense - São Tomé and Príncipe
Siphonops annulatus - Argentina, Bolivia, Brazil, Colombia, Ecuador, French Guiana, Guyana, Paraguay, Peru, Suriname, Venezuela
Siphonops hardyi - Brazil
Siphonops paulensis - Argentina, Bolivia, Brazil, Paraguay
Typhlonectes compressicauda - Brazil, Colombia, French Guiana, Guyana, Peru, Venezuela
Typhlonectes natans - Colombia, Venezuela

ICHTHYOPHIIDAE

Ichthyophis bannanicus - China
Ichthyophis beddomei - India
Ichthyophis glutinosus - Sri Lanka
Ichthyophis kohtaoensis - Cambodia, Lao P.D.R., Myanmar, Thailand, Viet Nam
Ichthyophis tricolor - India

RHINATREMATIDAE

Epicrionops bicolor - Colombia, Ecuador, Peru
Epicrionops niger - Guyana, Venezuela
Epicrionops petersi - Ecuador, Peru
Rhinatrema bivittatum - Brazil, French Guiana, Guyana, Suriname

SCOLECOMORPHIDAE

Scolecomorphus kirkii - Malawi, Tanzania
Scolecomorphus uluguruensis - Tanzania
Scolecomorphus vittatus - Tanzania

APPENDIX XII. LIST OF DATA DEFICIENT SPECIES, WITH COUNTRY OF OCCURRENCE

ANURA

ARTHROLEPTIDAE

Arthroleptis bivittatus - Guinea
Arthroleptis brevipes - Togo
Arthroleptis carquejai - Angola
Arthroleptis discodactyla - Congo, D.R.
Arthroleptis hematogaster - Congo, D.R.
Arthroleptis loveridgei - Congo, D.R.
Arthroleptis milletihorsini - Mali
Arthroleptis mossoensis - Burundi
Arthroleptis nimbaensis - Guinea
Arthroleptis phrynoides - Congo, D.R.
Arthroleptis spinalis - Congo, D.R.
Arthroleptis tuberosus - Cameroon, Congo, Congo, D.R.
Arthroleptis vercammeni - Congo, D.R.
Arthroleptis zimmeri - Ghana
Cardioglossa cyaneospila - Burundi, Congo, D.R., Rwanda
Cardioglossa dorsalis - Unknown

ASTYLOSTERNIDAE

Leptodactylodon blanci - Gabon

BRACHYCEPHALIDAE

Brachycephalus brunneus - Brazil
Brachycephalus izecksohni - Brazil
Brachycephalus nodoterga - Brazil
Brachycephalus pernix - Brazil
Brachycephalus vertebralis - Brazil

BUFONIDAE

Andinophryne atelopoides - Colombia
Andinophryne olallai - Ecuador
Ansonia glandulosa - Indonesia
Ansonia inthanon - Thailand
Atelopus palmatus - Ecuador
Atelopus sanjosei - Colombia
Atelopus siranus - Peru
Bufo ailaoanus - China
Bufo amboroensis - Bolivia
Bufo apolobambicus - Bolivia
Bufo arborescandens - Peru
Bufo aspinius - China
Bufo brevirostris - India
Bufo buchneri - Angola, Congo
Bufo chudeaui - Mali
Bufo cristiglans - Sierra Leone
Bufo cristinae - Colombia
Bufo crocus - Myanmar
Bufo damaranus - Namibia
Bufo danielae - Côte d'Ivoire
Bufo diptychus - Paraguay
Bufo gnustae - Argentina
Bufo grandisonae - Angola
Bufo hololius - India
Bufo intermedius - Unknown
Bufo iserni - Peru
Bufo kabischi - China
Bufo langanoensis - Ethiopia
Bufo mocquardi - Kenya
Bufo multiverrucosus - Peru
Bufo pisinnus - Mexico
Bufo porteri - Honduras
Bufo reesi - Tanzania
Bufo schmidti - Congo, D.R.
Bufo scitulus - Brazil
Bufo silentvalleyensis - India
Bufo simus - Unknown
Bufo stuarti - India, Myanmar
Bufo turkanae - Kenya
Bufo urunguensis - Tanzania, Zambia
Bufo valhallae - Indonesia
Bufo vellardi - Peru
Bufo vittatus - Uganda
Bufo wolongensis - China
Crepidophryne epiotica - Costa Rica, Panama
Dendrophryniscus stawiarskyi - Brazil
Laurentophryne parkeri - Congo, D.R.
Melanophryniscus cambaraensis - Brazil
Melanophryniscus krauczuki - Argentina
Melanophryniscus pachyrhynus - Brazil
Melanophryniscus simplex - Brazil
Nectophrynoides frontierei - Tanzania
Nectophrynoides laevis - Tanzania
Oreophrynella weiassipuensis - Brazil, Guyana
Pedostibes everetti - Malaysia
Pedostibes kempi - India
Pedostibes maculatus - Malaysia
Pelophryne macrotis - Malaysia
Rhamphophryne acrolopha - Colombia, Panama
Rhamphophryne lindae - Colombia
Rhamphophryne proboscidea - Brazil
Rhamphophryne ruizi - Colombia
Rhamphophryne tenrec - Colombia
Rhamphophryne truebae - Colombia
Truebella skoptes - Peru
Truebella tothastes - Peru

CENTROLENIDAE

Centrolene acanthidiocephalum - Colombia
Centrolene altitudinale - Venezuela
Centrolene bacatum - Colombia, Ecuador
Centrolene gorzulai - Venezuela
Centrolene guanacarum - Colombia
Centrolene huilense - Colombia
Centrolene lema - Venezuela
Centrolene lemniscatum - Peru
Centrolene litorale - Colombia, Ecuador
Centrolene medemi - Colombia
Centrolene muelleri - Peru
Centrolene paezorum - Colombia
Centrolene papillahallicum - Guyana
Centrolene sanchezi - Colombia
Centrolene scirtetes - Colombia, Ecuador
Cochranella adenocheira - Bolivia
Cochranella ametarsia - Colombia
Cochranella cariticommata - Ecuador
Cochranella castroviejoi - Venezuela
Cochranella chami - Colombia
Cochranella chancas - Peru
Cochranella cristinae - Colombia
Cochranella croceopodes - Peru
Cochranella duidaeana - Venezuela
Cochranella euhystrix - Peru
Cochranella geijskesi - Suriname
Cochranella luteopunctata - Colombia
Cochranella nephelophila - Colombia
Cochranella ocellifera - Ecuador
Cochranella orejuela - Colombia
Cochranella oreonympha - Colombia
Cochranella phenax - Peru
Cochranella pluvialis - Bolivia, Peru
Cochranella ramirezi - Colombia
Cochranella ritae - Brazil, Colombia
Cochranella solitaria - Colombia
Cochranella spilota - Colombia
Cochranella tangarana - Peru
Cochranella truebae - Peru
Cochranella vozmedianoi - Venezuela
Hyalinobatrachium duranti - Venezuela
Hyalinobatrachium eccentricum - Venezuela
Hyalinobatrachium helenae - Venezuela
Hyalinobatrachium iaspidiense - Venezuela
Hyalinobatrachium ignioculus - Guyana
Hyalinobatrachium lemur - Peru
Hyalinobatrachium parvulum - Brazil
Hyalinobatrachium petersi - Ecuador
Hyalinobatrachium talamancae - Costa Rica

DENDROBATIDAE

Colostethus alacris - Colombia
Colostethus alagoanus - Brazil
Colostethus alessandroi - Peru
Colostethus atopoglossus - Colombia
Colostethus ayarzaguenai - Venezuela
Colostethus baeobatrachus - Brazil, French Guiana, Suriname
Colostethus betancuri - Colombia
Colostethus borjai - Colombia
Colostethus brachistriatus - Colombia
Colostethus breviquartus - Colombia, Ecuador
Colostethus bromelicola - Venezuela
Colostethus caeruleodactylus - Brazil
Colostethus capixaba - Brazil
Colostethus capurinensis - Venezuela
Colostethus carioca - Brazil
Colostethus cepedai - Colombia
Colostethus chocoensis - Colombia, Ecuador, Panama
Colostethus conspicuus - Brazil, Peru
Colostethus crombiei - Brazil
Colostethus dysprosium - Colombia
Colostethus erasmios - Colombia
Colostethus exasperatus - Ecuador
Colostethus excisus - Colombia
Colostethus faciopunctulatus - Colombia
Colostethus fallax - Ecuador
Colostethus fratisenescus - Ecuador
Colostethus fugax - Ecuador
Colostethus fuliginosus - Ecuador
Colostethus furviventris - Colombia
Colostethus fuscellus - Brazil
Colostethus gasconi - Brazil
Colostethus goianus - Brazil
Colostethus guanayensis - Venezuela
Colostethus idiomelas - Peru
Colostethus imbricolus - Colombia
Colostethus lacrimosus - Colombia
Colostethus latinasus - Panama
Colostethus lynchi - Colombia
Colostethus maquipucuna - Ecuador
Colostethus marmoreoventris - Ecuador
Colostethus masniger - Brazil
Colostethus melanolaemus - Peru
Colostethus mittermeieri - Peru
Colostethus mystax - Ecuador
Colostethus nidicola - Brazil
Colostethus ornatus - Peru
Colostethus parimae - Venezuela
Colostethus parkerae - Venezuela
Colostethus patitae - Peru
Colostethus peculiaris - Ecuador
Colostethus picacho - Colombia
Colostethus pinguis - Colombia
Colostethus poecilonotus - Peru
Colostethus praderioi - Venezuela
Colostethus pseudopalmatus - Colombia
Colostethus pumilus - Ecuador
Colostethus ramirezi - Colombia

Colostethus ramosi - Colombia
Colostethus roraima - Venezuela
Colostethus saltuarius - Colombia
Colostethus sanmartini - Venezuela
Colostethus shrevei - Venezuela
Colostethus sumtuosus - Brazil, Peru
Colostethus sylvaticus - Peru
Colostethus tamacuarensis - Venezuela
Colostethus tepuyensis - Venezuela
Colostethus thorntoni - Colombia
Colostethus triunfo - Venezuela
Colostethus undulatus - Venezuela
Colostethus utcubambensis - Peru
Colostethus vanzolinius - Brazil
Colostethus whymperi - Ecuador
Colostethus wothuja - Venezuela
Colostethus yaguara - Colombia
Cryptophyllobates chlorocraspedus - Brazil
Dendrobates amazonicus - Peru
Dendrobates captivus - Peru
Dendrobates claudiae - Panama
Dendrobates flavovittatus - Peru
Dendrobates nubeculosus - Guyana
Dendrobates occultator - Colombia
Dendrobates rubrocephalus - Peru
Dendrobates variabilis - Peru
Dendrobates vicentei - Panama
Epipedobates andinus - Colombia
Epipedobates erythromos - Ecuador
Epipedobates espinosai - Ecuador
Epipedobates labialis - Unknown
Epipedobates maculatus - Panama
Epipedobates pongoensis - Peru
Epipedobates pulchripectus - Brazil
Epipedobates rubriventris - Peru
Epipedobates rufulus - Venezuela
Epipedobates silverstonei - Peru
Epipedobates smaragdinus - Peru
Mannophryne larandina - Venezuela
Mannophryne oblitterata - Venezuela

HEMISOTIDAE

Hemisus barotseensis - Zambia
Hemisus brachydactylus - Tanzania
Hemisus perreti - Congo, D.R., Gabon
Hemisus wittei - Congo, D.R., Zambia

HYLIDAE

Aparasphenodon bokermanni - Brazil
Aplastodiscus flumineus - Brazil
Aplastodiscus musicus - Brazil
Aplastodiscus sibilatus - Brazil
Bokermannohyla ahenea - Brazil
Bokermannohyla claresignata - Brazil
Bokermannohyla clepsydra - Brazil
Bokermannohyla feioi - Brazil
Bokermannohyla gouveai - Brazil
Bokermannohyla ibitiguara - Brazil
Bokermannohyla ibitipoca - Brazil
Bokermannohyla langei - Brazil
Bokermannohyla lucianae - Brazil
Bokermannohyla ravida - Brazil
Bokermannohyla sazimai - Brazil
Calamita melanorabdotus - Brazil
Calamita quadrilineatus - Unknown
Dendropsophus araguaya - Brazil
Dendropsophus battersbyi - Venezuela
Dendropsophus cachimbo - Brazil
Dendropsophus cerradensis - Brazil
Dendropsophus dutrai - Brazil
Dendropsophus grandisonae - Guyana
Dendropsophus joannae - Bolivia
Dendropsophus limai - Brazil
Dendropsophus minimus - Brazil
Dendropsophus novaisi - Brazil
Dendropsophus rhea - Brazil
Dendropsophus ruschii - Brazil
Dendropsophus studerae - Brazil
Dendropsophus tintinnabulum - Brazil
Dendropsophus yaracuyanus - Venezuela
Ecnomiohyla thysanota - Panama
Exerodonta abdivita - Mexico
Exerodonta bivocata - Mexico
Hyla albovittata - Brazil
Hyla arboricola - Mexico
Hyla auraria - Unknown
Hyla helenae - Guyana
Hyla imitator - Brazil
Hyla inframaculata - Brazil
Hyla molitor - Unknown
Hyla palliata - Paraguay
Hyla roeschmanni - Bolivia
Hyla surinamensis - Unknown
Hyla suweonensis - Korea, Republic
Hyla warreni - Guyana
Hyla zhaopingensis - China
Hylomantis danieli - Colombia
Hylomantis medinai - Venezuela
Hylomantis psilopygion - Colombia, Ecuador
Hyloscirtus caucanus - Colombia
Hyloscirtus estevesi - Venezuela
Hyloscirtus pacha - Ecuador
Hyloscirtus sarampiona - Colombia
Hyloscirtus tapichalaca - Ecuador
Hypsiboas alemani - Venezuela
Hypsiboas beckeri - Brazil
Hypsiboas buriti - Brazil
Hypsiboas cordobae - Argentina
Hypsiboas ericae - Brazil
Hypsiboas exastis - Brazil
Hypsiboas freicanecae - Brazil
Hypsiboas fuentei - Suriname
Hypsiboas hypselops - Peru
Hypsiboas latistriatus - Brazil
Hypsiboas leucocheilus - Brazil
Hypsiboas melanopleura - Peru
Hypsiboas palaestes - Peru
Hypsiboas phaeopleura - Brazil
Hypsiboas pulidoi - Venezuela
Hypsiboas rhythmicus - Venezuela
Hypsiboas riojanus - Argentina
Hypsiboas roraima - Guyana
Hypsiboas secedens - Brazil
Hypsiboas stenocephalus - Brazil
Hypsiboas varelae - Argentina
Isthmohyla infucata - Panama
Isthmohyla xanthosticta - Costa Rica
Litoria albolabris - Papua New Guinea
Litoria aruensis - Indonesia
Litoria brongersmai - Indonesia
Litoria bulmeri - Papua New Guinea
Litoria capitula - Indonesia
Litoria cavernicola - Australia
Litoria chloronota - Indonesia
Litoria contrastens - Papua New Guinea
Litoria dorsivena - Papua New Guinea
Litoria elkeae - Indonesia
Litoria everetti - Indonesia, Timor-Leste
Litoria javana - Unknown
Litoria jeudii - Papua New Guinea
Litoria kumae - Papua New Guinea
Litoria leucova - Papua New Guinea
Litoria longicrus - Indonesia, Papua New Guinea
Litoria macki - Indonesia
Litoria majikthise - Papua New Guinea
Litoria mucro - Papua New Guinea
Litoria multicolor - Indonesia
Litoria mystax - Indonesia
Litoria obtusirostris - Indonesia
Litoria oenicolen - Papua New Guinea
Litoria ollauro - Papua New Guinea
Litoria pratti - Indonesia
Litoria rubrops - Papua New Guinea
Litoria sanguinolenta - Indonesia
Litoria singadanae - Papua New Guinea
Litoria umarensis - Indonesia
Litoria umbonata - Indonesia
Litoria vagabunda - Indonesia
Litoria verae - Indonesia
Litoria wapogaensis - Indonesia
Myersiohyla aromatica - Venezuela
Myersiohyla inparquesi - Venezuela
Myersiohyla loveridgei - Venezuela
Nyctimystes daymani - Papua New Guinea
Nyctimystes fluviatilis - Indonesia
Nyctimystes granti - Indonesia
Nyctimystes gularis - Papua New Guinea
Nyctimystes montanus - Indonesia
Nyctimystes obsoletus - Papua New Guinea
Nyctimystes oktediensis - Indonesia, Papua New Guinea
Nyctimystes papua - Papua New Guinea
Nyctimystes persimilis - Papua New Guinea
Nyctimystes tyleri - Papua New Guinea
Nyctimystes zweifeli - Papua New Guinea
Osteocephalus exophthalmus - Guyana
Osteocephalus fuscifacies - Ecuador
Phrynomedusa bokermanni - Brazil
Phrynomedusa vanzolinii - Brazil
Phyllodytes brevirostris - Brazil
Phyllodytes edelmoi - Brazil
Phyllodytes gyrinaethes - Brazil
Phyllodytes punctatus - Brazil
Phyllodytes tuberculosus - Brazil
Phyllodytes wuchereri - Brazil
Phyllomedusa centralis - Brazil
Phyllomedusa duellmani - Peru
Phyllomedusa megacephala - Brazil
Phyllomedusa oreades - Brazil
Phyllomedusa perinesos - Colombia, Ecuador
Plectrohyla ameibothalame - Mexico
Plectrohyla labedactyla - Mexico
Ptychohyla acrochorda - Mexico
Ptychohyla zophodes - Mexico
Scinax arduous - Brazil
Scinax ariadne - Brazil
Scinax aromothyella - Argentina
Scinax atratus - Brazil
Scinax baumgardneri - Venezuela
Scinax canastrensis - Brazil
Scinax castroviejoi - Bolivia
Scinax curicica - Brazil
Scinax danae - Venezuela
Scinax heyeri - Brazil
Scinax jolyi - French Guiana
Scinax jureia - Brazil
Scinax kautskyi - Brazil
Scinax maracaya - Brazil
Scinax melloi - Brazil
Scinax pinima - Brazil
Scinax ranki - Brazil
Scinax strigilatus - Brazil
Sphaenorhynchus bromelicola - Brazil
Sphaenorhynchus pauloalvini - Brazil
Sphaenorhynchus platycephalus - Unknown
Tepuihyla aecii - Venezuela
Tepuihyla celsae - Venezuela
Tepuihyla galani - Venezuela
Tepuihyla luteolabris - Venezuela
Tepuihyla rodriguezi - Venezuela
Tepuihyla talbergae - Guyana
Trachycephalus lepidus - Brazil
Xenohyla eugenioi - Brazil

HYPEROLIIDAE

Afrixalus lindholmi - Cameroon
Afrixalus schneideri - Cameroon
Afrixalus upembae - Congo, D.R.
Chrysobatrachus cupreonitens - Congo, D.R.
Cryptothylax minutus - Congo, D.R.
Hyperolius acuticephalus - Central African Republic
Hyperolius albofrenatus - Tanzania
Hyperolius atrigularis - Congo, D.R.
Hyperolius bicolor - Angola
Hyperolius brachiofasciatus - Central African Republic
Hyperolius cinereus - Angola
Hyperolius diaphanus - Congo, D.R.
Hyperolius fasciatus - Angola
Hyperolius ferreirai - Angola
Hyperolius ferrugineus - Congo, D.R.
Hyperolius fuscigula - Angola
Hyperolius ghesquieri - Congo, D.R.
Hyperolius gularis - Angola
Hyperolius houyi - Chad
Hyperolius hutsebauti - Congo, D.R.
Hyperolius inornatus - Congo, D.R.
Hyperolius kibarae - Congo, D.R.
Hyperolius laticeps - Togo
Hyperolius lucani - Angola
Hyperolius maestus - Angola
Hyperolius obscurus - Congo, D.R.
Hyperolius orkarkarri - Tanzania
Hyperolius polli - Angola, Congo, D.R.
Hyperolius protchei - Angola
Hyperolius punctulatus - Angola
Hyperolius pustulifer - Congo, D.R.
Hyperolius quadratomaculatus - Tanzania
Hyperolius raveni - Unknown
Hyperolius rhizophilus - Angola
Hyperolius robustus - Congo, D.R.
Hyperolius sankuruensis - Congo, D.R.
Hyperolius seabrai - Angola
Hyperolius soror - Guinea
Hyperolius stenodactylus - Cameroon
Hyperolius thoracotuberculatus - Unknown
Hyperolius tornieri - Tanzania
Hyperolius vilhenai - Angola
Hyperolius viridis - Tanzania
Hyperolius xenorhinus - Congo, D.R.
Kassina mertensi - Congo, D.R.
Leptopelis bequaerti - Liberia
Leptopelis brevipes - Equatorial Guinea
Leptopelis crystallinoron - Gabon
Leptopelis fenestratus - Congo, D.R.
Leptopelis fiziensis - Congo, D.R., Tanzania
Leptopelis jordani - Angola
Leptopelis lebeaui - Congo, D.R.
Leptopelis marginatus - Angola
Leptopelis parvus - Congo, D.R.

LEPTODACTYLIDAE

Adelophryne pachydactyla - Brazil
Adenomera lutzi - Guyana
Alsodes australis - Argentina, Chile
Alsodes hugoi - Chile

Alsodes igneus - Chile
Alsodes kaweshkari - Chile
Alsodes laevis - Chile
Alsodes monticola - Chile
Alsodes pehuenche - Argentina
Alsodes valdiviensis - Chile
Alsodes verrucosus - Chile
Alsodes vittatus - Chile
Atelognathus ceii - Chile
Atelognathus grandisonae - Chile
Batrachyla nibaldoi - Chile
Ceratophrys joazeirensis - Brazil
Ceratophrys testudo - Ecuador
Craugastor adamastus - Guatemala
Craugastor amniscola - Guatemala, Mexico
Craugastor campbelli - Guatemala
Craugastor cuaquero - Costa Rica
Craugastor jota - Panama
Craugastor melanogaster - Peru
Craugastor monnichorum - Panama
Craugastor myllomyllon - Guatemala
Craugastor nefrens - Guatemala
Craugastor occidentalis - Mexico
Craugastor palenque - Guatemala, Mexico
Craugastor phasma - Costa Rica
Craugastor rayo - Costa Rica
Craugastor taylori - Mexico
Crossodactylodes pintoi - Brazil
Crossodactylus aeneus - Brazil
Crossodactylus bokermanni - Brazil
Crossodactylus dantei - Brazil
Crossodactylus dispar - Brazil
Crossodactylus grandis - Brazil
Crossodactylus lutzorum - Brazil
Crossodactylus trachystomus - Brazil
Cycloramphus asper - Brazil
Cycloramphus bandeirensis - Brazil
Cycloramphus bolitoglossus - Brazil
Cycloramphus carvalhoi - Brazil
Cycloramphus catarinensis - Brazil
Cycloramphus cedrensis - Brazil
Cycloramphus diringshofeni - Brazil
Cycloramphus duseni - Brazil
Cycloramphus eleutherodactylus - Brazil
Cycloramphus granulosus - Brazil
Cycloramphus izecksohni - Brazil
Cycloramphus jordanensis - Brazil
Cycloramphus juimirim - Brazil
Cycloramphus lutzorum - Brazil
Cycloramphus migueli - Brazil
Cycloramphus mirandaribeiroi - Brazil
Cycloramphus ohausi - Brazil
Cycloramphus stejnegeri - Brazil
Cycloramphus valae - Brazil
Dischidodactylus colonnelloi - Venezuela
Dischidodactylus duidensis - Venezuela
Edalorhina nasuta - Peru
Eleutherodactylus adercus - Colombia
Eleutherodactylus aemulatus - Colombia
Eleutherodactylus andicola - Bolivia
Eleutherodactylus anemerus - Peru
Eleutherodactylus aniptopalmatus - Peru
Eleutherodactylus anotis - Venezuela
Eleutherodactylus anthrax - Colombia
Eleutherodactylus apiculatus - Colombia, Ecuador
Eleutherodactylus araiodactylus - Peru
Eleutherodactylus ardalonychus - Peru
Eleutherodactylus atrabracus - Peru
Eleutherodactylus aurantiguttatus - Colombia
Eleutherodactylus avicuporum - Peru
Eleutherodactylus avius - Venezuela
Eleutherodactylus baiotis - Colombia
Eleutherodactylus batrachites - Colombia
Eleutherodactylus batrachylus - Mexico
Eleutherodactylus bearsei - Peru
Eleutherodactylus bipunctatus - Peru
Eleutherodactylus cadenai - Colombia
Eleutherodactylus caliginosus - Peru
Eleutherodactylus cantitans - Venezuela
Eleutherodactylus carmelitae - Colombia
Eleutherodactylus carranguerorum - Colombia
Eleutherodactylus cavernibardus - Venezuela
Eleutherodactylus citriogaster - Peru
Eleutherodactylus corniger - Colombia
Eleutherodactylus crepitans - Brazil
Eleutherodactylus cristinae - Colombia
Eleutherodactylus cuentasi - Colombia
Eleutherodactylus cuneirostris - Peru
Eleutherodactylus delicatus - Colombia
Eleutherodactylus delius - Peru
Eleutherodactylus duende - Colombia
Eleutherodactylus dundeei - Bolivia, Brazil
Eleutherodactylus epacrus - Colombia
Eleutherodactylus erythromerus - Brazil
Eleutherodactylus esmeraldas - Ecuador
Eleutherodactylus exoristus - Ecuador, Peru
Eleutherodactylus ganonotus - Ecuador
Eleutherodactylus gehrti - Brazil
Eleutherodactylus grandiceps - Colombia
Eleutherodactylus grandoculis - Suriname
Eleutherodactylus hectus - Colombia, Ecuador
Eleutherodactylus heterodactylus - Brazil
Eleutherodactylus holti - Brazil
Eleutherodactylus huicundo - Ecuador
Eleutherodactylus incertus - Venezuela
Eleutherodactylus infraguttatus - Peru
Eleutherodactylus interorbitalis - Mexico
Eleutherodactylus ixalus - Colombia
Eleutherodactylus izecksohni - Brazil
Eleutherodactylus jaimei - Colombia
Eleutherodactylus karcharias - Peru
Eleutherodactylus laticlavius - Colombia, Ecuador
Eleutherodactylus laticorpus - Panama
Eleutherodactylus lentiginosus - Colombia, Venezuela
Eleutherodactylus leucopus - Colombia, Ecuador
Eleutherodactylus librarius - Ecuador
Eleutherodactylus lindae - Peru
Eleutherodactylus lirellus - Peru
Eleutherodactylus lundbergi - Peru
Eleutherodactylus luscombei - Peru
Eleutherodactylus lutitus - Colombia
Eleutherodactylus lynchi - Colombia
Eleutherodactylus maestrensis - Cuba
Eleutherodactylus maurus - Mexico
Eleutherodactylus melanoproctus - Venezuela
Eleutherodactylus memorans - Venezuela
Eleutherodactylus mercedesae - Bolivia
Eleutherodactylus metabates - Peru
Eleutherodactylus mondolfii - Venezuela
Eleutherodactylus muscosus - Ecuador, Peru
Eleutherodactylus myops - Colombia
Eleutherodactylus nigriventris - Brazil
Eleutherodactylus ocellatus - Colombia, Ecuador
Eleutherodactylus olivaceus - Bolivia, Peru
Eleutherodactylus orphnolaimus - Ecuador
Eleutherodactylus ortizi - Ecuador
Eleutherodactylus pallidus - Mexico
Eleutherodactylus paranaensis - Brazil
Eleutherodactylus pecki - Ecuador, Peru
Eleutherodactylus pedimontanus - Venezuela
Eleutherodactylus pelorus - Mexico
Eleutherodactylus petrobardus - Peru
Eleutherodactylus philipi - Ecuador
Eleutherodactylus pinguis - Peru
Eleutherodactylus pirrensis - Panama
Eleutherodactylus pleurostriatus - Venezuela
Eleutherodactylus plicifer - Brazil
Eleutherodactylus pruinatus - Venezuela
Eleutherodactylus ptochus - Colombia
Eleutherodactylus pusillus - Brazil
Eleutherodactylus randorum - Brazil
Eleutherodactylus reclusus - Colombia
Eleutherodactylus reticulatus - Venezuela
Eleutherodactylus rhabdocnemus - Peru
Eleutherodactylus riveroi - Venezuela
Eleutherodactylus rozei - Venezuela
Eleutherodactylus rufioculis - Peru
Eleutherodactylus ruidus - Ecuador
Eleutherodactylus salaputium - Peru
Eleutherodactylus sambaqui - Brazil
Eleutherodactylus scitulus - Peru
Eleutherodactylus scopaeus - Colombia
Eleutherodactylus spanios - Brazil
Eleutherodactylus stenodiscus - Venezuela
Eleutherodactylus sternothylax - Peru
Eleutherodactylus stictogaster - Peru
Eleutherodactylus susaguae - Colombia
Eleutherodactylus taciturnus - Colombia
Eleutherodactylus telefericus - Venezuela
Eleutherodactylus teretistes - Mexico
Eleutherodactylus tigrillo - Costa Rica
Eleutherodactylus trachyblepharis - Ecuador
Eleutherodactylus tubernasus - Colombia, Venezuela
Eleutherodactylus uisae - Colombia
Eleutherodactylus verruculatus - Mexico
Eleutherodactylus wiensi - Peru
Eleutherodactylus xeniolum - Colombia
Eleutherodactylus xestus - Colombia
Eleutherodactylus yaviensis - Venezuela
Eleutherodactylus yustizi - Venezuela
Gastrotheca abdita - Peru
Gastrotheca atympana - Peru
Gastrotheca galeata - Peru
Gastrotheca helenae - Colombia, Venezuela
Gastrotheca lateonota - Peru
Gastrotheca ochoai - Peru
Gastrotheca ossilaginis - Peru
Gastrotheca pacchamama - Peru
Gastrotheca phalarosa - Peru
Gastrotheca rebeccae - Peru
Gastrotheca walkeri - Venezuela
Gastrotheca weinlandii - Colombia, Ecuador, Peru
Gastrotheca williamsoni - Venezuela
Holoaden luederwaldti - Brazil
Hylodes amnicola - Brazil
Hylodes babax - Brazil
Hylodes charadranaetes - Brazil
Hylodes dactylocinus - Brazil
Hylodes glaber - Brazil
Hylodes heyeri - Brazil
Hylodes magalhaesi - Brazil
Hylodes mertensi - Brazil
Hylodes otavioi - Brazil
Hylodes regius - Brazil
Hylodes sazima - Brazil
Hylodes uai - Brazil
Hylodes vanzolinii - Brazil
Ischnocnema choristolemma - Bolivia
Ischnocnema saxatilis - Peru
Ischnocnema verrucosa - Brazil
Leptodactylus camaquara - Brazil
Leptodactylus hallowelli - Colombia
Leptodactylus hylodes - Brazil
Leptodactylus rhodostima - Peru
Leptodactylus tapiti - Brazil
Leptodactylus viridis - Brazil
Megaelosia apuana - Brazil
Megaelosia bocainensis - Brazil
Megaelosia boticariana - Brazil
Megaelosia lutzae - Brazil
Megaelosia massarti - Brazil
Odontophrynus barrioi - Argentina
Odontophrynus salvatori - Brazil
Paratelmatobius cardosoi - Brazil
Paratelmatobius gaigeae - Brazil
Paratelmatobius lutzii - Brazil
Paratelmatobius mantiqueira - Brazil
Paratelmatobius poecilogaster - Brazil
Phrynopus adenopleurus - Bolivia
Phrynopus bufoides - Peru
Phrynopus columbianus - Colombia
Phrynopus fallaciosus - Peru
Phrynopus nanus - Colombia
Phrynopus nebulanastes - Peru
Phrynopus paucari - Peru
Phrynopus peraccai - Ecuador
Phrynopus peruanus - Peru
Phrynopus pesantesi - Peru
Phrynopus pinguis - Bolivia
Phrynopus thompsoni - Peru
Phrynopus wettsteini - Peru
Phyllonastes heyeri - Ecuador, Peru
Phyllonastes lynchi - Peru
Phyllonastes ritarasquinae - Bolivia
Physalaemus barrioi - Brazil
Physalaemus bokermanni - Brazil
Physalaemus caete - Brazil
Physalaemus coloradorum - Ecuador
Physalaemus deimaticus - Brazil
Physalaemus erythros - Brazil
Physalaemus evangelistai - Brazil
Physalaemus guayaco - Ecuador
Physalaemus jordanensis - Brazil
Physalaemus maximus - Brazil
Physalaemus moreirae - Brazil
Physalaemus obtectus - Brazil
Physalaemus rupestris - Brazil
Proceratophrys concavitympanum - Brazil
Proceratophrys cururu - Brazil
Proceratophrys moehringi - Brazil
Proceratophrys palustris - Brazil
Proceratophrys phyllostomus - Brazil
Pseudopaludicola canga - Brazil
Pseudopaludicola mineira - Brazil
Pseudopaludicola mirandae - Argentina
Pseudopaludicola riopiedadensis - Brazil
Stefania breweri - Venezuela
Stefania goini - Venezuela
Stefania marahuaquensis - Venezuela
Stefania oculosa - Venezuela
Stefania percristata - Venezuela
Stefania riae - Venezuela
Stefania roraimae - Guyana
Stefania tamacuarina - Venezuela
Telmatobius atahualpai - Peru
Telmatobius contrerasi - Argentina
Telmatobius dankoi - Chile
Telmatobius fronteriensis - Chile
Telmatobius halli - Chile
Telmatobius intermedius - Peru
Telmatobius philippii - Chile
Telmatobius pinguiculus - Argentina
Telmatobius timens - Bolivia, Peru
Telmatobius vilamensis - Chile
Zachaenus carvalhoi - Brazil
Zachaenus roseus - Chile

LIMNODYNASTIDAE

Mixophyes hihihorlo - Papua New Guinea
Notaden weigeli - Australia

MANTELLIDAE

Boophis andohahela - Madagascar
Boophis anjanaharibeensis - Madagascar
Boophis brachychir - Madagascar
Boophis burgeri - Madagascar
Boophis elenae - Madagascar
Boophis englaenderi - Madagascar
Boophis feonnyala - Madagascar
Boophis hillenii - Madagascar
Boophis laurenti - Madagascar
Boophis liami - Madagascar
Boophis mandraka - Madagascar
Boophis periegetes - Madagascar
Boophis sambirano - Madagascar
Boophis schuboeae - Madagascar
Boophis septentrionalis - Madagascar
Boophis sibilans - Madagascar
Boophis solomaso - Madagascar
Boophis xerophilus - Madagascar
Mantella manery - Madagascar
Mantidactylus albofrenatus - Madagascar
Mantidactylus albolineatus - Madagascar
Mantidactylus ambohimitombi - Madagascar
Mantidactylus cornutus - Madagascar
Mantidactylus eiselti - Madagascar
Mantidactylus enki - Madagascar
Mantidactylus kathrinae - Madagascar
Mantidactylus madinika - Madagascar
Mantidactylus punctatus - Madagascar
Mantidactylus sarotra - Madagascar
Mantidactylus thelenae - Madagascar
Mantidactylus tricinctus - Madagascar
Mantidactylus tschenki - Madagascar
Mantidactylus zavona - Madagascar
Mantidactylus zolitschka - Madagascar

MEGOPHRYIDAE

Brachytarsophrys chuannanensis - China
Leptobrachella natunae - Indonesia
Leptobrachium buchardi - Lao P.D.R.
Leptobrachium pullum - Viet Nam
Leptobrachium xanthospilum - Viet Nam
Leptolalax bourreti - Viet Nam
Leptolalax nahangensis - Viet Nam
Leptolalax pluvialis - Viet Nam
Leptolalax sungi - Viet Nam
Leptolalax ventripunctatus - China
Megophrys huangshanensis - China
Megophrys parallela - Indonesia
Ophryophryne gerti - Lao P.D.R., Viet Nam
Ophryophryne hansi - Viet Nam
Oreolalax nanjiangensis - China
Oreolalax weigoldi - China
Scutiger adungensis - Myanmar
Scutiger bhutanensis - Bhutan
Scutiger brevipes - China
Scutiger jiulongensis - China
Xenophrys auralensis - Cambodia
Xenophrys caudoprocta - China
Xenophrys daweimontis - China
Xenophrys kempii - China, India
Xenophrys medogensis - China
Xenophrys pachyproctus - China
Xenophrys robusta - India
Xenophrys shuichengensis - China
Xenophrys wawuensis - China
Xenophrys wuliangshanensis - China, India
Xenophrys zhangi - China

MICROHYLIDAE

Adelastes hylonomus - Venezuela
Albericus exclamitans - Papua New Guinea
Albericus fafniri - Papua New Guinea
Albericus gudrunae - Papua New Guinea
Albericus gunnari - Papua New Guinea
Albericus laurini - Indonesia
Albericus rheaurum - Papua New Guinea
Albericus sanguinopictus - Papua New Guinea
Albericus variegatus - Indonesia
Altigius alios - Bolivia, Peru
Anodonthyla nigrigularis - Madagascar
Aphantophryne minuta - Papua New Guinea
Aphantophryne sabini - Papua New Guinea
Asterophrys leucopus - Papua New Guinea
Austrochaperina adamantina - Papua New Guinea
Austrochaperina aquilonia - Papua New Guinea
Austrochaperina archboldi - Papua New Guinea
Austrochaperina brevipes - Papua New Guinea
Austrochaperina kosarek - Indonesia
Austrochaperina mehelyi - Papua New Guinea
Austrochaperina parkeri - Papua New Guinea
Austrochaperina polysticta - Papua New Guinea
Austrochaperina septentrionalis - Papua New Guinea
Austrochaperina yelaensis - Papua New Guinea
Barygenys cheesmanae - Papua New Guinea
Barygenys flavigularis - Papua New Guinea
Barygenys maculata - Papua New Guinea
Barygenys parvula - Papua New Guinea
Breviceps bagginsi - South Africa
Breviceps sopranus - South Africa, Swaziland
Calluella brooksii - Indonesia, Malaysia
Calluella flava - Malaysia
Calluella minuta - Malaysia
Calluella smithi - Malaysia
Calluella volzi - Indonesia
Callulops boettgeri - Indonesia
Callulops dubius - Indonesia
Callulops eurydactylus - Indonesia, Papua New Guinea
Callulops fuscus - Indonesia
Callulops glandulosus - Papua New Guinea
Callulops marmoratus - Papua New Guinea
Callulops sagittatus - Papua New Guinea
Chiasmocleis alagoanus - Brazil
Chiasmocleis centralis - Brazil
Chiasmocleis cordeiroi - Brazil
Chiasmocleis crucis - Brazil
Chiasmocleis gnoma - Brazil
Chiasmocleis jimi - Brazil
Chiasmocleis mehelyi - Brazil
Choerophryne allisoni - Papua New Guinea
Choerophryne longirostris - Papua New Guinea
Cophixalus aimbensis - Papua New Guinea
Cophixalus ateles - Papua New Guinea
Cophixalus balbus - Indonesia
Cophixalus bewaniensis - Papua New Guinea
Cophixalus cryptotympanum - Papua New Guinea
Cophixalus daymani - Papua New Guinea
Cophixalus kaindiensis - Papua New Guinea
Cophixalus montanus - Indonesia
Cophixalus peninsularis - Australia
Cophixalus pulchellus - Papua New Guinea
Cophixalus tagulensis - Papua New Guinea
Cophixalus tetzlaffi - Indonesia
Cophixalus verecundus - Papua New Guinea
Cophixalus zweifeli - Australia
Cophyla berara - Madagascar
Copiula expectata - Indonesia
Copiula major - Indonesia
Copiula obsti - Indonesia
Copiula pipiens - Indonesia, Papua New Guinea
Ctenophryne minor - Colombia
Elachistocleis skotogaster - Argentina
Hylophorbus nigrinus - Indonesia
Hylophorbus picoides - Indonesia
Hylophorbus richardsi - Papua New Guinea
Hylophorbus sextus - Indonesia
Hylophorbus tetraphonus - Indonesia
Hylophorbus wondiwoi - Indonesia
Hyophryne histrio - Brazil
Kalophrynus bunguranus - Indonesia
Kalophrynus eok - Malaysia
Kalophrynus menglienicus - China
Kalophrynus orangensis - India
Kalophrynus robinsoni - Malaysia
Kaloula assamensis - India
Kaloula walteri - Philippines
Liophryne allisoni - Papua New Guinea
Liophryne rhododactyla - Papua New Guinea
Liophryne rubra - Papua New Guinea
Liophryne similis - Papua New Guinea
Mantophryne infulata - Papua New Guinea
Mantophryne louisiadensis - Papua New Guinea
Microhyla annectens - Malaysia
Microhyla chakrapanii - India
Microhyla erythropoda - Viet Nam
Microhyla fusca - Viet Nam
Microhyla nanapollexa - Viet Nam
Microhyla picta - Viet Nam
Microhyla pulverata - Viet Nam
Microhyla superciliaris - Indonesia, Malaysia
Oreophryne albopunctata - Indonesia
Oreophryne alticola - Indonesia
Oreophryne asplenicola - Indonesia
Oreophryne atrigularis - Indonesia
Oreophryne brevicrus - Indonesia
Oreophryne brevirostris - Indonesia
Oreophryne clamata - Indonesia
Oreophryne crucifer - Indonesia
Oreophryne flava - Indonesia
Oreophryne frontifasciata - Indonesia
Oreophryne geminus - Papua New Guinea
Oreophryne habbemensis - Indonesia
Oreophryne idenburgensis - Indonesia
Oreophryne insulana - Papua New Guinea
Oreophryne kampeni - Papua New Guinea
Oreophryne loriae - Papua New Guinea
Oreophryne minuta - Indonesia
Oreophryne moluccensis - Indonesia
Oreophryne nana - Philippines
Oreophryne notata - Papua New Guinea
Oreophryne parkeri - Indonesia, Papua New Guinea
Oreophryne pseudasplenicola - Indonesia
Oreophryne rookmaakeri - Indonesia
Oreophryne sibilans - Indonesia
Oreophryne terrestris - Papua New Guinea
Oreophryne unicolor - Indonesia
Oreophryne waira - Indonesia
Oreophryne wapoga - Indonesia
Oreophryne wolterstorffi - Papua New Guinea
Oreophryne zimmeri - Indonesia
Oxydactyla brevicrus - Indonesia
Oxydactyla coggeri - Papua New Guinea
Oxydactyla crassa - Papua New Guinea
Pherohapsis menziesi - Papua New Guinea
Platypelis cowanii - Madagascar
Platypelis occultans - Madagascar
Platypelis pollicaris - Madagascar
Plethodontohyla angulifera - Madagascar
Plethodontohyla minuta - Madagascar
Ramanella anamalaiensis - India
Ramanella minor - India
Scaphiophryne menabensis - Madagascar
Scaphiophryne obscura - Madagascar
Scaphiophryne verrucosa - Madagascar
Stumpffia grandis - Madagascar
Stumpffia psologlossa - Madagascar
Stumpffia roseifemoralis - Madagascar
Stumpffia tetradactyla - Madagascar
Stumpffia tridactyla - Madagascar
Xenobatrachus anorbis - Indonesia, Papua New Guinea
Xenobatrachus arfakianus - Indonesia
Xenobatrachus giganteus - Indonesia
Xenobatrachus huon - Papua New Guinea
Xenobatrachus multisica - Indonesia
Xenobatrachus ocellatus - Indonesia
Xenobatrachus ophiodon - Indonesia
Xenobatrachus scheepstrai - Indonesia
Xenobatrachus schiefenhoeveli - Indonesia
Xenobatrachus subcroceus - Papua New Guinea
Xenobatrachus tumulus - Papua New Guinea
Xenobatrachus zweifeli - Papua New Guinea
Xenorhina adisca - Indonesia
Xenorhina arboricola - Papua New Guinea
Xenorhina eiponis - Indonesia
Xenorhina minima - Indonesia

MYOBATRACHIDAE

Crinia sloanei - Australia
Uperoleia arenicola - Australia
Uperoleia marmorata - Australia
Uperoleia martini - Australia
Uperoleia orientalis - Australia
Uperoleia tyleri - Australia

PETROPEDETIDAE

Arthroleptella drewesii - South Africa
Arthroleptella subvoce - South Africa
Cacosternum karooicum - South Africa
Cacosternum leleupi - Congo, D.R.
Cacosternum poyntoni - South Africa
Cacosternum striatum - Lesotho, South Africa
Phrynobatrachus albolabris - Ghana
Phrynobatrachus albomarginatus - Congo, D.R.
Phrynobatrachus anotis - Congo, D.R.
Phrynobatrachus asper - Congo, D.R.
Phrynobatrachus brevipalmatus - Angola
Phrynobatrachus congicus - Congo, D.R.
Phrynobatrachus cryptotis - Congo, D.R.
Phrynobatrachus dalcqi - Congo, D.R.
Phrynobatrachus elberti - Chad
Phrynobatrachus gastoni - Congo, D.R.
Phrynobatrachus giorgii - Congo, D.R.
Phrynobatrachus inexpectatus - Ethiopia
Phrynobatrachus manengoubensis - Cameroon
Phrynobatrachus nanus - Chad
Phrynobatrachus ogoensis - Gabon, Liberia
Phrynobatrachus pygmaeus - Chad
Phrynobatrachus rouxi - Uganda
Phrynobatrachus sternfeldi - Central African Republic
Phrynobatrachus stewartae - Malawi, Tanzania
Phrynobatrachus sulfureogularis - Burundi
Phrynobatrachus taiensis - Côte d'Ivoire
Phrynobatrachus ukingensis - Malawi, Tanzania
Phrynobatrachus vogti - Ghana

PIPIDAE

Hymenochirus boulengeri - Congo, D.R.

Hymenochirus feae - Gabon
Xenopus boumbaensis - Cameroon
Xenopus largeni - Ethiopia
Xenopus ruwenzoriensis - Uganda

RANIDAE

Afrana amieti - Congo, D.R.
Afrana desaegeri - Congo, D.R.
Afrana ruwenzorica - Congo, D.R., Kenya, Uganda
Afrana vandijki - South Africa
Afrana wittei - Kenya, Tanzania
Amnirana fonensis - Guinea
Amnirana parkeriana - Angola
Amolops aniqiaoensis - China
Amolops bellulus - China, Myanmar
Amolops chakrataensis - India
Amolops jaunsari - India
Amolops kaulbacki - Myanmar
Amolops liangshanensis - China
Amolops longimanus - Myanmar
Amolops medogensis - China
Amolops nepalicus - Nepal
Amolops spinapectoralis - Viet Nam
Batrachylodes gigas - Papua New Guinea
Chaparana aenea - Thailand
Chaparana delacouri - Viet Nam
Chaparana fansipani - China, Viet Nam
Chaparana taihangnicus - China
Chaparana yei - China
Discodeles malukuna - Solomon Islands
Discodeles opisthodon - Papua New Guinea, Solomon Islands
Euphlyctis ghoshi - India
Fejervarya altilabris - Myanmar
Fejervarya assimilis - India
Fejervarya brama - Unknown
Fejervarya brevipalmata - India
Fejervarya frithi - Bangladesh
Fejervarya moodiei - Philippines
Fejervarya multistriata - China
Fejervarya mysorensis - India
Fejervarya parambikulamana - India
Fejervarya pulla - Malaysia
Fejervarya raja - Malaysia, Thailand
Fejervarya sauriceps - India
Fejervarya schlueteri - Unknown
Hildebrandtia ornatissima - Angola
Huia absita - Lao P.D.R.
Huia melasma - Thailand
Huia modiglianii - Indonesia
Indirana longicrus - India
Indirana tenuilingua - India
Ingerana alpina - China
Ingerana mariae - Philippines
Ingerana medogensis - China
Ingerana reticulata - China
Ingerana xizangensis - China
Limnonectes dabanus - Viet Nam
Limnonectes doriae - India, Malaysia, Myanmar, Thailand
Limnonectes kenepaiensis - Indonesia, Malaysia
Limnonectes khammonensis - Lao P.D.R.
Limnonectes khasianus - India
Limnonectes limborgi - Myanmar
Limnonectes macrognathus - Malaysia, Myanmar, Thailand
Limnonectes mawlyndipi - India
Limnonectes mawphlangensis - India
Limnonectes micrixalus - Philippines
Meristogenys macrophthalmus - Malaysia
Micrixalus elegans - India
Micrixalus narainensis - India
Micrixalus silvaticus - India
Micrixalus swamianus - India
Micrixalus thampii - India
Nyctibatrachus kempholeyensis - India
Nyctibatrachus sylvaticus - India
Occidozyga floresianus - Indonesia
Occidozyga vittatus - Viet Nam
Paa bourreti - Thailand, Viet Nam
Paa conaensis - China
Paa feae - China, Myanmar
Paa medogensis - China
Paa mokokchungensis - India
Paa rarica - Nepal
Paa taihangnicus - China
Paa yei - China
Platymantis acrochorda - Papua New Guinea, Solomon Islands
Platymantis batantae - Indonesia
Platymantis bimaculata - Indonesia
Platymantis cheesmanae - Indonesia
Platymantis gilliardi - Papua New Guinea
Platymantis macrops - Papua New Guinea
Platymantis macrosceles - Papua New Guinea
Platymantis mamusiorum - Papua New Guinea
Platymantis mimica - Papua New Guinea
Platymantis myersi - Papua New Guinea
Platymantis nexipus - Papua New Guinea
Platymantis rhipiphalca - Papua New Guinea
Ptychadena arnei - Côte d'Ivoire, Guinea, Senegal, Sierra Leone
Ptychadena christyi - Congo, D.R., Uganda
Ptychadena filwoha - Ethiopia
Ptychadena harenna - Ethiopia
Ptychadena ingeri - Congo, D.R.
Ptychadena mapacha - Namibia
Ptychadena nana - Ethiopia
Ptychadena pujoli - Côte d'Ivoire, Guinea, Liberia, Sierra Leone
Ptychadena retropunctata - Guinea, Liberia, Sierra Leone
Ptychadena submascareniensis - Côte d'Ivoire, Guinea, Liberia, Sierra Leone
Ptychadena wadei - Ethiopia
Rana albotuberculata - Philippines
Rana anlungensis - China
Rana aurata - Indonesia
Rana bacboensis - Viet Nam
Rana banaorum - Viet Nam
Rana bannanica - China
Rana bolavensis - Lao P.D.R.
Rana cordofana - Sudan
Rana crassiovis - Indonesia
Rana daorum - China, Viet Nam
Rana debussyi - Indonesia
Rana demarchii - Eritrea
Rana everetti - Philippines
Rana graminea - China, Viet Nam
Rana heatwolei - Lao P.D.R.
Rana hejiangensis - China
Rana hmongorum - Viet Nam
Rana iriodes - Viet Nam
Rana khalam - Lao P.D.R., Viet Nam
Rana kunyuensis - China
Rana lemosespinali - Mexico
Rana leporipes - China
Rana lini - China
Rana livida - Myanmar
Rana margariana - Myanmar
Rana megatympanum - Viet Nam
Rana melanomenta - Philippines
Rana morafkai - Viet Nam
Rana oatesii - Myanmar
Rana orba - Lao P.D.R., Viet Nam
Rana persimilis - Indonesia
Rana pseudodalmatina - Iran
Rana psilonota - Mexico
Rana sangzhiensis - China
Rana scutigera - Thailand
Rana sinica - China
Rana tavasensis - Turkey
Rana taylori - Costa Rica, Nicaragua
Rana terentievi - Tajikistan
Rana trankieni - Viet Nam
Rana volkerjane - Indonesia
Rana zhengi - China
Sphaerotheca leucorhynchus - India
Sphaerotheca swani - Nepal
Strongylopus kilimanjaro - Tanzania
Tomopterna damarensis - Namibia

RHACOPHORIDAE

Chirixalus ananjevae - Viet Nam
Chirixalus cherrapunjiae - India
Chirixalus dudhwaensis - India
Chirixalus hansenae - Thailand
Chirixalus laevis - Viet Nam
Chirixalus punctatus - Myanmar
Chirixalus shyamrupus - India
Philautus abditus - Viet Nam
Philautus albopunctatus - China
Philautus banaensis - Viet Nam
Philautus cardamonus - Cambodia
Philautus carinensis - Myanmar, Thailand, Viet Nam
Philautus cinerascens - Myanmar
Philautus cornutus - Indonesia
Philautus dubius - India
Philautus flaviventris - India
Philautus gryllus - Viet Nam
Philautus hainanus - China
Philautus jerdonii - India
Philautus kempiae - India
Philautus luteolus - India
Philautus maosonensis - Viet Nam
Philautus medogensis - China
Philautus menglaensis - China
Philautus microdiscus - India
Philautus namdaphaensis - India
Philautus petilus - Lao P.D.R.
Philautus regius - Sri Lanka
Philautus semiruber - Sri Lanka
Philautus similipalensis - India
Philautus supercornutus - Viet Nam
Philautus terebrans - India
Philautus tuberohumerus - India
Philautus tytthus - Myanmar
Philautus vittiger - Indonesia
Polypedates dorsoviridis - Viet Nam
Polypedates hecticus - Philippines
Polypedates hungfuensis - China
Polypedates naso - India
Polypedates puerensis - China
Polypedates zed - Nepal
Rhacophorus achantharrhena - Indonesia
Rhacophorus barisani - Indonesia
Rhacophorus catamitus - Indonesia
Rhacophorus depressus - Unknown
Rhacophorus duboisi - China, Viet Nam
Rhacophorus edentulus - Indonesia
Rhacophorus georgii - Indonesia
Rhacophorus hainanus - China
Rhacophorus hoanglienensis - Viet Nam
Rhacophorus modestus - Indonesia
Rhacophorus namdaphaensis - India
Rhacophorus notater - Viet Nam
Rhacophorus orlovi - Lao P.D.R., Thailand, Viet Nam
Rhacophorus poecilonotus - Indonesia
Rhacophorus rhyssocephalus - Indonesia
Rhacophorus robinsonii - Malaysia, Thailand
Rhacophorus taronensis - Myanmar
Rhacophorus translineatus - China, India
Rhacophorus tuberculatus - China, India
Rhacophorus turpes - Myanmar
Rhacophorus variabilis - India
Rhacophorus verrucopus - China
Theloderma corticale - Viet Nam
Theloderma kwangsiense - China
Theloderma phrynoderma - Myanmar

CAUDATA

AMBYSTOMATIDAE

Ambystoma flavipiperatum - Mexico
Ambystoma rivulare - Mexico
Ambystoma silvensis - Mexico

HYNOBIIDAE

Batrachuperus taibaiensis - China
Hynobius guabangshanensis - China
Hynobius katoi - Japan
Hynobius quelpartensis - Korea, Republic
Hynobius turkestanicus - Unknown
Protohynobius puxiongensis - China

PLETHODONTIDAE

Batrachoseps diabolicus - United States of America
Batrachoseps gabrieli - United States of America
Batrachoseps incognitus - United States of America
Batrachoseps kawia - United States of America
Batrachoseps minor - United States of America
Batrachoseps relictus - United States of America
Bolitoglossa anthracina - Panama
Bolitoglossa copia - Panama
Bolitoglossa cuna - Panama
Bolitoglossa digitigrada - Peru
Bolitoglossa epimela - Costa Rica
Bolitoglossa hermosa - Mexico
Bolitoglossa lozanoi - Colombia
Bolitoglossa nigrescens - Costa Rica
Bolitoglossa oaxacensis - Mexico
Bolitoglossa obscura - Costa Rica
Bolitoglossa phalarosoma - Colombia, Panama
Bolitoglossa savagei - Colombia
Bolitoglossa sombra - Costa Rica
Bolitoglossa taylori - Panama
Bolitoglossa veracrucis - Mexico
Bolitoglossa zapoteca - Mexico
Chiropterotriton arboreus - Mexico
Chiropterotriton chiropterus - Mexico
Chiropterotriton terrestris - Mexico
Cryptotriton wakei - Guatemala
Desmognathus folkertsi - United States of America
Eurycea chamberlaini - United States of America
Eurycea pterophila - United States of America
Eurycea robusta - United States of America
Eurycea troglodytes - United States of America
Nototriton brodiei - Guatemala
Nototriton major - Costa Rica
Nototriton stuarti - Guatemala
Nototriton tapanti - Costa Rica
Oedipina carablanca - Costa Rica
Oedipina collaris - Costa Rica, Nicaragua, Panama
Oedipina ignea - Guatemala, Honduras
Oedipina savagei - Costa Rica, Panama
Oedipina stuarti - Honduras
Oedipina taylori - El Salvador, Guatemala, Honduras
Plethodon aureolus - United States of America
Plethodon kiamichi - United States of America

Plethodon sequoyah - United States of America
Pseudoeurycea ahuitzotl - Mexico
Pseudoeurycea amuzga - Mexico
Pseudoeurycea anitae - Mexico
Pseudoeurycea aurantia - Mexico
Pseudoeurycea conanti - Mexico
Pseudoeurycea maxima - Mexico
Pseudoeurycea mixcoatl - Mexico
Pseudoeurycea obesa - Mexico
Pseudoeurycea quetzalanensis - Mexico
Pseudoeurycea ruficauda - Mexico
Pseudoeurycea tenchalli - Mexico
Pseudoeurycea teotepec - Mexico
Pseudoeurycea tlahcuiloh - Mexico
Pseudoeurycea tlilicxitl - Mexico
Thorius insperatus - Mexico
Thorius smithi - Mexico

SALAMANDRIDAE

Cynops chenggongensis - China
Paramesotriton laoensis - Lao P.D.R.

GYMNOPHIONA

CAECILIIDAE

Atretochoana eiselti - Brazil
Boulengerula changamwensis - Kenya, Malawi
Boulengerula denhardti - Kenya
Boulengerula fischeri - Rwanda
Caecilia abitaguae - Ecuador
Caecilia albiventris - Suriname
Caecilia antioquiaensis - Colombia
Caecilia armata - Brazil
Caecilia attenuata - Ecuador, Peru
Caecilia bokermanni - Colombia, Ecuador
Caecilia caribea - Colombia
Caecilia corpulenta - Colombia
Caecilia crassisquama - Ecuador
Caecilia degenerata - Colombia
Caecilia dunni - Ecuador
Caecilia flavopunctata - Venezuela
Caecilia guntheri - Colombia, Ecuador
Caecilia inca - Peru
Caecilia isthmica - Colombia, Panama
Caecilia mertensi - Unknown
Caecilia occidentalis - Colombia
Caecilia pachynema - Colombia, Ecuador
Caecilia pressula - Guyana
Caecilia subterminalis - Ecuador
Caecilia tenuissima - Colombia, Ecuador
Caecilia thompsoni - Colombia
Caecilia volcani - Panama
Chthonerpeton arii - Brazil
Chthonerpeton braestrupi - Brazil
Chthonerpeton exile - Brazil
Chthonerpeton noctinectes - Brazil
Chthonerpeton onorei - Ecuador
Chthonerpeton perissodus - Brazil
Chthonerpeton viviparum - Brazil
Dermophis costaricensis - Costa Rica
Dermophis glandulosus - Colombia, Costa Rica, Panama
Dermophis gracilior - Costa Rica, Panama
Dermophis oaxacae - Mexico
Dermophis occidentalis - Costa Rica
Gegeneophis carnosus - India
Gegeneophis danieli - India
Gegeneophis fulleri - India
Gegeneophis krishni - India
Gegeneophis madhavai - India
Gegeneophis nadkarnii - India
Gegeneophis seshachari - India
Geotrypetes angeli - Guinea, Sierra Leone
Geotrypetes pseudoangeli - Guinea, Liberia
Gymnopis syntrema - Belize, Guatemala
Herpele multiplicata - Cameroon
Idiocranium russeli - Cameroon
Indotyphlus battersbyi - India
Indotyphlus maharashtraensis - India
Luetkenotyphlus brasiliensis - Argentina, Brazil
Microcaecilia rabei - Suriname, Venezuela
Microcaecilia supernumeraria - Brazil
Mimosiphonops reinhardti - Brazil
Mimosiphonops vermiculatus - Brazil
Oscaecilia elongata - Panama
Oscaecilia equatorialis - Ecuador
Oscaecilia hypereumeces - Brazil
Oscaecilia koepckeorum - Peru
Oscaecilia osae - Costa Rica
Oscaecilia polyzona - Colombia
Oscaecilia zweifeli - French Guiana, Guyana
Siphonops insulanus - Brazil
Siphonops leucoderus - Brazil
Sylvacaecilia grandisonae - Ethiopia
Typhlonectes cunhai - Brazil

ICHTHYOPHIIDAE

Caudacaecilia asplenia - Malaysia
Caudacaecilia larutensis - Malaysia, Thailand
Caudacaecilia nigroflava - Malaysia
Caudacaecilia paucidentula - Indonesia
Caudacaecilia weberi - Philippines
Ichthyophis acuminatus - Thailand
Ichthyophis atricollaris - Malaysia
Ichthyophis bernisi - Indonesia
Ichthyophis biangularis - Malaysia
Ichthyophis billitonensis - Indonesia
Ichthyophis bombayensis - India
Ichthyophis dulitensis - Malaysia
Ichthyophis elongatus - Indonesia
Ichthyophis garoensis - India
Ichthyophis glandulosus - Philippines
Ichthyophis humphreyi - Unknown
Ichthyophis husaini - India
Ichthyophis hypocyaneus - Indonesia
Ichthyophis javanicus - Indonesia
Ichthyophis laosensis - Lao P.D.R.
Ichthyophis longicephalus - India
Ichthyophis malabarensis - India
Ichthyophis mindanaoensis - Philippines
Ichthyophis monochrous - Indonesia, Malaysia, Brunei Darussalam (Extinct)
Ichthyophis paucisulcus - Indonesia
Ichthyophis peninsularis - India
Ichthyophis sikkimensis - India, Nepal
Ichthyophis singaporensis - Singapore
Ichthyophis subterrestris - India
Ichthyophis sumatranus - Indonesia
Ichthyophis supachaii - Thailand
Ichthyophis youngorum - Thailand

RHINATREMATIDAE

Epicrionops columbianus - Colombia
Epicrionops lativittatus - Peru
Epicrionops marmoratus - Ecuador
Epicrionops parkeri - Colombia
Epicrionops peruvianus - Peru

SCOLECOMORPHIDAE

Crotaphatrema bornmuelleri - Cameroon
Crotaphatrema lamottei - Cameroon
Crotaphatrema tchabalmbaboensis - Cameroon

URAEOTYPHLIDAE

Uraeotyphlus interruptus - India
Uraeotyphlus malabaricus - India
Uraeotyphlus menoni - India
Uraeotyphlus narayani - India
Uraeotyphlus oxyurus - India

APPENDIX XIII. THE DIFFERENCES IN IUCN RED LIST STATUS FOR SOME BRAZILIAN SPECIES

Species	Brazil GAA workshop Red List Assessment	"Consistent" GAA team Red List Assessment
ANURA		
BRACHYCEPHALIDAE		
Brachycephalus didactylus	LC	NT
Brachycephalus hermogenesi	LC	VU B1ab(iii)
BUFONIDAE		
Dendrophryniscus berthalutzae	LC	VU B1ab(iii)
Melanophryniscus cambaraensis	DD	EN B1ab(iii,v)
Melanophryniscus macrogranulosus	VU B1ab(iii)	CR B2ab(iii)
Melanophryniscus moreirae	NT	VU D2
HYLIDAE		
Aplastodiscus callipygius	LC	VU B1ab(iii)
Aplastodiscus cochranae	LC	NT
Aplastodiscus ehrhardti	LC	NT
Aplastodiscus flumineus	DD	CR B2ab(iii)
Aplastodiscus musicus	DD	EN B1ab(iii)
Aplastodiscus weygoldti	NT	DD
Bokermannohyla carvalhoi	LC	VU B1ab(iii)
Bokermannohyla claresignata	DD	CR A2ae; B2ab(v)
Bokermannohyla clepsydra	DD	VU B1ab(iii)
Bokermannohyla luctuosa	LC	VU B1ab(iii)
Bokermannohyla martinsi	LC	NT
Bokermannohyla nanuzae	LC	VU B1ab(iii)
Dendropsophus ruschii	DD	EN B1ab(iii)+2ab(iii)
Hylomantis aspera	LC	EN B2ab(iii)
Hylomantis granulosa	LC	VU B1ab(iii)
Hypsiboas marginatus	LC	VU B1ab(iii)
Phasmahyla exilis	LC	NT
Phrynomedusa appendiculata	NT	CR B2ab(v)
Phyllodytes brevirostris	DD	CR B1ab(iii)
Phyllodytes edelmoi	DD	EN B1ab(iii)
Phyllodytes gyrinaethes	DD	EN B1ab(iii)
Phyllodytes kautskyi	LC	NT
Scinax albicans	LC	VU B1ab(iii)
Scinax angrensis	LC	EN B1ab(iii)
Scinax arduous	DD	EN B1ab(iii)
Scinax cardosoi	LC	NT
Scinax heyeri	DD	CR B2ab(iii,v)
Scinax kautskyi	DD	VU D2
Scinax littoralis	LC	VU B1ab(iii)
Scinax littoreus	LC	VU B1ab(iii)
Scinax machadoi	LC	NT
Scinax pinima	DD	VU B1ab(iii)
Scinax trapicheiroi	NT	VU B1ab(iii)
LEPTODACTYLIDAE		
Adelophryne baturitensis	VU B1ab(iii)	EN B1ab(iii)
Adelophryne maranguapensis	EN B1ab(iii)	CR B1ab(iii)
Crossodactylodes bokermanni	NT	VU B1ab(iii)
Crossodactylodes izecksohni	NT	VU D2
Crossodactylus aeneus	DD	LC
Crossodactylus bokermanni	DD	EN B1ab(iii)+2ab(iii)
Crossodactylus dantei	DD	EN B1ab(iii)+2ab(iii)
Crossodactylus dispar	DD	NT
Crossodactylus grandis	DD	EN B1ab(iii)+2ab(iii)
Crossodactylus trachystomus	DD	CR B2ab(iii,v)
Cycloramphus asper	DD	EN B2ab(iii,iv,v)
Cycloramphus bolitoglossus	DD	EN B2ab(iii)
Cycloramphus brasiliensis	NT	VU B1ab(iii)
Cycloramphus dubius	LC	EN B1ab(iii)
Cycloramphus eleutherodactylus	DD	LC
Cycloramphus granulosus	DD	EN B2ab(iii,v)
Cycloramphus izecksohni	DD	VU B1ab(iii)
Cycloramphus lutzorum	DD	VU B1ab(iii)
Cycloramphus ohausi	DD	CR A2ac; B2ab(v)
Cycloramphus rhyakonastes	LC	DD

Species	Brazil GAA workshop Red List Assessment	"Consistent" GAA team Red List Assessment
Cycloramphus semipalmatus	NT	VU B1ab(iii,v)+2ab(iii,v)
Cycloramphus stejnegeri	DD	EN B1ab(iii)
Eleutherodactylus bolbodactylus	LC	VU B1ab(iii)
Eleutherodactylus epipedus	NT	EN B1ab(iii)
Eleutherodactylus erythromerus	DD	EN B1ab(iii)
Eleutherodactylus gualteri	LC	EN B1ab(iii)
Eleutherodactylus hoehnei	LC	VU B1ab(iii)
Eleutherodactylus octavioi	LC	VU B1ab(iii)
Eleutherodactylus oeus	NT	EN B1ab(iii)
Eleutherodactylus venancioi	LC	VU B1ab(iii)
Euparkerella brasiliensis	LC	VU B1ab(iii)
Euparkerella cochranae	LC	VU B1ab(iii)
Euparkerella robusta	VU B1ab(iii)	EN B1ab(iii)
Euparkerella tridactyla	VU D2	EN B1ab(iii)
Holoaden luederwaldti	DD	VU B1ab(iii)
Hylodes heyeri	DD	VU B1ab(iii)
Hylodes meridionalis	LC	VU B1ab(iii)
Hylodes ornatus	LC	VU B1ab(iii)
Hylodes perplicatus	LC	VU B1ab(iii)
Hylodes regius	DD	EN B1ab(iii)+2ab(iii)
Hylodes sazima	DD	EN B1ab(iii,v)+2ab(iii,v)
Leptodactylus marambaiae	LC	VU D2
Megaelosia goeldii	LC	VU B1ab(iii)
Odontophrynus salvatori	DD	LC
Paratelmatobius gaigeae	DD	B1ab(iii,v)+2ab(iii,v)
Paratelmatobius lutzii	DD	CR B1ab(v)
Paratelmatobius mantiqueira	DD	CR B1ab(iii,v)+2ab(iii,v)
Paratelmatobius poecilogaster	DD	EN B1ab(iii)+2ab(iii)
Physalaemus barrioi	DD	EN B1ab(iii)
Physalaemus bokermanni	DD	EN B1ab(iii)
Physalaemus caete	DD	EN B1ab(iii)
Physalaemus moreirae	DD	EN B1ab(iii)
Physalaemus rupestris	DD	VU D2
Physalaemus soaresi	EN B1ab(iii)+2ab(iii)	CR B1ab(iii)+2ab(iii)
Proceratophrys brauni	LC	VU B1ab(iii)
Proceratophrys melanopogon	LC	VU B1ab(iii)
Proceratophrys moehringi	DD	VU B1ab(iii)
Proceratophrys phyllostomus	DD	EN B1ab(iii)+2ab(iii)
Proceratophrys subguttata	LC	NT
Rupirana cardosoi	NT	VU B1ab(iii)
Scythrophrys sawayae	LC	VU B1ab(iii)
Thoropa lutzi	EN B1ab(iii,v)+2ab(iii,v)	CR A2ae; B2ab(i,ii,iii,iv,v)
Thoropa megatympanum	LC	NT
Thoropa petropolitana	VU B1ab(iii,v)+2ab(ii,iii,iv,v)	EN A2ac; B2ab(ii,iii,iv,v)
Thoropa saxatilis	NT	EN A2ac; B2ab(ii,iii,iv,v)
Zachaenus parvulus	LC	VU B1ab(iii)
MICROHYLIDAE		
Arcovomer passarellii	LC	NT
Chiasmocleis alagoanus	DD	EN B1ab(iii)
Chiasmocleis atlantica	LC	VU B1ab(iii)
Chiasmocleis capixaba	LC	VU B1ab(iii)
Chiasmocleis carvalhoi	EN B2ab(iii)	NT
Chiasmocleis centralis	DD	LC
Elachistocleis erythrogaster	NT	EN B1ab(iii)
Stereocyclops parkeri	LC	VU B1ab(iii)

APPENDIX XIV. GLOSSARY OF SOME KEY TERMS USED

Alkaloid: An organic compound, containing nitrogen, which can naturally be found in plants, animals and fungi. Many alkaloids have medicinal properties.
Amplexus: A specific breeding position of amphibians, whereby the eggs and sperm are externally fertilized.
Anthropogenic: Processes that are influenced or induced by human activity.
Anura: The largest Order of amphibians (5,208 living species), most readily identified as the frogs and toads.
Apodous: A species generally having no, or only very rudimentory, feet (ceacilians are largely apodal).
Aposematic: Natural defences, such as coloration or sounds, that suggests that the species has dangerous or harmful properties.
Buccopharyngeal: Pertaining to the mouth and pharynx.
Caudata: The Order of amphibians consisting of salamanders and newts (535 living species).
Cerrado: A large, biologically rich, tropical savannah located in central Brazil.
Chaco: An extensive, semi-arid ecosystem, located in central South America.
Chytridiomycosis: An infectious disease caused by the chytrid fungus *Batrachochytrium dendrobatidis*. This disease has been suggested as a cause of recent substantial declines in amphibian populations.
Cloaca: A posterior opening for the urinary, reproductive and digestive systems in certain animal groups (including amphibians).
Crepuscular: Appearing most active during the twilight hours of dawn and dusk.
Ectotherm: Animals that are 'cold-blooded', with the outside environment largely determining body temperature.
Endorheic: An enclosed watershed area, often in arid areas, in which rivers rise, but do not reach the sea. Commonly used to describe contained wetlands and basins.
Endotherm: Animals that are 'warm-blooded', in that they are able to regulate their own body temperature at a fairly constant rate, regardless to the surrounding temperatures
Enucleate: Removal of the nucleus from a cell. A procedure often used as part of cloning studies.
Ex-situ: Generally refers here to conservation efforts for a species undertaken outside of its natural range (such as captive-breeding).
Gymnophiona: The smallest Order of amphibians (172 living species), commonly called the caecilians.
Hybridogenetic: A reproductional mode in which hybrids from two parental species are able to backcross with one of the parents, thereby maintaining a distinct hybrid lineage. This has been recorded in a number of European waterfrog species (eg. *Rana esculenta*). See http://tolweb.org/notes/?note_id=579 [accessed May 16 2007] for further explanation.
In-situ: Generally refers here to conservation measures undertaken within the original or natural habitat of the species.
Metamorphosis: The physical transformation from the larval stage to adult form.
Monophyletic: A group of taxa that are considered to have descended from a single common ancestor taxon.
Nucleus (pl. nuclei): An important structure in cells that contains the genetic material of the organism.
Oocyte: A cell which may produce an egg (ovum) by meiotic division.
Oviparous: Producing eggs that develop and hatch outside of the female's body.
Ovoviviparous: A live-bearing breeding strategy, in which the young develop within eggs retained in the mother's body until hatching. In this reproductive strategy, the egg yolk rather than the mother's body nourishes the embryos.
Paedomorphic: Here this generally refers to sexually mature animals retaining juvenile characteristics.
Paramo: A high-altitude, largely grassland ecosystem, of the Cordillera de Talamanca in Central America and the northern Andes mountains of South America.
Paraphyletic: A group of taxa descended from a single ancestral taxon, but does not contain all the descendants of the most recent common ancestor.
Peptide: A compound containing two or more linked amino acids.
Photophilic: An organism that thrives in conditions of full light.
Phytotelmic: An organism that inhabits small pools of water within or upon plants (e.g., water in the leaf bases of bromeliads).
Polymelia: A physical defect in which the affected individual has more than the normal number of limbs present.
Polyploidy: Having more than two sets of homologous chromosomes in the nucleus. Forms of polyploidy include triploid (three sets of chromosomes) and tetraploid (four sets of chromosones).
Puna: A high-elevation, grassland-dominated ecosystem of the Andes Mountains.
Refugia: A natural area providing suitable environmental conditions to allow the persistence of a formerly widespread species, most often after they have become extinct from surrounding areas.
Rupicolous: A species that is mostly associated with rocky habitats.
Saprobe (or saprotroph): An organism that derives its nutrition from non-living organic matter; most usually from the dead or decaying remains of plants or animals.
Translocation: In the context of this book, this term refers to the conservation activity concerning the physical transportation of a species, on either a temporary or permanent basis, from an area of high threat to a more secure environment. For the most part, translocations are made to areas of natural habitat, but in some instances – especially for temporary translocations – the species may be moved from its natural range while conservation measures to ameliorate the underlying threat are undertaken.
Tropophilous: A species that thrives in an environment that undergoes clear periodic fluctuations in light, temperature, moisture and similar natural agents.
Uric acid: An organic nitrogen compound, $C_5H_4N_4O_3$ that comprises a major component in the urine of organisms.
Uricotelic: Organisms that excrete nitrogenous waste in the form of uric acid (such as some amphibians from arid environments).
Viviparous: A live-bearing breeding strategy in which offspring are nourished by, and fully develop within, the mother's body.
Yungas: A diverse ecosystem located in the eastern section of the Andes Mountains, primarily in Bolivia, and characterized as having a humid and subtropical environment.

APPENDIX XV. WEBSITES AND AMPHIBIAN-RELATED RESOURCES

General Amphibian Websites

http://research.amnh.org/herpetology/amphibia/index.php – Amphibian Species of the World: An Online Reference: provides systematic information on all amphibian species.
http://www.amphibiaweb.org/ – AmphibiaWeb: provides information for all amphibians on conservation, population declines, as well as images and other information about many amphibian species.
http://www.ssarherps.org – Society for the Study of Amphibians and Reptiles: an organization established to advance research, conservation, and education about amphibians and reptiles. Publications include the Journal of Herpetology and Herpetological Review.
http://www.caudata.org – The Newt and Salamander Portal: facilitates the sharing of accurate information about newts and salamanders, with an emphasis on their maintenance in captivity.
http://www.gymnophiona.org/ – Gymnophiona.org: a site intended to provide accurate information on caecilians and create an online community of caecilian enthusiasts
http://www.livingunderworld.org – Livingunderworld.org: an ongoing web project dedicated to the preservation of wild and captive amphibians.
http://www.herpetofauna.org/ – Amphibian and Reptile Conservation.
http://www.herplit.com/ – The Herplit Database consists of approximately 50,000 citations dating from 1586 to the present.

Regional Amphibian Websites

AFRICA

http://www.afriherp.org/ – Afriherp.org: a resource centre for the exchange of information on the herpetofauna of Africa.
http://www.wits.ac.za/haa/ – Herpetological Association of Africa: dedicated to the study and conservation of reptiles and amphibians, particularly those of Africa. Publishes the African Journal of Herpetology.

AUSTRALIA

http://www.jcu.edu.au/school/tbiol/zoology/herp/decline/decl.shtml – Amphibian declines in Australia: includes information on frog declines in Australia and current research in to these declines.
http://www.jcu.edu.au/school/tbiol/zoology/herp/herp2.shtml – Australian Herpetological Directory: a repository for information on Australian herpetofauna managed by James Cook University.
http://frogs.org.au/ – Amphibian Research Centre: a centre dedicated to research and conservation of Australia's unique frogs providing expertise in all areas of frog knowledge including captive breeding and research and education.

EUROPE

http://www.club100.net/ – club100.net: a meeting place for European field herpetology enthusiasts, with many photographs of European amphibians and reptiles.
http://www.gli.cas.cz/SEH/ – Societas Europaea Herpetologica (SEH): a specialist society presently made up by nearly 500 members from most of the European countries as well as from elsewhere in the world.
http://www.herpconstrust.org.uk/ – The Herpetological Conservation Trust: a European charitable trust dedicated to the conservation of reptiles and amphibians.
http://www.whose-tadpole.net/ – Whose tadpole is it?: A guide to the tadpole identification for Central European Amphibians.

Austria

http://www.herpetofauna.at/ – Amphibien and Reptilien Österreichs: herpetofauna of Austria.

http://www.nhm-wien.ac.at/nhm/herpet/index.htm – Austrian Herpetological Society (Österreichische Gesellschaft für Herpetologie (ÖGH)): public non-profit organization dedicated to the promotion of all aspects of herpetology. Publications include the journal Herpetozoa.

Cyprus
http://bornova.ege.edu.tr/~bgocmen/home12.html – Amphibians and Reptiles of Northern Cyprus: details of the amphibians and reptiles in northern Cyprus.

Finland
http://www.herpetomania.fi/ – The Herpetological Society of Finland: promotes the research, protection, keeping and breeding of reptiles and amphibians. Publishes the journal Herpetomania.

France
http://www.societeherpetologiquedefrance.asso.fr/ – La Société Herpétologique de France: French herpetological society.

Greece
http://www.nhmc.uoc.gr:9091/homeENG.htm – Societas Hellenica Herpetologica: concerning the study and protection of the Greek reptile and amphibian species and their habitat.

Italy
http://www.aes-web.it – Associazione Erpetologica Siciliana: the herpetofauna of Sicily, Italy.
http://www.unipv.it/webshi/ – La Societas Herpetologica Italica (S.H.I.): the Italian herpetofauna society.

Spain
http://www.herpetologica.org/index.asp – Asociación Sociación Herpetológica Española: Spanish Herpetological Association whose publications include the Revista Española de Herpetología and the Boletín de la Asociación Herpetológica Española.

United Kingdom
http://www.thebhs.org/ - The British Herpetological Society

NORTH AMERICA

http://www.cnah.org/index.asp – The Center for North American Herpetology: Joseph T. Collins' website, a good place to start to access much herpetological information, particularly with reference to the United States.
http://www.frogweb.gov/ – Amphibian declines and deformities: information on declines and deformities in North American species.
http://www.asih.org/– American Society of Ichthyologists and Herpetologists: dedicated to the scientific study of fishes, amphibians and reptiles. Publishes the journal *Copeia*.
http://www.parcplace.org/ – Partners in Amphibian and Reptile Conservation: partnership dedicated to the conservation of herpetofauna and their habitats in the United States.
http://armi.usgs.gov/ – Amphibian and Reptile Monitoring Initiative (ARMI) - national program of amphibian monitoring, research, and conservation.

SOUTH AMERICA

http://rana.biologia.ucr.ac.cr – The Research and Analysis Network for Neotropical Amphibians.

Argentina
http://www.portal-aha.com.ar/ – Asociación Herpetológica Argentina: an organization dedicated to the herpetology of Argentina.

Brazil
http://www.sbherpetologia.org.br/ – Sociedade Brasileira de Herpetologia: Brazilian Herpetological Society.

Bolivia
http://www.herpetology-bolivia.com/englishstart2.htm – Herpetology of Bolivia: details and photographs of the herpetofauna of Bolivia.

Ecuador
http://www.puce.edu.ec/zoologia/vertebrados/amphibiawebec/index.html – AmphibiaWebEcuador: information on the amphibians of Ecuador processed at the Museo de Zoología del Centro de Biodiversidad y Ambiente (Escuela de Biología) de la Pontificia Universidad Católica del Ecuador.

CENTRAL AMERICA

Mexico
http://www.sociedadherpetologicamexicana.com/ – Sociedad Herpetológica Mexicana A.C.: a non-governmental herpetological organization. Publishes the jounal Boletín de la Sociedad Herpetológica Mexicana.

Guatemala
http://www.uta.edu/biology/campbell/guatemala/ – Guide to the Reptiles and Amphibians of Guatemala.

Panama
http://home.earthlink.net/~itec/Amphibian.html – Amphibians of Panama: checklist of species as well as other useful information and photos for each species.

Caribbean
http://evo.bio.psu.edu/caribherp/lists/wi-list.htm – Caribherp: checklist of West Indian amphibians and reptiles.

ASIA

Malaysia
http://www.frogweb.org/ – Frogs of the Malay Peninsula: an in-depth look at the frogs and toads of the Malay Peninsula.

Philippines
http://herpwatch.org/ – Herpwatch Philippines: a guide to the diversity and natural history of the reptiles and amphibians and the Philippines.

India
http://www.zooreach.org/ – ZOO (Zoo Outreach Organisation): conservation, education, research and animal welfare Society for South Asia.

Japan
http://zoo.zool.kyoto-u.ac.jp/herp/ – The Herpetological Society of Japan: publishes the journals *Current Herpetology* and *Bulletin of the Herpetological Society of Japan*.
http://www3.ocn.ne.jp/~herpsgh/amphibians.html – Amphibians of Hiroshima: data including photographs of the 19 amphibians in Hiroshima Prefecture, Japan.

Pakistan
http://wildlifeofpakistan.com/AmphibiansofPakistan/amphibiansofPakistanmain.htm – Wildlife of Pakistan: species accounts and list for the amphibians of Pakistan.

INDEX OF EXTINCT, THREATENED AND NEAR THREATENED SPECIES ACCOUNTS*

A

B

*Least Concern and Data Deficient species are listed in Appendices XI and XII, respectively, sorted by Order, Family and scientific name.

C

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Amphibians are facing an extinction crisis, on a scale that scientists are only just beginning to understand. *Threatened Amphibians of the World* is a visual journey through the first-ever comprehensive assessment of the conservation status of the world's 6,000 known species of frogs, toads, newts, salamanders, and caecilians. Some 1,900 species known to be threatened with extinction are covered, including a description of threats to each species and an evaluation of conservation measures in place or needed. Each entry includes a photograph or illustration of the species where available, a distribution map, and information on range, population and habitat and ecology. Introductory chapters present a detailed analysis of the results, complemented by a series of short essays written by many of the world's leading herpetologists. Appendices include annotated lists of lower risk species and a country-by-country listing of threatened amphibians.

Threatened Amphibians of the World presents a snapshot in time of the dire status of an entire class of organisms, and in so doing poses searching questions about the health of our environment and what we are going to do about it.

Lynx

IUCN

SSC
Species Survival Commission

CONSERVATION INTERNATIONAL

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