

Taxonomic Checklist of Amphibian Species

listed unilaterally in the Annexes of
EC Regulation 338/97,
not included in the CITES Appendices

Species information extracted from

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Species included

ANURA		
Conrauidae	<i>Conraua goliath</i>	Annex B
Dicroglossidae	<i>Limnonectes macrodon</i>	Annex D
Hylidae	<i>Phyllomedusa sauvagii</i>	Annex D
Leptodactylidae	<i>Leptodactylus laticeps</i>	Annex D
Ranidae	<i>Lithobates catesbeianus</i>	Annex B
	<i>Pelophylax shqipericus</i>	Annex D
CAUDATA		
Hynobiidae	<i>Ranodon sibiricus</i>	Annex D
Plethodontidae	<i>Bolitoglossa dofleini</i>	Annex D
Salamandridae	<i>Cynops ensicauda</i>	Annex D
	<i>Echinotriton andersoni</i>	Annex D
	<i>Laotriton laoensis</i> ¹	Annex D
	<i>Paramesotriton caudopunctatus</i>	Annex D
	<i>Paramesotriton chinensis</i>	Annex D
	<i>Paramesotriton deloustali</i>	Annex D
	<i>Paramesotriton fuzhongensis</i>	Annex D
	<i>Paramesotriton guanxiensis</i>	Annex D
	<i>Paramesotriton hongkongensis</i>	Annex D
	<i>Paramesotriton labiatus</i>	Annex D
	<i>Paramesotriton longliensis</i>	Annex D
	<i>Paramesotriton maolanensis</i>	Annex D
	<i>Paramesotriton yunwuensis</i>	Annex D
	<i>Paramesotriton zhijinensis</i>	Annex D
	<i>Salamandra algira</i>	Annex D
	<i>Tylototriton asperrimus</i>	Annex D
	<i>Tylototriton broadoridgus</i>	Annex D
	<i>Tylototriton dabienicus</i>	Annex D
	<i>Tylototriton hainanensis</i>	Annex D
	<i>Tylototriton kweichowensis</i>	Annex D
	<i>Tylototriton lizhengchangi</i>	Annex D
	<i>Tylototriton notialis</i>	Annex D
	<i>Tylototriton pseudoverrucosus</i>	Annex D
	<i>Tylototriton taliangensis</i>	Annex D
	<i>Tylototriton verrucosus</i>	Annex D
	<i>Tylototriton vietnamensis</i>	Annex D
	<i>Tylototriton wenxianensis</i>	Annex D
	<i>Tylototriton yangi</i>	Annex D

¹ Formerly known as *Paramesotriton laoensis* STUART & PAPENFUSS, 2002

ANURA

Conrauidae

Genera and species assigned to family Conrauidae

Genus: *Conraua* Nieden, 1908

- Species: *Conraua alleni* (Barbour and Loveridge, 1927)
- Species: *Conraua beccarii* (Boulenger, 1911)
- Species: *Conraua crassipes* (Buchholz and Peters, 1875)
- Species: *Conraua derooi* Hulselmans, 1972
- Species: *Conraua goliath* (Boulenger, 1906)
- Species: *Conraua robusta* Nieden, 1908

Conraua goliath (Boulenger, 1906)

Rana goliath Boulenger, 1906, Ann. Mag. Nat. Hist., Ser. 7, 17: 317. Type(s): BMNH. Type locality: "Efulen", South Cameroon.

Gigantorana goliath — Noble, 1931, Biol. Amph.: 519.

Paleorana goliath — Scortecci, 1931, Atti Soc. Ital. Sci. Nat. Mus. Civ. Stor. Nat. Milano, 70: 17.

Rana (Conraua) goliath — Parker, 1936, Proc. Zool. Soc. London, 1936: 138.

Conraua goliath — Lamotte, Perret, and Dzieduszycka, 1959, Bull. Inst. Franç. Afr. Noire, Ser. A, 21: 762. Perret, 1960, Bull. Soc. Neuchatel. Sci. Nat., 83: 95.

English Names

Goliath Frog (Ananjeva, Borkin, Darevsky, and Orlov, 1988, Dict. Amph. Rept. Five Languages: 122).

Giant Slippery Frog (Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 98).

Distribution

Southwestern Cameroon (region of Nkongsamba) and south to Monte Alen in mainland Equatorial Guinea, below 1000 m elevation.

Comment

See Perret, 1957, Bull. Soc. Neuchatel. Sci. Nat., 80: 195-202; and Perret, 1966, Zool. Jahrb., Jena, Abt. Syst., 93: 335-336. De la Riva, 1994, Rev. Esp. Herpetol., 8: 132, provided a record for Equatorial Guinea. Lasso, Rial, Castroviejo, and De la Riva, 2002, Graellsia, 58: 21-34, provided notes on ecological distribution in Equatorial Guinea. See photograph, map, description of geographic range and habitat, and conservation status in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 478.

Dicroglossidae

Genera assigned to family Dicroglossidae

Genus: *Allopaq* Ohler and Dubois, 2006
Genus: *Chrysopaq* Ohler and Dubois, 2006
Genus: *Euphlyctis* Fitzinger, 1843
Genus: *Fejervarya* Bolkay, 1915
Genus: *Hoplobatrachus* Peters, 1863
Genus: *Ingerana* Dubois, 1987
Genus: *Limnonectes* Fitzinger, 1843
Genus: *Minervarya* Dubois, Ohler, and Biju, 2001
Genus: *Nannophrys* Günther, 1869
Genus: *Nanorana* Günther, 1896
Genus: *Occidozyga* Kuhl and Van Hasselt, 1822
Genus: *Ombrana* Dubois, 1992
Genus: *Quasipa* Dubois, 1992
Genus: *Sphaerotheca* Günther, 1859
Genus: *Zakerana* Howlader, 2011

Limnonectes Fitzinger, 1843

Species assigned to genus *Limnonectes*

Species: *Limnonectes acanthi* (Taylor, 1923)
Species: *Limnonectes arathooni* (Smith, 1927)
Species: *Limnonectes asperatus* (Inger, Boeadi, and Taufik, 1996)
Species: *Limnonectes bannaensis* Ye, Fei, and Jiang, 2007
Species: *Limnonectes blythii* (Boulenger, 1920)
Species: *Limnonectes dabanus* (Smith, 1922)
Species: *Limnonectes dammermani* (Mertens, 1929)
Species: *Limnonectes diuatus* (Brown and Alcalá, 1977)
Species: *Limnonectes doriae* (Boulenger, 1887)
Species: *Limnonectes ferneri* Siler, McVay, Diesmos, and Brown, 2009
Species: *Limnonectes finchi* (Inger, 1966)
Species: *Limnonectes fragilis* (Liu and Hu, 1973)
Species: *Limnonectes fujianensis* Ye and Fei, 1994
Species: *Limnonectes grunniens* (Latreille, 1801)
Species: *Limnonectes gyldenstolpei* (Andersson, 1916)
Species: *Limnonectes hascheanus* (Stoliczka, 1870)
Species: *Limnonectes heinrichi* (Ahl, 1933)
Species: *Limnonectes ibanorum* (Inger, 1964)
Species: *Limnonectes ingeri* (Kiew, 1978)
Species: *Limnonectes jarujini* Matsui, Panha, Khonsue, and Kuraishi, 2010
Species: *Limnonectes kadarsani* Iskandar, Boeadi, and Sancoyo, 1996
Species: *Limnonectes kenepaiensis* (Inger, 1966)
Species: *Limnonectes khammonensis* (Smith, 1929)
Species: *Limnonectes khasianus* (Anderson, 1871)
Species: *Limnonectes kohchangae* (Smith, 1922)
Species: *Limnonectes kuhlii* (Tschudi, 1838)
Species: *Limnonectes laticeps* (Boulenger, 1882)
Species: *Limnonectes leporinus* Andersson, 1923
Species: *Limnonectes leytenis* (Boettger, 1893)
Species: *Limnonectes limborgi* (Sclater, 1892)
Species: *Limnonectes macrocephalus* (Inger, 1954)
Species: *Limnonectes macrodon* (Duméril and Bibron, 1841)
Species: *Limnonectes macrognathus* (Boulenger, 1917)

Species: *Limnonectes magnus* (Stejneger, 1910)
 Species: *Limnonectes malesianus* (Kiew, 1984)
 Species: *Limnonectes mawlyndipi* (Chanda, 1990)
 Species: *Limnonectes megastomias* McLeod, 2008
 Species: *Limnonectes micrixalus* (Taylor, 1923)
 Species: *Limnonectes microdiscus* (Boettger, 1892)
 Species: *Limnonectes microtympanum* (Van Kampen, 1907)
 Species: *Limnonectes modestus* (Boulenger, 1882)
 Species: *Limnonectes namiyei* (Stejneger, 1901)
 Species: *Limnonectes nitidus* (Smedley, 1932)
 Species: *Limnonectes palavanensis* (Boulenger, 1894)
 Species: *Limnonectes paramacrodon* (Inger, 1966)
 Species: *Limnonectes parvus* (Taylor, 1920)
 Species: *Limnonectes plicatellus* (Stoliczka, 1873)
 Species: *Limnonectes poilani* (Bourret, 1942)
 Species: *Limnonectes rhacoda* (Inger, Boeadi, and Taufik, 1996)
 Species: *Limnonectes shompenorum* Das, 1996
 Species: *Limnonectes sisikdagu* McLeod, Horner, Husted, Barley, and Iskandar, 2011
 Species: *Limnonectes taylori* Matsui, Panha, Khonsue, and Kuraishi, 2010
 Species: *Limnonectes timorensis* (Smith, 1927)
 Species: *Limnonectes tweediei* (Smith, 1935)
 Species: *Limnonectes visayanus* (Inger, 1954)
 Species: *Limnonectes woodworthi* (Taylor, 1923)

***Limnonectes macrodon* (Duméril and Bibron, 1841)**

Rana macrodon Tschudi, 1838, *Classif. Batr.*: 83. *Nomen nudum* attributed to Kuhl (label name).

Rana macrodon Duméril and Bibron, 1841, *Erp. Gen.*, 8: 382. Syntypes: MNHNP (6 specimens) of which the Celebes specimen Barbour, 1912, *Mem. Mus. Comp. Zool.*, 44: 63, suggested was likely a specimen of *Rana modesta*; MNHNP 4465 designated lectotype by Kiew, 1978, *Malayan Nat. J.*, 31: 220. Type locality: "Java" and "Célèbes", Indonesia; restricted to Java by lectotype designation.

Rana (*Rana*) *macrodon* — Boulenger, 1920, *Rec. Indian Mus.*, 20: 6. Van Kampen, 1923, *Amph. Indo-Austral. Arch.*: 174.

Rana macrodon macrodon — Inger, 1954, *Fieldiana, Zool.*, 33: 276.

Rana (*Euphlyctis*) *macrodon* — Dubois, 1981, *Monit. Zool. Ital., N.S., Suppl.*, 15: 239. by implication.

Euphlyctis macrodon — Poynton and Broadley, 1985, *Ann. Natal Mus.*, 27: 124. by implication.

Limnonectes (*Limnonectes*) *macrodon* — Dubois, 1987 "1986", *Alytes*, 5: 63.

English Names

Malaya Wart Frog (Frank and Ramus, 1995, *Compl. Guide Scient. Common Names Amph. Rept. World*: 100).

Malayan Giant Bullfrog (Ananjeva, Borkin, Darevsky, and Orlov, 1988, *Dict. Amph. Rept. Five Languages*: 125).

Stone Creek Frog (Iskandar, 1998, *Amph. Java Bali*: 75).

Giant Javan Frog (Iskandar, 1998, Amph. Java Bali: 75; Dinesh, Radhakrishnan, Gururaja, and Bhatta, 2009, Rec. Zool. Surv. India, Occas. Pap., 302: 28).

Brown Mountain Frog (Nutphund, 2001, Amph. Thailand: 106).

Distribution

Java and eastern Sumatra (Indonesia). (See comment)

Comment

See accounts by Boulenger, 1920, Rec. Indian Mus., 20: 40; Taylor, 1962, Univ. Kansas Sci. Bull., 43: 383-386; Inger, 1966, Fieldiana, Zool., 52: 208-212; Bourret, 1942, Batr. Indochine: 255-260; and Kiew, 1978, Malayan Nat. J., 31: 219-229. See comment under *Rana blythii*. Possibly two species (? including *Rana malesiana*) under this name in Malaya, according to Berry, 1975, Amph. Fauna Peninsular Malaysia: 77-78. See *Rana malesiana*, with which this species has been confused. Bornean records are referable to *Rana ingeri*. The record for Sikkim by Chanda, 1987 "1986", J. Bengal Nat. Hist. Soc., N.S., 5: 145, is almost certainly in error (Dutta, 1997, Amph. India Sri Lanka: 173). Devi and Shamungou, 2006, J. Exp. Zool. India, 9: 317-324, provided a record for Manipur, northeastern India, which is here considered problematic, although it was accepted at face value by Dinesh, Radhakrishnan, Gururaja, and Bhatta, 2009, Rec. Zool. Surv. India, Occas. Pap., 302: 28. See Iskandar, 1998, Amph. Java Bali: 75-76, for brief account for Javan population. See identification table by Manthey and Grossmann, 1997, Amph. Rept. Südasiens: 84-86, to compare this species with other ranids of the Sunda Shelf region. In the *Limnonectes (Limnonectes) grunniens* group of Dubois, 1987 "1986", Alytes, 5: 63. Nutphund, 2001, Amph. Thailand: 105, provided a brief characterization and photograph (which Ohler, 2003, Alytes, 21: 101, regarded as of *Rana kuhlii*). Menzies, 2006, Frogs New Guinea & Solomon Is.: 66, discussed the problematic nature of the New Guinea record. See map, description of geographic range and habitat, and conservation status in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 483, who noted that records from mainland Southeast Asia are referable to *Limnonectes blythii*.

Hylidae

Genera assigned to family Hylidae

Genus: *Acris* Duméril and Bibron, 1841
Genus: *Agalychnis* Cope, 1864
Genus: *Anotheca* Smith, 1939
Genus: *Aparasphenodon* Miranda-Ribeiro, 1920
Genus: *Aplastodiscus* Lutz, 1950
Genus: *Argenteohyla* Trueb, 1970
Genus: *Bokermannohyla* Faivovich, Haddad, Garcia, Frost, Campbell, and Wheeler, 2005
Genus: *Bromeliahyla* Faivovich, Haddad, Garcia, Frost, Campbell, and Wheeler, 2005
Genus: *Charadrahyla* Faivovich, Haddad, Garcia, Frost, Campbell, and Wheeler, 2005
Genus: *Corythomantis* Boulenger, 1896
Genus: *Cruziohyla* Faivovich, Haddad, Garcia, Frost, Campbell, and Wheeler, 2005
Genus: *Cruziohyla* Faivovich, Haddad, Garcia, Frost, Campbell, and Wheeler, 2005
Genus: *Dendropsophus* Fitzinger, 1843
Genus: *Diaglena* Cope, 1887
Genus: *Duellmanohyla* Campbell and Smith, 1992
Genus: *Ecnomihyla* Faivovich, Haddad, Garcia, Frost, Campbell, and Wheeler, 2005
Genus: *Exerodonta* Brocchi, 1879
Genus: *Hyla* Laurenti, 1768
Genus: *Hyloscirtus* Peters, 1882
Genus: *Hypsiboas* Wagler, 1830
Genus: *Isthmohyla* Faivovich, Haddad, Garcia, Frost, Campbell, and Wheeler, 2005
Genus: *Itapotiuhyla* Faivovich, Haddad, Garcia, Frost, Campbell, and Wheeler, 2005
Genus: *Litoria* Tschudi, 1838
Genus: *Lysapsus* Cope, 1862
Genus: *Megastomahyla* Faivovich, Haddad, Garcia, Frost, Campbell, and Wheeler, 2005
Genus: *Myersiohyla* Faivovich, Haddad, Garcia, Frost, Campbell, and Wheeler, 2005
Genus: *Nyctimantis* Boulenger, 1882
Genus: *Osteocephalus* Steindachner, 1862
Genus: *Osteopilus* Fitzinger, 1843
Genus: *Phasmahyla* Cruz, 1991
Genus: *Phrynomedusa* Miranda-Ribeiro, 1923
Genus: *Phyllodytes* Wagler, 1830
Genus: *Phyllomedusa* Wagler, 1830
Genus: *Phytotriades* Jowers, Downie, and Cohen, 2009
Genus: *Plectrohyla* Brocchi, 1877
Genus: *Pseudacris* Fitzinger, 1843
Genus: *Pseudis* Wagler, 1830
Genus: *Ptychohyla* Taylor, 1944
Genus: *Scarthyla* Duellman and de Sá, 1988
Genus: *Scinax* Wagler, 1830
Genus: *Smilisca* Cope, 1865
Genus: *Sphaenorhynchus* Tschudi, 1838
Genus: *Tepuihyla* Ayarzagüena, Señaris, and Gorzula, 1993
Genus: *Tlalocohyla* Faivovich, Haddad, Garcia, Frost, Campbell, and Wheeler, 2005
Genus: *Trachycephalus* Tschudi, 1838
Genus: *Triprion* Cope, 1866
Genus: *Xenohyla* Izecksohn, 1998

Phyllomedusa Wagler, 1830

Species assigned to genus *Phyllomedusa*

Species: *Phyllomedusa atelopoides* Duellman, Cadle, and Cannatella, 1988

Species: *Phyllomedusa ayeaye* (Lutz, 1966)
 Species: *Phyllomedusa azurea* Cope, 1862
 Species: *Phyllomedusa bahiana* Lutz, 1925
 Species: *Phyllomedusa baltea* Duellman and Toft, 1979
 Species: *Phyllomedusa bicolor* (Boddaert, 1772)
 Species: *Phyllomedusa boliviana* Boulenger, 1902
 Species: *Phyllomedusa burmeisteri* Boulenger, 1882
 Species: *Phyllomedusa camba* De la Riva, 1999
 Species: *Phyllomedusa centralis* Bokermann, 1965
 Species: *Phyllomedusa coelestis* (Cope, 1874)
 Species: *Phyllomedusa distincta* Lutz, 1950
 Species: *Phyllomedusa duellmani* Cannatella, 1982
 Species: *Phyllomedusa ecuatoriana* Cannatella, 1982
 Species: *Phyllomedusa hypochondrialis* (Daudin, 1800)
 Species: *Phyllomedusa iheringii* Boulenger, 1885
 Species: *Phyllomedusa megacephala* (Miranda-Ribeiro, 1926)
 Species: *Phyllomedusa neildi* Barrio-Amorós, 2006
 Species: *Phyllomedusa nordestina* Caramaschi, 2006
 Species: *Phyllomedusa oreades* Brandão, 2002
 Species: *Phyllomedusa palliata* Peters, 1873
 Species: *Phyllomedusa perinesos* Duellman, 1973
 Species: *Phyllomedusa rohdei* Mertens, 1926
 Species: *Phyllomedusa sauvagii* Boulenger, 1882
 Species: *Phyllomedusa tarsius* (Cope, 1868)
 Species: *Phyllomedusa tetraploidea* Pombal and Haddad, 1992
 Species: *Phyllomedusa tomopterna* (Cope, 1868)
 Species: *Phyllomedusa trinitatis* Mertens, 1926
 Species: *Phyllomedusa vaillantii* Boulenger, 1882
 Species: *Phyllomedusa venusta* Duellman and Trueb, 1967

***Phyllomedusa sauvagii* Boulenger, 1882**

Phyllomedusa sauvagii Boulenger, 1882, Cat. Batr. Sal. Coll. Brit. Mus., Ed. 2: 429.

Syntypes: BMNH 1947. 2. 25. 83-84 (formerly 81.7.2.3 and 1937.7.29.43) according to Condit, 1964, J. Ohio Herpetol. Soc., 4: 98. Type locality: "Buenos Ayres. . . . Oran Salta", Argentina.

Phyllomedusa Rickettsii Günther, 1897, Ann. Mag. Nat. Hist., Ser. 6, 20: 365. Holotype:

BMNH 1898. 11. 24. 6. Type locality: "Santa Fé", Argentina. Synonymy by Funkhouser, 1957, Occas. Pap. Nat. Hist. Mus. Stanford Univ., 5: 54.

Phyllomedusa rickettsii — Nieden, 1923, Das Tierreich, 46: 340.

Phyllomedusa sauvagii rickettsii — Cei, 1956, Invest. Zool. Chilen., 3: 56.

Phyllomedusa sauvagii sauvagii — Cei, 1956, Invest. Zool. Chilen., 3: 56.

Phyllomedusa sauvagei — Funkhouser, 1957, Occas. Pap. Nat. Hist. Mus. Stanford Univ., 5: 54. Incorrect subsequent spelling.

Pithecopus sauvagii — Lutz, 1966, Copeia, 1966: 236.

English Names

Painted-belly Leaf Frog (Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 62).

Distribution

The Chacoan region of eastern Bolivia, northern Paraguay, Mato Grosso do Sul (Brazil), and northern Argentina.

Comment

See account by Cei, 1980, Monit. Zool. Ital., N.S., Monogr., 2: 426-434. Cabrera, 1990, Herpetol. Rev., 21: 38, provided the first record for San Luis Province, Argentina. In the *Phyllomedusa tarsius* group of Faivovich, Haddad, Garcia, Frost, Campbell, and Wheeler, 2005, Bull. Am. Mus. Nat. Hist., 294: 117-118. Paiva, Nascimento, Silva, Bernarde, and Ananias, 2010, Ital. J. Zool., 77: 116-121, noted that this species lacks the karyological synapomorphy they hypothesized for the *Phyllomedusa tarsius* group. Sanabria, Quiroga, and Acosta, 2005, Herpetol. Rev., 36: 333, provided a new record for San Juan Province in Argentina and briefly discussed the range of this species in Argentina. Brusquetti and Lavilla, 2006, Cuad. Herpetol., 20: 12, briefly discussed range in Paraguay.

Leptodactylidae

Genera assigned to family Leptodactylidae

Genus: Adenomera Steindachner, 1867
Genus: Edalorhina Jiménez de la Espada, 1870
Genus: Engystomops Jiménez de la Espada, 1872
Genus: Eupemphix Steindachner, 1863
Genus: Hydrolaetare Gallardo, 1963
Genus: Leptodactylus Fitzinger, 1826
Genus: Lithodytes Fitzinger, 1843
Genus: Paratelmatobius Lutz and Carvalho, 1958
Genus: Physalaemus Fitzinger, 1826
Genus: Pleurodema Tschudi, 1838
Genus: Pseudopaludicola Miranda-Ribeiro, 1926
Genus: Scythrophrys Lynch, 1971

Leptodactylus Fitzinger, 1826

Genera assigned to genus *Leptodactylus*

Species: Leptodactylus albilabris (Günther, 1859)
Species: Leptodactylus bolivianus Boulenger, 1898
Species: Leptodactylus bufonius Boulenger, 1894
Species: Leptodactylus caatingae Heyer and Juncá, 2003
Species: Leptodactylus camaquara Sazima and Bokermann, 1978
Species: Leptodactylus chaquensis Ceí, 1950
Species: Leptodactylus colombiensis Heyer, 1994
Species: Leptodactylus cunicularius Sazima and Bokermann, 1978
Species: Leptodactylus cupreus Caramaschi, Feio, and São Pedro, 2008
Species: Leptodactylus didymus Heyer, García-Lopez, and Cardoso, 1996
Species: Leptodactylus diedrus Heyer, 1994
Species: Leptodactylus discodactylus Boulenger, 1884
Species: Leptodactylus elenae Heyer, 1978
Species: Leptodactylus fallax Müller, 1926
Species: Leptodactylus flavopictus Lutz, 1926
Species: Leptodactylus fragilis (Brocchi, 1877)
Species: Leptodactylus furnarius Sazima and Bokermann, 1978
Species: Leptodactylus fuscus (Schneider, 1799)
Species: Leptodactylus gracilis (Duméril and Bibron, 1840)
Species: Leptodactylus griseigularis (Henle, 1981)
Species: Leptodactylus guianensis Heyer and de Sá, 2011
Species: Leptodactylus hylodes (Reinhardt and Lütken, 1862)
Species: Leptodactylus insularum Barbour, 1906
Species: Leptodactylus jolyi Sazima and Bokermann, 1978
Species: Leptodactylus knudseni Heyer, 1972
Species: Leptodactylus labrosus Jiménez de la Espada, 1875
Species: Leptodactylus labyrinthicus (Spix, 1824)
Species: Leptodactylus laticeps Boulenger, 1918
Species: Leptodactylus latinasus Jiménez de la Espada, 1875
Species: Leptodactylus latrans (Steffen, 1815)
Species: Leptodactylus lauramiriamae Heyer and Crombie, 2005
Species: Leptodactylus leptodactyloides (Andersson, 1945)
Species: Leptodactylus lithonaetes Heyer, 1995
Species: Leptodactylus longirostris Boulenger, 1882
Species: Leptodactylus macrosternum Miranda-Ribeiro, 1926
Species: Leptodactylus magistris Mijares-Urrutia, 1997
Species: Leptodactylus marambaiae Izecksohn, 1976

Species: *Leptodactylus melanonotus* (Hallowell, 1861)
 Species: *Leptodactylus myersi* Heyer, 1995
 Species: *Leptodactylus mystaceus* (Spix, 1824)
 Species: *Leptodactylus mystacinus* (Burmeister, 1861)
 Species: *Leptodactylus natalensis* Lutz, 1930
 Species: *Leptodactylus nesiotus* Heyer, 1994
 Species: *Leptodactylus notoaktites* Heyer, 1978
 Species: *Leptodactylus ochraceus* Lutz, 1930
 Species: *Leptodactylus paraensis* Heyer, 2005
 Species: *Leptodactylus pascoensis* Heyer, 1994
 Species: *Leptodactylus pentadactylus* (Laurenti, 1768)
 Species: *Leptodactylus peritoaktites* Heyer, 2005
 Species: *Leptodactylus petersii* (Steindachner, 1864)
 Species: *Leptodactylus plaumanni* Ahl, 1936
 Species: *Leptodactylus podicipinus* (Cope, 1862)
 Species: *Leptodactylus poecilochilus* (Cope, 1862)
 Species: *Leptodactylus pustulatus* (Peters, 1870)
 Species: *Leptodactylus rhodomerus* Heyer, 2005
 Species: *Leptodactylus rhodomystax* Boulenger, 1884
 Species: *Leptodactylus rhodonotus* (Günther, 1869)
 Species: *Leptodactylus rhodostima* (Cope, 1874)
 Species: *Leptodactylus riveroi* Heyer and Pyburn, 1983
 Species: *Leptodactylus rugosus* Noble, 1923
 Species: *Leptodactylus sabanensis* Heyer, 1994
 Species: *Leptodactylus savagei* Heyer, 2005
 Species: *Leptodactylus sertanejo* Giarretta and Costa, 2007
 Species: *Leptodactylus silvanimbus* McCranie, Wilson, and Porras, 1980
 Species: *Leptodactylus spixi* Heyer, 1983
 Species: *Leptodactylus stenodema* Jiménez de la Espada, 1875
 Species: *Leptodactylus syphax* Bokermann, 1969
 Species: *Leptodactylus tapiti* Sazima and Bokermann, 1978
 Species: *Leptodactylus troglodytes* Lutz, 1926
 Species: *Leptodactylus turimiquensis* Heyer, 2005
 Species: *Leptodactylus validus* Garman, 1888
 Species: *Leptodactylus vastus* Lutz, 1930
 Species: *Leptodactylus ventrimaculatus* Boulenger, 1902
 Species: *Leptodactylus viridis* Jim and Spirandeli Cruz, 1973
 Species: *Leptodactylus wagneri* (Peters, 1862)

***Leptodactylus laticeps* Boulenger, 1918**

Leptodactylus laticeps Boulenger, 1918, Ann. Mag. Nat. Hist., Ser. 9, 2: 431. Holotype: BMNH 98.11.24.7, according to XXX. Type locality: "Santa Fé, Argentina".
Leptodactylus (Pachypus) laticeps — Vellard, 1947, Acta Zool. Lilloana, 4: 464.

English Names

Santa Fe Frog (Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 81).

Distribution

Gran Chaco of Paraguay, Bolivia, and Argentina.

Comment

In the *Leptodactylus pentadactylus* group of Heyer, 1972, Contrib. Sci. Nat. Hist. Mus. Los Angeles Co., 231: 1-8, and Heyer, 1979, Smithson. Contrib. Zool., 301: 1-43. See account by Cei, 1980, Monit. Zool. Ital., N.S., Monogr., 2: 355-357. De la Riva, Köhler, Lötters, and Reichle, 2000, Rev. Esp. Herpetol., 14: 41, noted that no voucher specimen exists for Bolivia, although it is expected in the Chaco. Brusquetti and Lavilla, 2006, Cuad. Herpetol., 20: 14, briefly discussed the range in Paraguay. See statement of geographic range, habitat, and conservation status in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 622.

Ranidae

Genera assigned to family Ranidae

Genus: *Amolops* Cope, 1865
Genus: *Babina* Thompson, 1912
Genus: *Clinotarsus* Mivart, 1869
Genus: *Glandirana* Fei, Ye, and Huang, 1990
Genus: *Huia* Yang, 1991
Genus: *Humerana* Dubois, 1992
Genus: *Hylarana* Tschudi, 1838
Genus: *Lithobates* Fitzinger, 1843
Genus: *Meristogenys* Yang, 1991
Genus: *Odorrana* Fei, Ye, and Huang, 1990
Genus: *Pelophylax* Fitzinger, 1843
Genus: *Pseudorana* Fei, Ye, and Huang, 1990
Genus: *Pterorana* Kiyasetuo and Khare, 1986
Genus: *Rana* Linnaeus, 1758
Genus: *Sanguirana* Dubois, 1992
Genus: *Staurois* Cope, 1865

Lithobates Fitzinger, 1843

Species assigned to genus *Lithobates*

Species: *Lithobates areolatus* (Baird and Girard, 1852)
Species: *Lithobates berlandieri* (Baird, 1859)
Species: *Lithobates blairi* (Mecham, Littlejohn, Oldham, Brown, and Brown, 1973)
Species: *Lithobates brownorum* (Sanders, 1973)
Species: *Lithobates bwana* (Hillis and de Sá, 1988)
Species: *Lithobates capito* (LeConte, 1855)
Species: *Lithobates catesbeianus* (Shaw, 1802)
Species: *Lithobates chichicuahutla* (Cuellar, Méndez-De La Cruz, and Villagrán-Santa Cruz, 1996)
Species: *Lithobates chiricahuensis* (Platz and Mecham, 1979)
Species: *Lithobates clamitans* (Latreille, 1801)
Species: *Lithobates dunni* (Zweifel, 1957)
Species: *Lithobates fisheri* (Stejneger, 1893)
Species: *Lithobates forreri* (Boulenger, 1883)
Species: *Lithobates grylio* (Stejneger, 1901)
Species: *Lithobates heckscheri* (Wright, 1924)
Species: *Lithobates johnei* (Blair, 1965)
Species: *Lithobates juliani* (Hillis and de Sá, 1988)
Species: *Lithobates lemosespinali* (Smith and Chiszar, 2003)
Species: *Lithobates macroglossa* (Brocchi, 1877)
Species: *Lithobates maculatus* (Brocchi, 1877)
Species: *Lithobates magnaocularis* (Frost and Bagnara, 1974)
Species: *Lithobates megapoda* (Taylor, 1942)
Species: *Lithobates miadis* (Barbour and Loveridge, 1929)
Species: *Lithobates montezumae* (Baird, 1854)
Species: *Lithobates neovolcanicus* (Hillis and Frost, 1985)
Species: *Lithobates okaloosae* (Moler, 1985)
Species: *Lithobates omiltemanus* (Günther, 1900)
Species: *Lithobates onca* (Cope, 1875)
Species: *Lithobates palmipes* (Spix, 1824)
Species: *Lithobates palustris* (LeConte, 1825)
Species: *Lithobates pipiens* (Schreber, 1782)
Species: *Lithobates psilonota* (Webb, 2001)

Species: *Lithobates pueblae* (Zweifel, 1955)
 Species: *Lithobates pustulosus* (Boulenger, 1883)
 Species: *Lithobates septentrionalis* (Baird, 1854)
 Species: *Lithobates sevosus* (Goin and Netting, 1940)
 Species: *Lithobates sierramadrensis* (Taylor, 1939)
 Species: *Lithobates spectabilis* (Hillis and Frost, 1985)
 Species: *Lithobates sphenoccephalus* (Cope, 1886)
 Species: *Lithobates sylvaticus* (LeConte, 1825)
 Species: *Lithobates tarahumarae* (Boulenger, 1917)
 Species: *Lithobates taylori* (Smith, 1959)
 Species: *Lithobates tlaloci* (Hillis and Frost, 1985)
 Species: *Lithobates vaillanti* (Brocchi, 1877)
 Species: *Lithobates vibicarius* (Cope, 1894)
 Species: *Lithobates virgatipes* (Cope, 1891)
 Species: *Lithobates warszewitschii* (Schmidt, 1857)
 Species: *Lithobates yavapaiensis* (Platz and Frost, 1984)
 Species: *Lithobates zweifeli* (Hillis, Frost, and Webb, 1984)

***Lithobates catesbeianus* (Shaw, 1802)**

Rana catesbeiana Shaw, 1802, Gen. Zool., 3(1): 106. Type(s): Specimen illustrated by Shaw, 1802, Gen. Zool., 3(1): 106, pl. 33; not known to exist. Type locality: "many parts of North America . . . Carolina . . . Virginia"; restricted to "South Carolina", USA, by Kellogg, 1932, Bull. U.S. Natl. Mus., 160: 197; restricted to "Charleston, Charleston County", South Carolina by Smith and Taylor, 1950, Univ. Kansas Sci. Bull., 33: 360; restricted to "vicinity of Charleston, South Carolina", USA, by Schmidt, 1953, Check List N. Am. Amph. Rept., Ed. 6: 79.

Rana pipiens Daudin, 1802 (An. XI), Hist. Nat. Rain. Gren. Crap., Quarto: 58. Syntypes: Including frog figured on pl. 18 of the original publication and five individuals noted in the original publication as being in the MNHNP. Type locality: "l'Amerique Septentrionale, et sur-tout dans la Caroline . . . la Virginie", USA. Primary homonym of *Rana pipiens* Schreber, with which Daudin was aware. Stated in the original publication to be Lacepede's Grenouille mugisante (= *Lithobates catesbeianus*).

Rana taurina Cuvier, 1817, Regne Animal., 2: 93. Replacement name for *Rana pipiens* Daudin, 1802.

Rana mugiens Merrem, 1820, Tent. Syst. Amph.: 175. Types: Based in part on Catesby, 1754, Nat. Hist. Carolina Florida Bahama Is.: pl. 72 (which appears from the illustration to be *Rana grylio*—DRF), *Rana catesbeiana* of Shaw, 1802, Gen. Zool., 3(1): 105; *Rana pipiens* of Latreille, Rept.: 153 (XXX unknown citation--DRF) and Daudin, 1802 "An. XI", Hist. Nat. Rain. Gren. Crap., Quarto: 58: 58, t. 18; Daudin, 1803 "An. XI", Hist. Nat. Gen. Part. Rept., 8: 113, and frogs mentioned by Kalm, 1761, En Resa Norra America, 3: 140, 191, 512; under the names of "Manteskühe" and "Ochsenfrösche"; clearly a mixture of several species of frogs (DRF). Type locality: "America septentionali"; restricted to "vicinity of New York City", USA, by Schmidt, 1953, Check List N. Am. Amph. Rept., Ed. 6: 79. Synonymy by Schinz, 1822, Thierr. Naturgesch., 2: 164 (*Rana catesbeiana* Shaw treated as if junior); Duméril and Bibron, 1841, Erp. Gen., 8: 379 (as *Rana mugiens*); LeConte, 1855, Proc. Acad. Nat. Sci. Philadelphia, 7: 423; Günther, 1859 "1858", Cat. Batr. Sal. Coll. Brit. Mus.: 13 (using *Rana mugiens* as the name of choice); Boulenger, 1882, Cat. Batr. Sal. Coll. Brit. Mus., Ed. 2: 36.

Rana scapularis Harlan, 1826, Am. J. Sci. Arts, 10: 59. Types: Not designated, although presumably originally in ANSP. Type locality: "Pennsylvania", USA; restricted to

- "vicinity of Philadelphia", USA, by Schmidt, 1953, Check List N. Am. Amph. Rept., Ed. 6: 79. Synonymy with *Rana mugiens* and *Rana catesbeiana* by Duméril and Bibron, 1841, Erp. Gen., 8: 370 with *Rana catesbeiana* by LeConte, 1855, Proc. Acad. Nat. Sci. Philadelphia, 7: 423; Boulenger, 1882, Cat. Batr. Sal. Coll. Brit. Mus., Ed. 2: 36.
- Rana conspersa* LeConte, 1855, Proc. Acad. Nat. Sci. Philadelphia, 7: 425. Syntypes: Including ANSP 2918, according to Malnate, 1971, Proc. Acad. Nat. Sci. Philadelphia, 123: 350. Type locality: "Pennsylvania"; corrected to "Riceborough, Liberty County, Georgia" by Schmidt, 1953, Check List N. Am. Amph. Rept., Ed. 6: 79. Synonymy by Boulenger, 1882, Cat. Batr. Sal. Coll. Brit. Mus., Ed. 2: 36.
- Rana (Rana) catesbeiana* — Boulenger, 1920, Rec. Indian Mus., 20: 10. Dubois, 1987 "1986", Alytes, 5: 41; by implication.
- Rana nantaiwuensis* Hsü, 1930, Contrib. Biol. Lab. Sci. Soc., China, Zool. Ser., 6: 19. Holotype: Mus. Univ. Amoy, presumed lost in World War II. Type locality: "Nantaiwu, Amoy [= Xiamen Shi, Fujian Province], China". Considered a junior synonym or *incertae sedis* within *Hoplobatrachus* by Dubois, 1987 "1986", Alytes, 5: 60; without discussion. Synonymy with *Rana catesbeiana* by Zhao and Adler, 1993, Herpetol. China: 140. Previously considered a synonym of *Rana spinosa* by Liu and Hu, 1961, Tailless Amph. China: 156.
- Rana mugicus* — Angel, 1947, Vie et Moeurs Amph.: 253. Apparent incorrect subsequent spelling of *Rana mugiens*, but based on specimens of *Lithobates pipiens*; see discussion by Smith, 1948, Am. Midl. Nat., 40: 517-518.
- Rana catesbyana* — Smith, 1978, Amph. N. Am.: 66. Unjustified emendation.
- Rana (Rana) catesbeiana* — Dubois, 1987 "1986", Alytes, 5: 41. by implication; Maeda and Matsui, 1990, Frogs Toads Japan, Ed. 2: 107
- Rana (Aquarana) catesbeiana* — Dubois, 1992, Bull. Mens. Soc. Linn. Lyon, 61: 331.
- Rana (Novirana, Aquarana) catesbeiana* — Hillis and Wilcox, 2005, Mol. Phylogenet. Evol., 34: 305. See Dubois, 2006, Mol. Phylogenet. Evol., 42: 317-330, Hillis, 2007, Mol. Phylogenet. Evol., 42: 331-338, and Dubois, 2007, Cladistics, 23: 390-402, for relevant discussion of nomenclature. Invalid name formulation under the International Code of Zoological Nomenclature (1999) as discussed by Dubois, 2007, Cladistics, 23: 395.
- Lithobates catesbeianus* — Frost, Grant, Faivovich, Bain, Haas, Haddad, de Sá, Channing, Wilkinson, Donnellan, Raxworthy, Campbell, Blotto, Moler, Drewes, Nussbaum, Lynch, Green, and Wheeler, 2006, Bull. Am. Mus. Nat. Hist., 297: 369. Che, Pang, Zhao, Wu, Zhao, and Zhang, 2007, Mol. Phylogenet. Evol., 43: 1-13; by implication.
- Lithobates (Aquarana) catesbeianus* — Dubois, 2006, C. R. Biol., Paris, 329: 829. Dubois, 2006, Mol. Phylogenet. Evol., 42: 325.
- Rana (Aquarana) catesbeiana* — Hillis, 2007, Mol. Phylogenet. Evol., 42: 335-336. by implication.

English Names

- Common Bullfrog (Dickerson, 1906, The Frog Book: 227; Kellogg, 1932, Bull. U.S. Natl. Mus., 160: 195; Carr, 1940, Univ. Florida Biol. Sci. Ser., 3: 64).
- Jug-O'-Rum (Fowler, 1907, Annu. Rep. N.J. State Mus. for 1906: 126).
- Bloody Nouns (Fowler, 1907, Annu. Rep. N.J. State Mus. for 1906: 126).
- Bull Frog (as "*Rana pipiens*": Smith, 1833, Rep. Geol. Mineral. Bot. Zool. Massachusetts: 552); Storer, 1840, Boston J. Nat. Hist., 3: 40).

Bull Frog (Shaw, 1802, Gen. Zool., 3(1): 106; Verrill, 1863, Proc. Boston Soc. Nat. Hist., 9: 198; Wood, 1863, Illust. Nat. Hist., 3: 155; Yarrow, 1882, Bull. U.S. Natl. Mus., 24: 25; Hay, 1892, Annu. Rep. Dept. Geol. Nat. Res. Indiana for 1891: 478; Davis and Rice, 1883, Bull. Chicago Acad. Sci., 1: 28; Rhoads, 1895, Proc. Acad. Nat. Sci. Philadelphia, 47: 394; Fowler, 1907, Annu. Rep. N.J. State Mus. for 1906: 120; Brimley, 1907, J. Elisha Mitchell Sci. Soc., 23: 159; Wright and Wright, 1933, Handb. Frogs Toads U.S. Canada: xi; Stebbins, 1951, Amph. W. North Am.: 345; Schmidt, 1953, Check List N. Am. Amph. Rept., Ed. 6: 79; Conant, Cagle, Goin, Lowe, Neill, Netting, Schmidt, Shaw, Stebbins, and Bogert, 1956, Copeia, 1956: 177; Stebbins, 1966, Field Guide W. North Am. Rept. Amph.: 76; Conant, 1975, Field Guide Rept. Amph. E. Cent. N. Am., Ed. 2: 338; Collins, Huheey, Knight, and Smith, 1978, Herpetol. Circ., 7: 12; Liner, 1994, Herpetol. Circ., 23: 27; Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 106; Collins, 1997, Herpetol. Circ., 25: 13; Stebbins, 2003, Field Guide W. Rept. Amph., Ed. 3: 240; Collins and Taggart, 2009, Standard Common Curr. Sci. Names N. Am. Amph. Turtles Rept. Crocodil., ed. 6: 8).

Eastern Bull Frog (Storer, 1925, Univ. California Publ. Zool., 27: 43).

American Bullfrog (Cochran, 1961, Living Amph. World: 151; Arnold and Burton, 1978, Field Guide Rept. Amph. Brit. Eur.: 87; Maeda and Matsui, 1990, Frogs Toads Japan, Ed. 2: 107; Iskandar, 1998, Amph. Java Bali: 70; Crother, Boundy, Campbell, de Queiroz, Frost, Highton, Iverson, Meylan, Reeder, Seidel, Sites, Taggart, Tilley, and Wake, 2001 "2000", Herpetol. Circ., 29: 14; Arnold, 2002, Rept. Amph. Eur., Ed. 2: 97; Stebbins, 2003, Field Guide W. Rept. Amph., Ed. 3: 240; Goris and Maeda, 2004, Guide Amph. Rept. Japan: 62; Frost, McDiarmid, and Mendelson, 2008, *in* Crother (ed.), Herpetol. Circ., 37: 7; Liner and Casas-Andreu, 2008, Herpetol. Circ., 38: 16; Frost, McDiarmid, Mendelson, and Green, 2012, *in* Crother (ed.), Herpetol. Circ., 39: 17).

Edible Bullfrog (McKay, 2006, Field Guide Amph. Rept. Bali: 36).

Distribution

Eastern North America, except southern Florida, north to Nova Scotia, New Brunswick, southern Quebec, and southern Ontario (Canada), west to the central plains and south to Hidalgo, Puebla, and adjacent Veracruz (Mexico); introduced on Cuba, Isla de Juventud (= Isla de Pinos), Puerto Rico, Hispaniola, and Jamaica in the Antilles; introduced widely in the rest of the world including the Netherlands, Bordeaux region of France, Belgium, northern Italy, western Spain, Crete, Malaya (Malaysia), Java, Bali, Japan, southern and western Mexico, Brazil, northern Thailand, Korea, and Taiwan (China).

Comment

In the *Rana catesbeiana* group of XXX. In the equivalent *Rana* (*Rana*) *clamitans* group of Dubois, 1987 "1986", Alytes, 5: 41, in the equivalent subgenus *Aquarana* of Dubois, 1992, Bull. Mens. Soc. Linn. Lyon, 61: 331. Fei, 1999, Atlas Amph. China: 306-307, provided a brief account and figure for the species in China. Lanza and Ferri, 1997, *in* Gasc et al. (eds.), Atlas Amph. Rept. Eur.: 132-133, discussed range and relevant literature for European introduced populations. Maeda and Matsui, 1990, Frogs Toads Japan, Ed. 2: 100-107, provided an account for Japanese introduced populations. Fei and Ye, 2001, Color Handbook Amph. Sichuan: 228-229, provided a brief account and illustration for the introduced Chinese population. Grismer, 2002, Amph. Rept. Baja California: 79-81, provided an account for the introduced Baja California, Mexico, populations. Duifhuis-Rivera, García-Vazquez, and

Zamora-Hebrego, 2008, Herpetol. Rev., 39: 479, provided a record for Hidalgo, Mexico and briefly discussed the nearby records in Puebla. Mullen, 1976, Herpetol. Rev., 7: 122, reported an introduced population in Baja California del Sur, Mexico. Borges-Martins, Di-Bernardo, Vinciprova, and Measey, 2002, Herpetol. Rev., 33: 319, discussed the introduced populations in southern Brazil. Stebbins, 2003, Field Guide W. Rept. Amph., Ed. 3: 240-242, provided a brief account, figure, and map. Yang, Kim, Min, and Suh, 2001, Monogr. Korean Amph.: 72-73, provided a brief account, figure, and map for South Korea. Lever, 2003, Naturalized Rept. Amph. World: 203-218, discussed the introduced populations in England, Italy, Spain, France, Netherlands, China, Java, Bali, Japan, Israel, Malaysia, Russia, Argentina, Paraguay, Peru, Guyana, Brazil, Chile, Colombia, Ecuador, Venezuela, Cuba, Jamaica, Haiti, Dominican Republic, Puerto Rico, Hawaii. Goris and Maeda, 2004, Guide Amph. Rept. Japan: 62-63, provided an account for Japan, map, and photograph. Cisneros-Heredia, 2004, Herpetol. Rev., 35: 406, provided a record (introduced) for Ecuador. Pereyra, Baldo, and Krauczuk, 2006, Cuad. Herpetol., 20: 37-40, discussed the introduced populations in Argentina (and noted the other South American countries for which populations have been discovered). Valakos, Pafilis, Sotiropoulos, Lymberakis, Maragou, and Foufopoulos, 2008, Amph. Rept. Greece: 134-135, provided an account for the introduced population on Crete. Austin and Zamudio, 2008, Mol. Phylogenet. Evol., 48: 1041-1053, reported on mtDNA phylogeographic structure. Chan, Wood, and Grismer, 2008, Herpetol. Rev., 39: 479, provided a record for West Malaysia. Savage and Bolaños, 2009, Zootaxa, 2005: 9, reported this species as introduced in Costa Rica. See detailed account for the introduced population in Italy by Stagni and Lanza, 2007, in Lanza et al. (eds.), Fauna d'Italia, 42 (Amph.): 377-381. Farr, Lazcano, and Lavín-Murcio, 2009, Herpetol. Rev., 40: 459-467, provided records for eastern Tamaulipas, Mexico, and discussed the historical range of this species in that region. Chan, Daicus, and Norhayati, 2010, Russ. J. Herpetol., 17: 202-206, noted an introduced population in West Malaysia. Both, Lingnau, Santos, Madalozzo, Lima, and Grant, 2011, S. Am. J. Herpetol., 6: 127-134, documented the widespread feral population in southeastern Brazil. Ferreira and Lima, 2012, North-West. J. Zool., Romania, 8: 386-389, also discussed populations in Espírito Santo, southern Brazil. Iñiguez and Morejón, 2012, S. Am. J. Herpetol., 7: 85-90, discussed the potential range in Ecuador.

***Pelophylax* Fitzinger, 1843**

Species assigned to genus *Pelophylax*

- Species: *Pelophylax bedriagae* (Camerano, 1882)
Species: *Pelophylax bergeri* (Günther, 1986)
Species: *Pelophylax caralitani* (Arikan, 1988)
Species: *Pelophylax cerigensis* (Beerli, Hotz, Tunner, Heppich, and Uzzell, 1994)
Species: *Pelophylax chosenicus* (Okada, 1931)
Species: *Pelophylax cretensis* (Beerli, Hotz, Tunner, Heppich, and Uzzell, 1994)
Species: *Pelophylax cypriensis* Plötner, Baier, Akin, Mazepa, Schreiber, Beerli, Litvinchuk, Bilgin, Borkin, and Uzzell, 2012
Species: *Pelophylax demarchii* (Scortecci, 1929)
Species: *Pelophylax epeiroticus* (Schneider, Sofianidou, and Kyriakopoulou-Sklavounou, 1984)
Species: *Pelophylax fukienensis* (Pope, 1929)
Species: *Pelophylax hubeiensis* (Fei and Ye, 1982)
Species: *Pelophylax kurtmuelleri* (Gayda, 1940)
Species: *Pelophylax lessonae* (Camerano, 1882)
Species: *Pelophylax nigromaculatus* (Hallowell, 1861)
Species: *Pelophylax perezii* (López-Seoane, 1885)
Species: *Pelophylax planeyi* (Lataste, 1880)
Species: *Pelophylax porosus* (Cope, 1868)
Species: *Pelophylax ridibundus* (Pallas, 1771)
Species: *Pelophylax saharicus* (Boulenger, 1913)
Species: *Pelophylax shqipericus* (Hotz, Uzzell, Günther, Tunner, and Heppich, 1987)
Species: *Pelophylax tenggerensis* (Zhao, Macey, and Papenfuss, 1988)
Species: *Pelophylax terentievi* (Mezhzhherin, 1992)

***Pelophylax shqipericus* (Hotz, Uzzell, Günther, Tunner, and Heppich, 1987)**

- Rana shqipericus* Hotz, Uzzell, Günther, Tunner, and Heppich, 1987, Not. Nat., Philadelphia, 468: 2. Holotype: ANSP 30211, by original designation. Type locality: "Virpazar, Skadarsko Jezero, Crna Gora, Yugoslavia [now Montenegro] (42°14'N, 19°05'E)".
Rana (Pelophylax) shqipericus — Dubois, 1992, Bull. Mens. Soc. Linn. Lyon, 61: 332.
Hylarana shqipericus — Chen, Murphy, Lathrop, Ngo, Orlov, Ho, and Somorjai, 2005, Herpetol. J., 15: 237. by implication.
Pelophylax shqipericus — Frost, Grant, Faivovich, Bain, Haas, Haddad, de Sá, Channing, Wilkinson, Donnellan, Raxworthy, Campbell, Blotto, Moler, Drewes, Nussbaum, Lynch, Green, and Wheeler, 2006, Bull. Am. Mus. Nat. Hist., 297: 369. Che, Pang, Zhao, Wu, Zhao, and Zhang, 2007, Mol. Phylogenet. Evol., 43: 1-13; by implication.

English Names

Virpazar Frog (Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 109).

Balkan Frog (Stumpel-Rienks, 1992, Ergänzungsband Handbuch Rept. Amph. Eur., Trivialnamen der Herpetofauna Eur.: 59; Günther, 1997, in Gasc et al. (eds.), Atlas Amph. Rept. Eur.: 156.

Albanian Pool Frog (Arnold, 2002, Rept. Amph. Eur., Ed. 2: 95).

Distribution

Region of the type locality in southern Montenegro south along the Adriatic coastal region to southwestern Albania, below 500 m elevation.

Comment

Formerly often confused with "*Pelophylax esculentus*". See *Pelophylax bergeri*. Considered distinct (as *Rana*) from *Pelophylax lessonae* on the basis of morphometry, immunology, and allozymes, but considered conspecific by Schneider and Haxhiu, 1994, Zool. Jahrb., Jena, Abt. Syst., 121: 248-262, and Sinsch and Schneider, 1996, J. Zool. Syst. Evol. Res., 34: 63-73, because of the lack of significant differences between mating calls. This synonymy rejected by Beerli, unpublished dissertation, and Dubois and Ohler, 1996 "1994", Zool. Polon., 39: 178, and Plötner, 1998, J. Zool. Syst. Evol. Res., 36: 191-201, and Plötner and Ohst, 2001, Mitt. Mus. Naturkd. Berlin, Zool., 77: 5-21 (who suggested that this species was most closely related to *Pelophylax lessonae* and *Pelophylax bergeri*). Günther, 1997, in Gasc et al. (eds.), Atlas Amph. Rept. Eur.: 156-157, discussed relevant literature, distribution, and taxonomic controversy. Nöllert and Nöllert, 1992, Die Amph. Eur.: 361-363, provided an account and polygon map. Arnold, 2002, Rept. Amph. Eur., Ed. 2: 95, provided a brief account, figure, and map. Casola, Marracci, Bucci, Ragghianti, Mancino, Hotz, Uzzell, and Guex, 2004, J. Zool. Syst. Evol. Res., 42: 234-244, provided a molecular tree of western Palearctic water frogs (as *Rana*) in the topology *Pelophylax saharicus* (*Pelophylax cretensis* (*Pelophylax perezii* (*Pelophylax shqipericus* (*Pelophylax epeiroticus* (*Pelophylax lessonae* + *Pelophylax ridibundus*))))). See photograph, map, description of geographic range and habitat, and conservation status (as *Rana shqipERICA*) in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 511.

CAUDATA

Hynobiidae

Genera assigned to family Hynobiidae

Genus: Batrachuperus Boulenger, 1878
Genus: Hynobius Tschudi, 1838
Genus: Liua Zhao and Hu, 1983
Genus: Onychodactylus Tschudi, 1838
Genus: Pachyhynobius Fei, Qu, and Wu, 1983
Genus: Paradactylodon Risch, 1984
Genus: Pseudohynobius Fei and Yang, 1983
Genus: Ranodon Kessler, 1866
Genus: Salamandrella Dybowski, 1870

***Ranodon* Kessler, 1866**

Species assigned to genus *Ranodon*

Species: *Ranodon sibiricus* Kessler, 1866

***Ranodon sibiricus* Kessler, 1866**

Ranodon sibiricus Kessler, 1866, Bull. Soc. Imp. Nat. Moscou, 39: 130. Syntypes:
Including ZMM A-34 (one of two specimens) which was designated lectotype by Dunayev and Orlova, 1994, Russ. J. Herpetol., 1: 60. See discussion of types by Kuzmin and Thiesmeier, 2001, Adv. Amph. Res. Former Soviet Union, 6: 19.
Type locality: "Umgegend von Semipalatinsk" (= neighborhood of Semipalatinsk), Russia; in error, by being outside of known distribution according to Kuzmin, 1999, Amph. Former Soviet Union: 118, and Kuzmin and Thiesmeier, 2001, Adv. Amph. Res. Former Soviet Union, 6: 19. Type locality discussed by Dunayev and Orlova, 1994, Russ. J. Herpetol., 1: 60, who corrected it to "environs of Kuldzha (China)"; this correction rejected by Kuzmin and Thiesmeier, 2001, Adv. Amph. Res. Former Soviet Union, 6: 20.

Triton (Ranodon) sibiricus — Günther, 1867, Zool. Rec., 3: 130.

Ranodon Kessleri Ballion, 1868, Bull. Soc. Imp. Nat. Moscou, 41: 140. Holotype: Not stated; see comments by Bauer, Good, and Günther, 1993, Mitt. Zool. Mus. Berlin, 69: 301. NHMW 22908 considered holotype by Häupl and Tiedemann, 1978, Kat. Wiss. Samml. Naturhist. Mus. Wien, 2: 11, and Häupl, Tiedemann, and Grillitsch, 1994, Kat. Wiss. Samml. Naturhist. Mus. Wien, 9: 15. Type locality: "Umgegend von Kapal (45° 8' nördl. Br. 96° 47' östl. L.)", Kazakhstan. Synonymy by Strauch, 1870, Mem. Acad. Imp. Sci. St. Petersburg, Ser. 7, 16 (4): 66; Günther, 1871, Zool. Rec., 7: 80; Boulenger, 1882, Cat. Batr. Grad. Batr. Apoda Coll. Brit. Mus., Ed. 2: 36.

Ranidens sibiricus — Boulenger, 1882, Cat. Batr. Grad. Batr. Apoda Coll. Brit. Mus., Ed. 2: 36.

Ranodon kozhevnikovi Nikolskii, 1918, Fauna Rossii, Zemnovodnye: 251. Holotype: ZMM, by original designation; ZMM A-713, according to Dunayev and Orlova, 1994, Russ. J. Herpetol., 1: 61. Type locality: "Tashkent", Uzbekistan (considered

unlikely by Kuzmin, 1999, Amph. Former Soviet Union: 103, and Kuzmin and Thiesmeier, 2001, Adv. Amph. Res. Former Soviet Union, 6: 22). Synonymy by Bobrinskii, 1929, Trudy Nauchno Issledovatel'skogo Instituta Zoologii, 3: 19-20; Terentjev and Chernov, 1936, Brief Guide Amph. Rept. USSR: XXX; Thorn, 1968, Salamand. Eur. Asie Afr. Nord: 92. Specimen and its provenance discussed by Dunayev and Orlova, 1994, Russ. J. Herpetol., 1: 61.

Ranodon sibericus — Gee and Boring, 1929, Peking Nat. Hist. Bull., 4: 18. Incorrect subsequent spelling.

English Names

Siberian Salamander (Steward, 1969, Tailed Amph. Eur.: 39; Ananjeva, Borkin, Darevsky, and Orlov, 1988, Dict. Amph. Rept. Five Languages: 21; Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 28).

Semirechensk Salamander (Kuzmin, Kubykin, Thiesmeier, and Greven, 1998, Adv. Amph. Res. Former Soviet Union, 3: 1; Kuzmin, 1999, Amph. Former Soviet Union: 116; Kuzmin and Thiesmeier, 2001, Adv. Amph. Res. Former Soviet Union, 6: 18; Halliday and Adler, 2002, New Encyclop. Rept. Amph.: 56).

Central Asian Salamander (Fei, 1999, Atlas Amph. China: 34).

Distribution

Small mountain creeks with rapids streams and falls, at altitude of 15000-2500 m, in coniferous forests of the high mountains (Jungarian Ala Tau) of northwestern Xinjiang, China, and southeastern Kazakhstan, 2100-3200 m elevation.

Comment

See accounts by Ye, Fei, and Hu, 1993, Rare and Economic Amph. China 53; Kuzmin, 1999, Amph. Former Soviet Union: 116-124; Fei, 1999, Atlas Amph. China: 34; Thorn and Raffaëlli, 2000, Salamand. Ancien Monde: 126-131; Kuzmin and Thiesmeier, 2001, Adv. Amph. Res. Former Soviet Union, 6: 17-101, and Raffaëlli, 2007, Les Urodèles du Monde: 56-57. Distribution discussed in detail by Kuzmin, Kubykin, Thiesmeier, and Greven, 1998, Adv. Amph. Res. Former Soviet Union, 3: 1-20. Fei, Hu, Ye, and Huang, 2006, Fauna Sinica, Amph. 1: 213-218, provided an account for China. See photograph, map, description of geographic range and habitat, and conservation status in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 553. Fei, Ye, and Jiang, 2010, Colored Atlas of Chinese Amph.: 62-63, provided a brief account including photographs of specimens and habitat.

Plethodontidae

Genera assigned to family Plethodontidae

Genus: *Batrachoseps* Bonaparte, 1839
Genus: *Bolitoglossa* Duméril, Bibron, and Duméril, 1854
Genus: *Bradytriton* Wake and Elias, 1983
Genus: *Aneides* Baird, 1851
Genus: *Chiropterotriton* Taylor, 1944
Genus: *Cryptotriton* García-París and Wake, 2000
Genus: *Dendrotriton* Wake and Elias, 1983
Genus: *Desmognathus* Baird, 1850
Genus: *Ensatina* Gray, 1850
Genus: *Eurycea* Rafinesque, 1822
Genus: *Gyrinophilus* Cope, 1869
Genus: *Hemidactylium* Tschudi, 1838
Genus: *Hydromantes* Gistel, 1848
Genus: *Karsenia* Min, Yang, Bonett, Vieites, Brandon, and Wake, 2005
Genus: *Nototriton* Wake and Elias, 1983
Genus: *Nyctanolis* Elias and Wake, 1983
Genus: *Oedipina* Keferstein, 1868
Genus: *Parvimolge* Taylor, 1944
Genus: *Phaeognathus* Highton, 1961
Genus: *Plethodon* Tschudi, 1838
Genus: *Pseudoeurycea* Taylor, 1944
Genus: *Pseudotriton* Tschudi, 1838
Genus: *Stereochilus* Cope, 1869
Genus: *Thorius* Cope, 1869
Genus: *Urspelerpes* Camp, Peterman, Milanovich, Lamb, Maerz, and Wake, 2009

Bolitoglossa Duméril, Bibon, and Duméril, 1854

Species assigned to genus *Bolitoglossa*

Species: *Bolitoglossa adspersa* (Peters, 1863)
Species: *Bolitoglossa alberchi* García-París, Parra-Olea, Brame, and Wake, 2002
Species: *Bolitoglossa altamazonica* (Cope, 1874)
Species: *Bolitoglossa alvaradoi* Taylor, 1954
Species: *Bolitoglossa anthracina* Brame, Savage, Wake, and Hanken, 2001
Species: *Bolitoglossa aureocularis* Boza-Oviedo, Rovito, Chaves, García-Rodríguez, Artavia, Bolaños, and Wake, 2012
Species: *Bolitoglossa biseriata* Tanner, 1962
Species: *Bolitoglossa borburata* Trapido, 1942
Species: *Bolitoglossa bramei* Wake, Savage, and Hanken, 2007
Species: *Bolitoglossa capitana* Brame and Wake, 1963
Species: *Bolitoglossa carri* McCranie and Wilson, 1993
Species: *Bolitoglossa cataguana* Townsend, Butler, Wilson, and Austin, 2009
Species: *Bolitoglossa celaque* McCranie and Wilson, 1993
Species: *Bolitoglossa centenorum* Campbell, Smith, Streicher, Acevedo, and Brodie, 2010
Species: *Bolitoglossa cerroensis* (Taylor, 1952)
Species: *Bolitoglossa chica* Brame and Wake, 1963
Species: *Bolitoglossa chinanteca* Rovito, Parra-Olea, Lee, and Wake, 2012
Species: *Bolitoglossa colonnea* (Dunn, 1924)
Species: *Bolitoglossa compacta* Wake, Brame, and Duellman, 1973
Species: *Bolitoglossa conanti* McCranie and Wilson, 1993
Species: *Bolitoglossa copia* Wake, Hanken, and Ibáñez, 2005

Species: *Bolitoglossa cuchumatana* (Stuart, 1943)

Species: *Bolitoglossa cuna* Wake, Brame, and Duellman, 1973

Species: *Bolitoglossa daryorum* Campbell, Smith, Streicher, Acevedo, and Brodie, 2010

Species: *Bolitoglossa decora* McCranie and Wilson, 1997

Species: *Bolitoglossa diaphora* McCranie and Wilson, 1995

Species: *Bolitoglossa digitigrada* Wake, Brame, and Thomas, 1982

Species: *Bolitoglossa diminuta* Robinson, 1976

Species: *Bolitoglossa dofleini* (Werner, 1903)

Species: *Bolitoglossa dunni* (Schmidt, 1933)

Species: *Bolitoglossa engelhardti* (Schmidt, 1936)

Species: *Bolitoglossa epimela* Wake and Brame, 1963

Species: *Bolitoglossa equatoriana* Brame and Wake, 1972

Species: *Bolitoglossa eremia* Campbell, Smith, Streicher, Acevedo, and Brodie, 2010

Species: *Bolitoglossa flavimembris* (Schmidt, 1936)

Species: *Bolitoglossa flaviventris* (Schmidt, 1936)

Species: *Bolitoglossa franklini* (Schmidt, 1936)

Species: *Bolitoglossa gomezi* Wake, Savage, and Hanken, 2007

Species: *Bolitoglossa gracilis* Bolaños, Robinson, and Wake, 1987

Species: *Bolitoglossa guaneae* Acosta-Galvis and Gutiérrez-Lamus, 2012

Species: *Bolitoglossa guaramacalensis* Schargel, García-Pérez, and Smith, 2002

Species: *Bolitoglossa hartwegi* Wake and Brame, 1969

Species: *Bolitoglossa heiroreias* Greenbaum, 2004

Species: *Bolitoglossa helmrichi* (Schmidt, 1936)

Species: *Bolitoglossa hermosa* Papenfuss, Wake, and Adler, 1984

Species: *Bolitoglossa hiemalis* Lynch, 2001

Species: *Bolitoglossa huehuetenanguensis* Campbell, Smith, Streicher, Acevedo, and Brodie, 2010

Species: *Bolitoglossa hypacra* (Brame and Wake, 1962)

Species: *Bolitoglossa indio* Sunyer, Lotzkatz, Hertz, Wake, Aléman, Robleto, and Köhler, 2008

Species: *Bolitoglossa insularis* Sunyer, Lotzkatz, Hertz, Wake, Aléman, Robleto, and Köhler, 2008

Species: *Bolitoglossa jacksoni* Elias, 1984

Species: *Bolitoglossa kamuk* Boza-Oviedo, Rovito, Chaves, García-Rodríguez, Artavia, Bolaños, and Wake, 2012

Species: *Bolitoglossa kaqchikelorum* Campbell, Smith, Streicher, Acevedo, and Brodie, 2010

Species: *Bolitoglossa la* Campbell, Smith, Streicher, Acevedo, and Brodie, 2010

Species: *Bolitoglossa lignicolor* (Peters, 1873)

Species: *Bolitoglossa lincolni* (Stuart, 1943)

Species: *Bolitoglossa longissima* McCranie and Cruz-Díaz, 1996

Species: *Bolitoglossa lozanoi* Acosta-Galvis and Restrepo, 2001

Species: *Bolitoglossa macrinii* (Lafrentz, 1930)

Species: *Bolitoglossa magnifica* Hanken, Wake, and Savage, 2005

Species: *Bolitoglossa marmorea* (Tanner and Brame, 1961)

Species: *Bolitoglossa medemi* Brame and Wake, 1972

Species: *Bolitoglossa meliana* Wake and Lynch, 1982

Species: *Bolitoglossa mexicana* Duméril, Bibron, and Duméril, 1854

Species: *Bolitoglossa minutula* Wake, Brame, and Duellman, 1973

Species: *Bolitoglossa mombachoensis* Köhler and McCranie, 1999

Species: *Bolitoglossa morio* (Cope, 1869)

Species: *Bolitoglossa mulleri* (Brocchi, 1883)

Species: *Bolitoglossa nicefori* Brame and Wake, 1963

Species: *Bolitoglossa nigrescens* (Taylor, 1949)

Species: *Bolitoglossa ninadormida* Campbell, Smith, Streicher, Acevedo, and Brodie, 2010

Species: *Bolitoglossa nussbaumi* Campbell, Smith, Streicher, Acevedo, and Brodie, 2010

Species: *Bolitoglossa nympha* Campbell, Smith, Streicher, Acevedo, and Brodie, 2010

Species: *Bolitoglossa oaxacensis* Parra-Olea, García-París, and Wake, 2002

Species: *Bolitoglossa obscura* Hanken, Wake, and Savage, 2005

Species: *Bolitoglossa occidentalis* Taylor, 1941

Species: *Bolitoglossa odonnelli* (Stuart, 1943)

Species: *Bolitoglossa omniunsanctorum* (Stuart, 1952)

Species: *Bolitoglossa oresbia* McCranie, Espinal, and Wilson, 2005

Species: *Bolitoglossa orestes* Brame and Wake, 1962

Species: *Bolitoglossa pacaya* Campbell, Smith, Streicher, Acevedo, and Brodie, 2010

Species: *Bolitoglossa palmata* (Werner, 1897)
 Species: *Bolitoglossa pandi* Brame and Wake, 1963
 Species: *Bolitoglossa paraensis* (Unterstein, 1930)
 Species: *Bolitoglossa peruviana* (Boulenger, 1883)
 Species: *Bolitoglossa pesrubra* Taylor, 1952
 Species: *Bolitoglossa phalarosoma* Wake and Brame, 1962
 Species: *Bolitoglossa platydactyla* (Gray, 1831)
 Species: *Bolitoglossa porrasorum* McCranie and Wilson, 1995
 Species: *Bolitoglossa psephena* Campbell, Smith, Streicher, Acevedo, and Brodie, 2010
 Species: *Bolitoglossa pygmaea* Bolaños and Wake, 2009
 Species: *Bolitoglossa ramosi* Brame and Wake, 1972
 Species: *Bolitoglossa riletti* Holman, 1964
 Species: *Bolitoglossa robinsoni* Bolaños and Wake, 2009
 Species: *Bolitoglossa robusta* (Cope, 1894)
 Species: *Bolitoglossa rostrata* (Brocchi, 1883)
 Species: *Bolitoglossa rufescens* (Cope, 1869)
 Species: *Bolitoglossa salvinii* (Gray, 1868)
 Species: *Bolitoglossa savagei* Brame and Wake, 1963
 Species: *Bolitoglossa schizodactyla* Wake and Brame, 1966
 Species: *Bolitoglossa silverstonei* Brame and Wake, 1972
 Species: *Bolitoglossa sima* (Vaillant, 1911)
 Species: *Bolitoglossa sombra* Hanken, Wake, and Savage, 2005
 Species: *Bolitoglossa sooyorum* Vial, 1963
 Species: *Bolitoglossa splendida* Boza-Oviedo, Rovito, Chaves, García-Rodríguez, Artavia, Bolaños, and Wake, 2012
 Species: *Bolitoglossa striatula* (Noble, 1918)
 Species: *Bolitoglossa stuarti* Wake and Brame, 1969
 Species: *Bolitoglossa subpalmata* (Boulenger, 1896)
 Species: *Bolitoglossa suchitanensis* Campbell, Smith, Streicher, Acevedo, and Brodie, 2010
 Species: *Bolitoglossa synoria* McCranie and Köhler, 1999
 Species: *Bolitoglossa tatamae* Acosta-Galvis and Hoyos, 2006
 Species: *Bolitoglossa taylori* Wake, Brame, and Myers, 1970
 Species: *Bolitoglossa tica* García-París, Parra-Olea, and Wake, 2008
 Species: *Bolitoglossa tzultacaj* Campbell, Smith, Streicher, Acevedo, and Brodie, 2010
 Species: *Bolitoglossa valleculea* Brame and Wake, 1963
 Species: *Bolitoglossa veracruzis* Taylor, 1951
 Species: *Bolitoglossa walkeri* Brame and Wake, 1972
 Species: *Bolitoglossa xibalba* Campbell, Smith, Streicher, Acevedo, and Brodie, 2010
 Species: *Bolitoglossa yucatana* (Peters, 1882)
 Species: *Bolitoglossa zacapensis* Rovito, Vásquez-Almazán, and Papenfuss, 2010
 Species: *Bolitoglossa zapoteca* Parra-Olea, García-París, and Wake, 2002

***Bolitoglossa dofleini* (Werner, 1903)**

Spelerpes Dofleini Werner, 1903, Abh. Math. Physik. Cl. Bayer. Akad. Wiss., 22: 352.

Type(s): ZSM 1288/0, lost according to Stuart, 1963, Misc. Publ. Mus. Zool. Univ. Michigan, 122: 17, and Glaw and Franzen, 2006, Spixiana, München, 29: 156. MVZ 161627 designated neotype by McCranie, Wake, and Wilson, 1996, Caribb. J. Sci., 32: 395-398. Type locality: "Guatemala"; presumably the Alta Verapaz, according to Stuart, 1943, Misc. Publ. Mus. Zool. Univ. Michigan, 56: 17. Neotype is from "Finca Volcán, 25 km (by rd.) NW Senahú, Depto. Alta Verapaz, Guatemala, elevation 875 m".

Oedipus schmidti Dunn, 1924, Field Mus. Nat. Hist. Publ., Zool. Ser., 12: 96. Holotype: FMNH 4538, by original designation. Type locality: "mountains west of San Pedro,

Departamento de Cortes, Honduras, at 2000 feet, on trail". Synonymy by McCranie, Wake, and Wilson, 1996, Caribb. J. Sci., 32: 395.

Oedipus schmidtii — Dunn, 1926, Salamanders Fam. Plethodontidae: 361.

Oedipus dofleini — Stuart, 1943, Misc. Publ. Mus. Zool. Univ. Michigan, 56: 17.

Bolitoglossa schmidtii — Taylor, 1944, Univ. Kansas Sci. Bull., 30: 219.

Bolitoglossa doffleini — Taylor, 1944, Univ. Kansas Sci. Bull., 30: 219. Incorrect subsequent spelling.

Bolitoglossa dofleini — Stuart, 1963, Misc. Publ. Mus. Zool. Univ. Michigan, 122: 17.

Bolitoglossa (Pachymandra) dofleini — Parra-Olea, García-París, and Wake, 2004, Biol. J. Linn. Soc., 81: 337.

English Names

Alta Verapaz Salamander (*Bolitoglossa dofleini*: Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 29).

Doflein's Salamander (*Bolitoglossa dofleini*: Lee, 1996, Amph. Rept. Yucatan Peninsula: 40; Campbell, 1998, Amph. Rept. N. Guatemala Yucatan Belize: 37).

Schmidt's Mushroomtongue Salamander (*Bolitoglossa schmidtii*: Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 30).

Doflein's Mushroomtongue Salamander (*Bolitoglossa dofleini*: Lee, 2000, Field Guide Amph. Rept. Maya World: 52).

Palm Salamander (*Bolitoglossa dofleini*: Ananjeva, Borkin, Darevsky, and Orlov, 1988, Dict. Amph. Rept. Five Languages: 23).

Distribution

Low and moderate elevations of the Caribbean versant from extreme northern Alta Verapaz, Guatemala, and Cayo District, Belize, to north-central Honduras, 50-1370 m elevation.

Comment

The sole member of the *Bolitoglossa (Pachymandra) dofleini* group of Parra-Olea, García-París, and Wake, 2004, Biol. J. Linn. Soc., 81: 337. See account and discussion by McCranie, Wake, and Wilson, 1996, Caribb. J. Sci., 32: 395-398 Lee, 1996, Amph. Rept. Yucatan Peninsula: 40-41, Campbell, 1998, Amph. Rept. N. Guatemala Yucatan Belize: 37, Lee, 2000, Field Guide Amph. Rept. Maya World: 52-53, and McCranie and Wilson, 2002, Amph. Honduras: 113-115. Raffaëlli, 2007, Les Urodèles du Monde: 273, provided a brief account, photograph, and map. McCranie, 2007, Herpetol. Rev., 38: 36, summarized the departmental distribution in Honduras. See statement of geographic range, habitat, and conservation status in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 638.

Salamandridae

Genera assigned to family Salamandridae

Genus: *Calotriton* Gray, 1858
Genus: *Chioglossa* Bocage, 1864
Genus: *Cynops* Tschudi, 1838
Genus: *Echinotriton* Nussbaum and Brodie, 1982
Genus: *Euproctus* Gené, 1838
Genus: *Ichthyosaura* Sonnini de Manoncourt and Latreille, 1801
Genus: *Laotriton* Dubois and Raffaëlli, 2009
Genus: *Lissotriton* Bell, 1839
Genus: *Lyciasalamandra* Veith and Steinfartz, 2004
Genus: *Mertensiella* Wolterstorff, 1925
Genus: *Neurergus* Cope, 1862
Genus: *Notophthalmus* Rafinesque, 1820
Genus: *Ommatotriton* Gray, 1850
Genus: *Pachytriton* Boulenger, 1878
Genus: *Paramesotriton* Chang, 1935
Genus: *Pleurodeles* Michahelles, 1830
Genus: *Salamandra* Garsault, 1764
Genus: *Salamandrina* Fitzinger, 1826
Genus: *Taricha* Gray, 1850
Genus: *Triturus* Rafinesque, 1815
Genus: *Tylotriton* Anderson, 1871

Cynops Tschudi, 1838

Species assigned to genus *Cynops*

Species: *Cynops chenggongensis* Kou and Xing, 1983
Species: *Cynops cyanurus* Liu, Hu, and Yang, 1962
Species: *Cynops ensicauda* (Hallowell, 1861)
Species: *Cynops fudingensis* Wu, Wang, Jiang, and Hanken, 2010
Species: *Cynops orientalis* (David, 1873)
Species: *Cynops orphicus* Risch, 1983
Species: *Cynops pyrrhogaster* (Boie, 1826)
Species: *Cynops wolterstorffi* (Boulenger, 1905)

Cynops ensicauda (Hallowell, 1861)

Triton ensicauda Hallowell, 1861 "1860", Proc. Acad. Nat. Sci. Philadelphia, 12: 494.

Syntypes: USNM 7410 (3 specimens), according to Stejneger, 1907, Bull. U.S. Natl. Mus., 58: 21-23, and Cochran, 1961, Bull. U.S. Natl. Mus., 220: 27. Type localities: "Paddyfields at the Amakarima Isle" and "Ralousima . . . the northern half of Ousima proper" (= Amami, Ryukyu Is., Japan, according to Inger, 1947, Fieldiana, Zool., 32: 316). See Stejneger, 1907, Bull. U.S. Natl. Mus., 58: 23, for discussion of confusion surrounding the type localities.

Molge pyrrhogaster var. *ensicauda* — Boulenger, 1887, Proc. Zool. Soc. London, 1887: 150.

Molge pyrrhogastra var. *ensicaudatus* — Okada, 1891, Cat. Vert. Animals Japan: 65.
 Incorrect subsequent spelling.
Molge pyrrhogaster ensicauda — Brown, 1902, Proc. Acad. Nat. Sci. Philadelphia, 54: 186.
Diemictylus ensicauda — Stejneger, 1907, Bull. U.S. Natl. Mus., 58: 21.
Triturus ensicaudus — Dunn, 1918, Bull. Mus. Comp. Zool., 62: 450.
Triton pyrrhogaster subsp. ensicauda — Wolterstorff, 1925, Abh. Ber. Mus. Nat. Heimatkd. Magdeburg, 4: 291.
Triton (Cynops) pyrrhogaster — Wolterstorff, 1927, Bl. Aquar. Terrarienkd., Stuttgart, 19: 484.
Cynops ensicauda — Wolterstorff and Herre, 1935, Arch. Naturgesch., Leipzig, N. F., 4: 224.
Triturus ensicauda — Sato, 1943, Monogr. Tailed Batr. Japan: 378.
Triturus ensicaudus popei Inger, 1947, Fieldiana, Zool., 32: 319. Holotype: FMNH 45039, by original designation. Type locality: "Kin, Okinawa", Ryukyu Islands, Japan.
Triturus ensicaudus ensicaudus — Inger, 1947, Fieldiana, Zool., 32: 319.
Triturus pyrrhogaster ensicaudus — Kawamura, 1950, J. Sci. Hiroshima Univ., B—Zool., 11: 78. by implication.
Triturus (Cynops) pyrrhogaster ensicaudus — Nakamura and Ueno, 1963, Japan. Rept. Amph. Color: 19.
Cynops pyrrhogaster popei — Brame, 1967, Herpeton, California, 2: 6.
Cynops ensicauda ensicauda — Thorn, 1968, Salamand. Eur. Asie Afr. Nord: 281. Dubois and Raffaëlli, 2009, Alytes, 26: 65.
Cynops ensicauda popei — Dubois and Raffaëlli, 2009, Alytes, 26: 65.

English Names

Swordtail Newt (Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 35).

Sword-tailed Newt (Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 600).

Yellow-bellied Newt (Ananjeva, Borkin, Darevsky, and Orlov, 1988, Dict. Amph. Rept. Five Languages: 31).

Okinawa Newt (Ananjeva, Borkin, Darevsky, and Orlov, 1988, Dict. Amph. Rept. Five Languages: 31).

Distribution

Amami and Okinawa Archipelagos, Ryukyu Islands, Japan.

Comment

See Nakamura and Ueno, 1963, Japan. Rept. Amph. Color: 19-20 (as *Triturus pyrrhogaster*), and Thorn and Raffaëlli, 2000, Salamand. Ancien Monde: 312-314. for accounts. Hayashi and Matsui, 1988, Zool. Sci., Tokyo, 5: 1121-1136, suggested that *Cynops ensicauda* is genetically well differentiated from *Cynops pyrrhogaster* and that *Cynops ensicauda* formed two well-differentiated geographic groups which correspond to *Cynops ensicauda ensicauda*

and *Cynops ensicauda popei*. Goris and Maeda, 2004, Guide Amph. Rept. Japan: 40-42, provided an account, map, and photograph. Raffaëlli, 2007, Les Urodèles du Monde: 125-126, provided brief accounts by subspecies, figures, and map. See photograph, map, description of geographic range and habitat, and conservation status in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 600.

***Echinotriton* Nussbaum and Brodie, 1982**

Species assigned to genus *Echinotriton*

Species: *Echinotriton andersoni* (Boulenger, 1892)

Species: *Echinotriton chinhaiensis* (Chang, 1932)

***Echinotriton andersoni* (Boulenger, 1892)**

Tylototriton Andersoni Boulenger, 1892, Ann. Mag. Nat. Hist., Ser. 6, 10: 304. Holotype: BMNH 1947.9.5.89 (formerly 1892.7.14.50), according to XXX; BMNH 1892.9.3.30, according to Brame, 1972, Checklist Living & Fossil Salamand. World (Unpubl. MS): 112. Type locality: "Okinawa, or Great Loo Choo Island" (= Okinawa), Ryukyu Is., Japan.

Echinotriton andersoni — Nussbaum and Brodie, 1982, Herpetologica, 38: 321. Fei, Ye, Huang, Jiang, and Xie, 2005, Illust. Key Chinese Amph.: 44.

Tylototriton (Echinotriton) andersoni — Zhao and Hu, 1984, Stud. Chinese Tailed Amph.: 16.

Pleurodeles (Tylototriton) andersoni — Risch, 1985, J. Bengal Nat. Hist. Soc., N.S., 4: 142.

Pleurodeles (Echinotriton) andersoni — Dubois, 1987 "1986", Alytes, 5: 11.

English Names

Anderson's Newt (Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 35).

Anderson's Crocodile Newt (Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 601).

Ryukyu Spiny Newt (Fei, 1999, Atlas Amph. China: 44).

Japanese Warty Newt (Goris and Maeda, 2004, Guide Amph. Rept. Japan: 44).

Distribution

Okinawa and Anami, Ryukyu Islands, Japan; old records from Mount Kuanyinshan, northern Taiwan, China.

Comment

Reviewed by Sato, 1943, Monogr. Tailed Batr. Japan: 349-355. See also comments by Zhao and Adler, 1993, Herpetol. China: 111. See brief account, figure, and map by Fei, 1999, Atlas Amph. China: 44. Thorn and Raffaëlli, 2000, Salamand. Ancien Monde: 231-234. Goris and Maeda, 2004, Guide Amph. Rept. Japan: 44-46, provided an account (as *Tylototriton andersoni*), map, and photograph. Fei, Hu, Ye, and Huang, 2006, Fauna Sinica, Amph. 1: 284-288, provided an account and range map for China. Raffaëlli, 2007, Les Urodèles du Monde: 148, provided a brief account, figure, and map. See photograph, map, description of geographic range and habitat, and conservation status in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 601. Fei, Ye, and Jiang, 2010, Colored Atlas of Chinese Amph.: 82-83, provided a brief account including

photographs of specimens and habitat. Honda, Matsui, Tominaga, Ota, and Tanaka, 2012, Mol. Phylogenet. Evol., 65: 642-653, reported on strong inter-island genetic differentiation and molecular phylogeography.

***Laotriton* Dubois and Raffaëlli, 2009**

Species assigned to genus *Laotriton*

Species: *Laotriton laoensis* (Stuart and Papenfuss, 2002)

***Laotriton laoensis* (Stuart and Papenfuss, 2002)**

Paramesotriton laoensis Stuart and Papenfuss, 2002, J. Herpetol., 36: 146. Holotype: FMNH 257856, by original designation. Type locality: "Laos (Lao PDR), Saysamboun Special Zone, in pool of Houay Sang Kat Stream (18° 52' 49 N 103° 06' 32 E; 1160 m elevation) at base of Phou Sang Kat mountain".

Laotriton laosensis — Dubois and Raffaëlli, 2009, Alytes, 26: 48.

English Names

None noted.

Distribution

Xaysamboun District of Vientiane Province, Phoukhout and Pek districts of Xiengkhouang Province, and Phoukhoun District of Louangphabang Province, Laos.

Comment

Raffaëlli, 2007, *Les Urodèles du Monde*: 134-135, provided a brief account, figure, and map. Phimmachak, Stuart, and Sivongxay, 2012, J. Herpetol., 46: 120-128, discussed the range, population size, natural history, and conservation status.

***Paramesotriton* Chang, 1935**

Species assigned to genus *Paramesotriton*

Species: *Paramesotriton caudopunctatus* (Liu and Hu, 1973)
Species: *Paramesotriton chinensis* (Gray, 1859)
Species: *Paramesotriton deloustali* (Bourret, 1934)
Species: *Paramesotriton fuzhongensis* Wen, 1989
Species: *Paramesotriton guanxiensis* (Huang, Tang, and Tang, 1983)
Species: *Paramesotriton hongkongensis* (Myers and Leviton, 1962)
Species: *Paramesotriton labiatus* (Unterstein, 1930)
Species: *Paramesotriton longliensis* Li, Tian, Gu, and Xiong, 2008
Species: *Paramesotriton maolanensis* Gu, Chen, Tian, Li, and Ran, 2012
Species: *Paramesotriton yunwuensis* Wu, Jiang, and Hanken, 2010
Species: *Paramesotriton zhiinensis* Li, Tian, and Gu, 2008

***Paramesotriton caudopunctatus* (Liu and Hu, 1973)**

Trituroides caudopunctatus Liu and Hu In Hu, Zhao, and Liu, 1973, *Acta Zool. Sinica*, 19: 160. Holotype: CIB 63II0303, by original designation. Type locality: "Fang-xiang, Lei-shan Hsien, Kweichow [= Guizhou], altitude 1158 m", China.

Paramesotriton caudopunctatus — Bischoff and Böhme, 1980, *Salamandra*, 16: 139.

Paramesotriton caudomaculatus Seidel, 1981, *Aquarium, Minder*, 15: 481. Syntypes: ZFMK; ZFMK 38536 designated lectotype by Böhme and Bischoff, 1984, *Bonn. Zool. Monogr.*, 19: 174. Type locality: Unknown. Synonymy by Böhme and Bischoff, 1984, *Bonn. Zool. Monogr.*, 19: 174.

Allomesotriton caudopunctatus — Freytag, 1983, *Zool. Abh. Staatl. Mus. Tierkd. Dresden*, 39: 47.

Paramesotriton (*Allomesotriton*) *caudopunctatus* — Pang, Jiang, and Hu, 1992, in Jiang (ed.), *Collect. Pap. Herpetol.*: 89. Dubois and Raffaëlli, 2009, *Alytes*, 26: 49.

English Names

Guizhou Warty Newt (Frank and Ramus, 1995, *Compl. Guide Scient. Common Names Amph. Rept. World*: 35).

Spot-tailed Warty Newt (Fei, 1999, *Atlas Amph. China*: 46).

Distribution

Southeastern Chongqing, southwestern Hunan, eastern Guizhou, and southern Guangxi (Fuchuan), China, 500-1800 m elevation.

Comment

Related to *Paramesotriton chinensis* (as *Trituroides chinensis*), according to the original publication. See accounts by Ye, Fei, and Hu, 1993, *Rare and Economic Amph. China* 87; Fei, 1999, *Atlas Amph. China*: 46; and Thorn and Raffaëlli, 2000, *Salamand. Ancien Monde*: 334-336. Zhang and Wen, 2000, *Amph. Guangxi*: 26, provided an account for population in Guangxi, China. The sole member of the *Paramesotriton caudopunctatus* group of Fei, Ye,

Huang, Jiang, and Xie, 2005, Illust. Key Chinese Amph.: 44 (although they only addressed Chinese species). Fei, Hu, Ye, and Huang, 2006, Fauna Sinica, Amph. 1: 295-301, provided an account for China. Raffaëlli, 2007, Les Urodèles du Monde: 133-134, provided a brief account, figure, and map. See statement of geographic range, habitat, and conservation status in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 642. Fei, Ye, and Jiang, 2010, Colored Atlas of Chinese Amph.: 84, provided a brief account including photographs of specimens and habitat.

***Paramesotriton chinensis* (Gray, 1859)**

- Cynops chinensis* Gray, 1859, Proc. Zool. Soc. London, 1859: 229. Syntypes: Not stated but BMNH 1947.9.6.14-15 (formerly 59.11.18.8-9) by museum records; BMNH 1947.9.6.15 designated lectotype by Myers and Leviton, 1962, Occas. Pap. Div. Syst. Biol. Stanford Univ., 10: 1. Type locality: "River N. E. Coast of China, inland from Ningpo", China.
- Triton chinensis* — Strauch, 1870, Mem. Acad. Imp. Sci. St. Petersbourg, Ser. 7, 16 (4): 51.
- Triton sinensis* — Sauvage, 1876, L'Institut, Paris, N.S., 4: 274. Incorrect subsequent spelling.
- Molge sinensis* — Boulenger, 1882, Cat. Batr. Grad. Batr. Apoda Coll. Brit. Mus., Ed. 2: 20.
- Diemictylus sinensis* — Stejneger, 1907, Bull. U.S. Natl. Mus., 58: 20.
- Triturus sinensis* — Dunn, 1918, Bull. Mus. Comp. Zool., 62: 448.
- Triton (Cynops) chinensis* — Wolterstorff, 1925, Abh. Ber. Mus. Nat. Heimatk. Magdeburg, 4: 292. Based on *Paramesotriton hongkongensis* according to XXX.
- Cynops chinensis* — Wolterstorff and Herre, 1935, Arch. Naturgesch., Leipzig, N. F., 4: 224.
- Trituroides chinensis* — Chang, 1935, Bull. Soc. Zool. France, 60: 425. Chang, 1936, Contr. Etude Morphol. Biol. Syst. Amph. Urodeles Chine: 106.
- Triturus sinensis boringi* Herre, 1939, Abh. Ber. Mus. Nat. Heimatk. Magdeburg, 7: 84-85. Holotype: MM; destroyed in W.W.II. Type locality: "Linhai" (= Taichow), Zhejiang Province, China.
- Triturus chinensis* — Pope and Boring, 1940, Peking Nat. Hist. Bull., 15: 23.
- Paramesotriton chinensis* — Freytag, 1962, Mitt. Zool. Mus. Berlin, 38: 451-459.
- Trituroides chinensis* — Sichuan Biological Research Institute, 1977, Syst. Key Chinese Amph.: 14.
- Paramesotriton chinensis chinensis* — Fei, Ye, and Huang, 1990, Key to Chinese Amph.: 61-62. Ye, Fei, and Hu, 1993, Rare and Economic Amph. China 90.
- Triturus sinensis boringae* — Michels and Bauer, 2004, Bonn. Zool. Beitr., 52: 84. Unjustified emendation according to Dubois, 2007, Zootaxa, 1550: 67.
- Paramesotriton (Paramesotriton) chinensis* — Dubois and Raffaëlli, 2009, Alytes, 26: 49, 65.

English Names

Chinese Warty Newt (*Paramesotriton chinensis*: Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 35; Fei, 1999, Atlas Amph. China: 48).

Chinese Newt (Ananjeva, Borkin, Darevsky, and Orlov, 1988, Dict. Amph. Rept. Five Languages: 32).

Distribution

Anhui, Zhejiang, Hunan, Fujian, and Guangdong, China.

Comment

See accounts by Karsen, Lau, and Bogadek, 1986, Hong Kong Amph. Rept.: 15; Ye, Fei, and Hu, 1993, Rare and Economic Amph. China 88; Fei, 1999, Atlas Amph. China: 48; and Thorn and Raffaëlli, 2000, Salamand. Ancien Monde: 324-325. Huang, 1990, Fauna Zhejiang, Amph. Rept.: 22-23, provided an account (as *Trituroides chinensis*) for Zhejiang. In the *Paramesotriton chinensis* group of Fei, Ye, Huang, Jiang, and Xie, 2005, Illust. Key Chinese Amph.: 45 (although they only addressed Chinese species). Raffaëlli, 2007, Les Urodèles du Monde: 130, provided a brief account, figure, and map. Wu, Rovito, Papenfuss, and Hanken, 2009, Zootaxa, 2060: 59-68, noted that the Guangxi population is now referred to *Paramesotriton ermiizhaoi*. Fei, Ye, and Jiang, 2010, Colored Atlas of Chinese Amph.: 86-87, provided a brief account including photographs of specimens and habitat.

Paramesotriton deloustali (Bourret, 1934)

Mesotriton deloustali Bourret, 1934, Annexe Bull. Gen. Instr. Publique, Hanoi, 1934: 84.

Syntypes: Not stated; LZUH 226, 228, 257, and 287 according to Brame, 1972, Checklist Living & Fossil Salamand. World (Unpubl. MS): 66; these now MNHNP 1935.119, and possibly MNHNP 1935.120, 1948.110-111 according to Thireau, 1986, Cat. Types Urodeles Mus. Natl. Hist. Nat., Rev. Crit.: 28-29; Guibé, 1950 "1948", Cat. Types Amph. Mus. Natl. Hist. Nat.: 9, reported MNHNP 1935.119 as a 'paratype'. Bour, Ohler, and Dubois, 2009, Alytes, 26: 153-166, discussed the tortured literature history and related errors and concluded that MNHNP 1935.119-120 and 1948.110 are unquestionably syntypes of which they designated 1935.119 as lectotype. Type locality: "Tam-Dao, à 900 m d'altitude", Tonkin, Vietnam; corrected to "the torrent of the hill station of Tam Dao (. . .), province of Vinh Phuc, Vietnam (at an altitude of approximately 900 meters . . .)".

Pachytriton deloustali — Chang, 1935, Bull. Mus. Natl. Hist. Nat. Paris, Ser. 2, 7: 95.

Paramesotriton deloustali — Chang, 1935, Bull. Soc. Zool. France, 60: 425.

Paramesotriton (Paramesotriton) deloustali — Dubois and Raffaëlli, 2009, Alytes, 26: 49, 65.

English Names

Vietnam Warty Newt (Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 35).

Tam Dao Newt (Ananjeva, Borkin, Darevsky, and Orlov, 1988, Dict. Amph. Rept. Five Languages: 33).

Vietnamese Salamander (Nguyen, Ho, and Nguyen, 2005, Checklist Amph. Rept. Vietnam: 9).

Tam Dao Salamander (Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 605).

Distribution

Montane regions of northern Vietnam in the provinces of Lao Cai, Ha Giang, Tuyen Quang, Bac Kan, Quang Ninh and Vinh Phuc, 600-1900 m elevations; expected in adjacent Yunnan, China.

Comment

See accounts by Bourret, 1942, Batr. Indochine: 148-150; and Thorn and Raffaëlli, 2000, Salamand. Ancien Monde: 331-334. Orlov, Murphy, Ananjeva, Ryabov, and Ho, 2002, Russ. J. Herpetol., 9: 100, commented on the range. Nguyen, Ho, and Nguyen, 2005, Checklist Amph. Rept. Vietnam: 147, provided a photograph. Raffaëlli, 2007, Les Urodèles du Monde: 132-133, provided a brief account, figure, and map. See photograph, map, description of geographic range and habitat, and conservation status in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 605. Nguyen, Nguyen, H, Lê, and Nguyen, 2009, Tp chí Công nghệ Sinh học, 7: 325-333, reported on the species in Vietnam.

Paramesotriton fuzhongensis Wen, 1989

Paramesotriton fuzhongensis Wen, 1989, Chinese Herpetol. Res., 2: 15. Holotype: GXMU 81-021, by original designation. Type locality: "Gupo Hill, Wanggao (24°35'N 111°25'E), Zhongshan Xian (county), Guangxi Autonomous Region, China, altitude 400 m".

Paramesotriton (Paramesotriton) fuzhongensis — Dubois and Raffaëlli, 2009, Alytes, 26: 49, 65.

English Names

Wanggao Warty Newt (Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 35).

Distribution

Northeastern Guangxi (Zhongshan, Fuchuan, and Gongchen counties), China, 400-1200 m elevation.

Comment

Similar to *Paramesotriton guangxiensis* according to the original publication. See accounts by Thorn and Raffaëlli, 2000, Salamand. Ancien Monde: 326-328, and Zhang and Wen, 2000, Amph. Guangxi: 29. Lu, Yuan, Pang, Yang, Yu, McGuire, Xie, and Zhang, 2004, Biochem. Genet., 42: 139-148, provided molecular data in support of the distinctiveness of this species. Raffaëlli, 2007, Les Urodèles du Monde: 131, provided a brief account, figure, and map. See photograph, map, description of geographic range and habitat, and conservation status in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 605. Gu, Wang, Chen, Tian, and Li, 2012, Zootaxa, 3150: 59-68, suggested that this species is closely related to *Paramesotriton guangxiensis*.

***Paramesotriton guangxiensis* (Huang, Tang, and Tang, 1983)**

Trituroides guangxiensis Huang, Tang, and Tang, 1983, Acta Herpetol. Sinica, Chengdu, N.S., 2 (2): 37. Holotype: FU 81501, by original designation. Type locality: "Paiyang shan, Mingjiang People's Commune, Ningming County, Guangxi Zhuang Autonomous Region, altitude 478 m", China.

Trituroides guanxiensis Huang, Tang, and Tang, 1983, Acta Herpetol. Sinica, Chengdu, N.S., 2 (2): 37. Incorrect original spelling in English abstract.

Paramesotriton guangxiensis — Zhao and Hu, 1984, Stud. Chinese Tailed Amph.: 10.

Paramesotriton guangxiensis — Zhang and Wen, 2000, Amph. Guangxi: 28.

Paramesotriton (Paramesotriton) guangxiensis — Dubois and Raffaëlli, 2009, Alytes, 26: 49, 65.

English Names

Guangxi Warty Newt (Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 35; Fei, 1999, Atlas Amph. China: 50).

Guangxi Salamander (Nguyen, Ho, and Nguyen, 2005, Checklist Amph. Rept. Vietnam: 9).

Distribution

Type locality (Paiyangshan, Guangxi, China), ca. 470 m elevation; northeastern part of Cao Bang Province, Vietnam.

Comment

Related to *Paramesotriton chinensis* (as *Trituroides chinensis*) according to the original publication. See comment under *Paramesotriton fuzhonensis*. See accounts by Ye, Fei, and Hu, 1993, Rare and Economic Amph. China 91, Fei, 1999, Atlas Amph. China: 50; and Thorn and Raffaëlli, 2000, Salamand. Ancien Monde: 328-329. Zhang and Wen, 2000, Amph. Guangxi: 28, provided an account (as *Paramesotriton guangxiensis*). Orlov, Murphy, Ananjeva, Ryabov, and Ho, 2002, Russ. J. Herpetol., 9: 101, provided the Vietnam component of the range statement but did not cite voucher specimens. Nguyen, Ho, and Nguyen, 2005, Checklist Amph. Rept. Vietnam: 9, noted the Vietnamese locality as Nguyen Binh, Cao Bang. In the *Paramesotriton chinensis* group of Fei, Ye, Huang, Jiang, and Xie, 2005, Illust. Key Chinese Amph.: 45 (although they only addressed Chinese species). Fei, Hu, Ye, and Huang, 2006, Fauna Sinica, Amph. 1: 310-313, provided an account and range map. Raffaëlli, 2007, Les Urodèles du Monde: 131-132, provided a brief account, figure, and map. See photograph, map, description of geographic range and habitat, and conservation status in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 605. Nguyen, Nguyen, Hồ, Lê, and Nguyen, 2009, Tạp chí Công nghệ Sinh học, 7: 325-333, discussed the species in Vietnam. Fei, Ye, and Jiang, 2010, Colored Atlas of Chinese Amph.: 88, provided a brief account including photographs. Fei, Ye, and Jiang, 2012,

Colored Atlas Chinese Amph. Distr.: 110, provided an account, photographs, and map for China.

***Paramesotriton hongkongensis* (Myers and Leviton, 1962)**

Trituroides hongkongensis Myers and Leviton, 1962, Occas. Pap. Div. Syst. Biol. Stanford Univ., 10: 1. Holotype: CAS-SU 6378, by original designation. Type locality: "a mountain stream, on the Peak, Hong Kong Island", China.

Paramesotriton hongkongensis — Freytag, 1962, Mitt. Zool. Mus. Berlin, 38: 451-459. Fei, Ye, Huang, Jiang, and Xie, 2005, Illust. Key Chinese Amph.: 45.

Paramesotriton chinensis hongkongensis — Fei, Ye, and Huang, 1990, Key to Chinese Amph.: 61-62. Ye, Fei, and Hu, 1993, Rare and Economic Amph. China 90.

Paramesotriton (Paramesotriton) hongkongensis — Dubois and Raffaëlli, 2009, Alytes, 26: 49, 65.

English Names

Hong Kong Warty Newt (Karsen, Lau, and Bogadek, 1986, Hong Kong Amph. Rept.: 15; Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 35; Fei, 1999, Atlas Amph. China: 48).

Hong Kong Newt (Ananjeva, Borkin, Darevsky, and Orlov, 1988, Dict. Amph. Rept. Five Languages: 33; Thorn and Raffaëlli, 2000, Salamand. Ancien Monde: 329).

Distribution

Coastal Guangdong, including Hongkong, ca. 90-940 m elevation.

Comment

Removed from the synonymy of *Paramesotriton chensis* by Fei, Ye, Huang, Jiang, and Xie, 2005, Illust. Key Chinese Amph.: 45, where it had been placed by Ye, Fei, and Hu, 1993, Rare and Economic Amph. China 90. See account by Thorn and Raffaëlli, 2000, Salamand. Ancien Monde: 329-331. Fei, Hu, Ye, and Huang, 2006, Fauna Sinica, Amph. 1: 306-310, provided an account and range map. Raffaëlli, 2007, Les Urodèles du Monde: 132, provided a brief account, figure, and map. See statement of geographic range, habitat, and conservation status (for nominal *Paramesotriton hongkongensis*) in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 642. Fei, Ye, and Jiang, 2010, Colored Atlas of Chinese Amph.: 85, provided a brief account.

***Paramesotriton labiatus* (Unterstein, 1930)**

Molge labiatum Unterstein, 1930, Sitzungsber. Ges. Naturforsch. Freunde Berlin, 1930: 313. Syntypes: ZMB (4 specimens); ZMB 34087 considered holotype by Bauer, Good, and

- Günther, 1993, *Mitt. Zool. Mus. Berlin*, 69: 296. Type locality: "Kwangsi" (= Guangxi), China. Fan, 1931, *Bull. Dept. Biol. Coll. Sci. Sun Yatsen Univ.*, 11: 2, describing the expedition from whence the types came noted that "The main place from where the great majority of our specimens were secured, was a village named Loshiang () It is surrounded by lofty peaks no less than 3,000 ft. Streams run here and there through the jungles of a typical subtropical character" So, most likely the types came from Loshiang or its vicinity. Bauer, Good, and Günther, 1993, *Mitt. Zool. Mus. Berlin*, 69: 296, noted that data with the holotype were "Yao Shan [= Mt. Yao], Kwangsi Prov. [= Guangxi Zhuang Autonomous Region], China".
- Pachytriton brevipes labiatus* — Hu, Zhao, and Liu, 1973, *Acta Zool. Sinica*, 19: 149-178. Presumably based on specimens of *Pachytriton inexpectatus*.
- Pachytriton labiatus* — Zhao and Hu, 1984, *Stud. Chinese Tailed Amph.*: 10. Presumably based on specimens of *Pachytriton inexpectatus*.
- Pachytriton labiatus* — Zhao, Hu, Jiang, and Yang, 1988, *Studies on Chinese Salamanders*: 16-18. Fei, Ye, Huang, Jiang, and Xie, 2005, *Illust. Key Chinese Amph.*: 46. Presumably based on specimens of *Pachytriton inexpectatus*.
- Paramesotriton ermizhaoi* Wu, Rovito, Papenfuss, and Hanken, 2009, *Zootaxa*, 2060: 64. Holotype: CIB 88141, by original designation. Type locality: "Mt. Dayao (24°07'N, 110°13'E, 881m elevation), Jinxiu Yao Autonomous County, Guangxi Zhuang Autonomous Region, P. R. China". Synonymy by Nishikawa, Jiang, Matsui, and Mo, 2011, *Zool. Sci., Tokyo*, 28: 458.
- Paramesotriton labiatus* — Nishikawa, Jiang, Matsui, and Mo, 2011, *Zool. Sci., Tokyo*, 28: 457.

English Names

Unterstein's Newt (Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 35).

Distribution

Known from Mount Dayao, Jinxiu Yao Autonomous County, Guangxi Zhuang Autonomous Region, China.

Comment

Confused with *Paramesotriton chinensis* previous to its recognition according to the original publication. Zhang and Wen, 2000, *Amph. Guangxi*: 27, provided an account for this species (as *Paramesotriton chinensis*) in Guangxi, China. Nishikawa, Jiang, Matsui, and Mo, 2011, *Zool. Sci., Tokyo*, 28: 453-461, discovered a confusing situation where most of what had been referred to as the northeastern population of *Pachytriton labiatus* should have the name *Pachytriton granulosus* applied; the southwestern population of former *Pachytriton labiatus* was a distinct species, which they name *Pachytriton inexpectatus*, and the types of nominal *Pachytriton labiatus* were conspecific with what had been named *Paramesotriton ermizhaoi* and not with the populations that had had the name *Pachytriton labiatus* applied for so long. All literature prior to 2011 should be used with great caution because of this.

***Paramesotriton longliensis* Li, Tian, Gu, and Xiong, 2008**

Paramesotriton longliensis Li, Tian, Gu, and Xiong, 2008, Zool. Res., Kunming, 29: 313.

Holotype: LTHC 0705015, by original designation. Type locality: Shuichang village, Longli County, Guizhou Province, 26°26′57.4N, 107°00′0.1E, China, 1142 m elevation.

Paramesotriton (Paramesotriton) longliensis — Dubois and Raffaëlli, 2009, Alytes, 26: 49, 65.

Paramesotriton (Allomesotriton) longliensis — Gu, Wang, Chen, Tian, and Li, 2012, Zootaxa, 3150: 59.

English Names

None noted.

Distribution

Known from the type locality (Shuichang village, Longli County, Guizhou, China, 1142 m elevation) and from Shizilu village, Xianfeng county, Hubei, China.

Comment

Fei, Hu, Ye, and Huang, 2009, Fauna Sinica, Amph. 3: 1620-1625, provided an account, figures, and range map. Wu, Jiang, and Hanken, 2010, Zootaxa, 2494: 55-56, reported a population from near Shizilu village, Xianfeng county, Hubei, China. Fei, Ye, and Jiang, 2010, Colored Atlas of Chinese Amph.: 89, provided a brief account including photographs. Gu, Wang, Chen, Tian, and Li, 2012, Zootaxa, 3150: 59-68, transferred this species to *Allomesotriton*

***Paramesotriton maolanensis* Gu, Chen, Tian, Li, and Ran, 2012**

Paramesotriton (Allomesotriton) maolanensis Gu, Chen, Tian, Li, and Ran, 2012, Zootaxa, 3510: 41. Holotype: GZNU 2006030001, by original designation. Type locality: "Wengang, 25° 40' N 107° 53' E, 817m a.s.l., Libo County, Guizhou Province, P. R. China".

English Names

None noted.

Distribution

Known currently only from the Maolan National Nature Reserve in Libo County in southern Guizhou, China.

Comment

Suggested to be the sister taxon of *Paramesotriton longliensis*

***Paramesotriton yunwuensis* Wu, Jiang, and Hanken, 2010**

Paramesotriton yunwuensis Wu, Jiang, and Hanken, 2010, Zootaxa, 2494: 51. Holotype: CIB 97854, by original designation. Type locality: "pool along a montane stream (22° 37' N, 111° 10' E; 525 m elevation) near Nanchong village, Fuhe, Luoding city, Guangdong province, P. R. China".

English Names

None noted.

Distribution

Montane streams of Yunwe Mountains, Guangdong Province, China.

***Paramesotriton zhijinensis* Li, Tian, and Gu, 2008**

Paramesotriton zhijinensis Li, Tian, and Gu, 2008, Acta Zootaxon. Sinica, 33: 410. Holotype: LTHC0705123, by original designation. Type locality: "Shuangyantang, Zhijin County, Guizhou Province (26° 39' N, 105° 45' E) with an elevation of 1310 m". (April publication data—DRF.)

Paramesotriton zhijinensis Zhao, Che, Zhou, Chen, Zhao, and Zhang, 2008, Zootaxa, 1775: 56. Holotype: BJC 20070129001, by original designation. Type locality: "Shuangyan Pond (26°40' N 105°46' E), 1310 m, Zhijin County, Guizhou Province, P. R. China". (May publication date—DRF.)

Paramesotriton (Paramesotriton) zhijinensis — Dubois and Raffaëlli, 2009, Alytes, 26: 49, 65.

Paramesotriton (Allomesotriton) zhijinensis — Gu, Wang, Chen, Tian, and Li, 2012, Zootaxa, 3150: 59.

English Names

None noted.

Distribution

Known only from the type locality (Shuangyan Pond, 1310 m elevation, Zhijin County, Guizhou Province, China).

Comment

There is ambiguity as to what the publication with priority is. The stated publication data of the Zhao et al paper is May and that of the Li et al. paper is April, but what the *actual* date of distribution to libraries of record is is unknown (DRF). Fei, Hu, Ye, and Huang, 2009, Fauna Sinica, Amph. 3: 1616-1620, provided an account , figures, and range map. Fei, Ye, and Jiang, 2010, Colored Atlas of Chinese Amph.: 90, provided a brief account including photographs. Gu, Wang, Chen, Tian, and Li, 2012, Zootaxa, 3150: 59-68, transferred this species to *Allomesotriton*, the former *Paramesotriton caudopunctatus* group.

***Salamandra* Garsault, 1764**

Species assigned to genus *Salamandra*

Species: *Salamandra algira* Bedriaga, 1883

Species: *Salamandra atra* Laurenti, 1768

Species: *Salamandra corsica* Savi, 1838

Species: *Salamandra infraimmaculata* (Martens, 1885)

Species: *Salamandra lanzai* Nascetti, Andreone, Capula, and Bullini, 1988

Species: *Salamandra longirostris* Joger and Steinfartz, 1994

Species: *Salamandra salamandra* (Linnaeus, 1758)

***Salamandra algira* Bedriaga, 1883**

Salamandra maculosa var. *algira* Bedriaga, 1883, Arch. Naturgesch., 49: 252. Type(s): Not stated or known to exist; NHMW 9251 designated neotype by Eiselt, 1958, Abh. Ber. Naturkd. Magdeburg, 10: 133. Type locality: "Mont Edough bei Bône", Algeria; neotype from "Mt. Edough bei Bône, Algerien".

Salamandra salamandra algira — Nikolskii, 1918, Fauna Rossii, Zemnovodnye: 187.

Salamandra algira — Veith, 1996, Amphibia-Reptilia, 17: 174-177.

Salamandra algira algira — Donaire-Barroso and Bogaerts, 2003, Podarcis, 4: 88. by implication.

Salamandra algira tingitana Donaire-Barroso and Bogaerts, 2003, Podarcis, 4: 88. Holotype: MNCN 41037, by original designation. Type locality: "500 m altitude on Jabal Muse (= Jabal Mousa) north Morocco".

Salamandra algira spelaea Escoriza and Comas, 2007, Salamandra, 43: 80. Holotype: MNCN 2005-05550, by original designation. Type locality: "Ouartass, Beni Snassen massif, Northeast-Morocco (Locality 5, at approximately 1300 m above sea level)".

Salamandra (Algiandra) algira algira — Dubois and Raffaëlli, 2009, Alytes, 26: 68.

Salamandra (Algiandra) algira spelaea — Dubois and Raffaëlli, 2009, Alytes, 26: 68.

Salamandra (Algiandra) tingitana — Dubois and Raffaëlli, 2009, Alytes, 26: 68.

English Names

North African Fire Salamander (Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 606).

Distribution

Isolated populations in Northwest Africa in northern Morocco (including Ceuta, Spain), northern Algeria, and northern Tunisia (see comment).

Comment

See accounts by Salvador, 1996, Smithson. Herpetol. Inform. Serv., 109: 7, and Thorn and Raffaëlli, 2000, Salamand. Ancien Monde: 176-178 (who did not include Tunisia in the

range). Donaire-Barroso and Bogaerts, 2003, Podarcis, 4: 84-100, discussed the systematics of this species. Raffaëlli, 2007, Les Urodèles du Monde: 159, provided brief accounts, figures, and map. See photograph, map, description of geographic range and habitat, and conservation status in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 606, who regarded the Tunisian record as suspect. Dubois and Raffaëlli, 2009, Alytes, 26: 35, based their taxonomic decision to recognize *Salamandra tingitana* as a distinct species on evidence provided by Steinfartz, Veith, and Tautz, 2000, Mol. Ecol., 9: 397-410, and Escoriza and Comas, 2007, Salamandra, 43: 77-90. Beukema, de Pous, Donaire-Barroso, Escoriza, Bogaerts, Toxopeus, de Bie, Roca, and Carranza, 2010, Biol. J. Linn. Soc., 101: 626-641, suggested that *Salamandra algira spelaea* is the sister taxon of *Salamandra algira algira* + *Salamandra algira tingitana*. These authors rejected the recognition of *Salamandra tingitana* as a distinct species although noting that the allopatric populations are ecologically distinctive and diagnosable. I (DRF) have followed the state of the literature, but note that showing that *Salamandra algira spelaea*, *Salamandra algira tingitana*, and *Salamandra algira algira* populations are allopatric, ecologically and morphologically distinctive, and substantially differentiated at a molecular level, they have presented evidence that all three populations could be considered species under a lineage species concept. For an example see *Aneides iecanus* (Plethodontidae).

***Tylototriton* Anderson, 1871**

Species assigned to genus *Tylototriton*

Species: *Tylototriton asperrimus* Unterstein, 1930

Species: *Tylototriton broadoridgus* Shen, Jiang, and Mo, 2012

Species: *Tylototriton dabienicus* Chen, Wang, and Tao, 2010

Species: *Tylototriton hainanensis* Fei, Ye, and Yang, 1984

Species: *Tylototriton kweichowensis* Fang and Chang, 1932

Species: *Tylototriton lizhengchangi* Hou, Zhang, Jiang, Li and Lu, 2012

Species: *Tylototriton notialis* Stuart, Phimmachak, Sivongxay, and Robichaud, 2010

Species: *Tylototriton pseudoverrucosus* Hou, Gu, Zhang, Zeng, and Lu, 2012

Species: *Tylototriton taliangensis* Liu, 1950

Species: *Tylototriton verrucosus* Anderson, 1871

Species: *Tylototriton vietnamensis* Böhme, Schöttler, Nguyen, and Köhler, 2005

Species: *Tylototriton wenxianensis* Fei, Ye, and Yang, 1984

***Tylototriton asperrimus* Unterstein, 1930**

Tylototriton asperrimus Unterstein, 1930, Sitzungsber. Ges. Naturforsch. Freunde Berlin, 1930: 314. Syntypes: ZMB (2 specimens); ZMB 34089 considered holotype (lectotype designation by implication) by Bauer, Good, and Günther, 1993, Mitt. Zool. Mus. Berlin, 69: 298. Type locality: "Kwangsi"; corrected to "Yao Shan [= Mt. Yao], Kwangsi Prov. [= Guangxi Zhuang Autonomous Region], China" by Bauer, Good, and Günther, 1993, Mitt. Zool. Mus. Berlin, 69: 298. Fan, 1931, Bull. Dept. Biol. Coll. Sci. Sun Yatsen Univ., 11: 1-154, provided evidence that the type locality is or near to the town of Loshiang.

Tylototriton (Echinotriton) asperrimus — Zhao and Hu, 1984, Stud. Chinese Tailed Amph.: 19.

Tylototriton asperrimus asperrimus — Fei, Ye, and Yang, 1984, Acta Zool. Sinica, 30: 89.

Pleurodeles (Tylototriton) asperrimus asperrimus — Risch, 1985, J. Bengal Nat. Hist. Soc., N.S., 4: 142.

Pleurodeles (Echinotriton) asperrimus — Dubois, 1987 "1986", Alytes, 5: 11.

Echinotriton asperrimus — Zhao, 1990, in Zhao (ed.), From Water onto Land: 219. Nguyen, Ho, and Nguyen, 2005, Checklist Amph. Rept. Vietnam: 9.

Echinotriton asperrimus asperrimus — Zhao and Adler, 1993, Herpetol. China: 112.

Tylototriton asperrimus — Nussbaum, Brodie, and Yang, 1995, Herpetologica, 51: 265.

Tylototriton (Yaotriton) asperrimus — Dubois and Raffaëlli, 2009, Alytes, 26: 68.

English Names

Mount Yao Newt (Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 35).

Black Knobby Newt (Fei, 1999, Atlas Amph. China: 40).

Granular Newt (Nguyen, Ho, and Nguyen, 2005, Checklist Amph. Rept. Vietnam: 9).

Distribution

Manson Mountains of Anhui, Guangxi, Guangdong, Gansu, Hunan, Sichuan, and Hubei, China; Mau Son and Lang Son areas of Ha Giang and Laco Cai provinces in northern Vietnam, 400-1700 m elevation.

Comment

See accounts by Bourret, 1942, *Batr. Indochine*: 146-148; Fang and Chang, 1932, *Sinensia, Nanking*, 2: 117-121; Ye, Fei, and Hu, 1993, *Rare and Economic Amph. China* 72; and Fei, 1999, *Atlas Amph. China*: 40. See also Liu, Hu, Fei, and Huang, 1973, *Acta Zool. Sinica*, 19: 394. Deng and Yu, 1984, *Acta Herpetol. Sinica, Chengdu, N.S.*, 3 (2): 75-77, recognize a subspecies in Sichuan. Nussbaum, Brodie, and Yang, 1995, *Herpetologica*, 51: 265, discussed reasons for transferring this species from *Echinotriton* to *Tylototriton*. Thorn and Raffaëlli, 2000, *Salamand. Ancien Monde*: 236-238, provided an account (as *Echinotriton asperrimus asperrimus*). Zhang and Wen, 2000, *Amph. Guangxi*: 21, provided an account for population in Guangxi, China. Bain and Nguyen, 2004, *Am. Mus. Novit.*, 3453: 9, provided the record for Ha Giang Province, Vietnam. Nguyen, Ho, and Nguyen, 2005, *Checklist Amph. Rept. Vietnam*: 9, provided specific records for Vietnam and (p. 147) provided a photograph. In the *Tylototriton asperrimus* group of Fei, Ye, Huang, Jiang, and Xie, 2005, *Illust. Key Chinese Amph.*: 42 (although they only addressed Chinese species). Böhme, Schöttler, Nguyen, and Köhler, 2005, *Salamandra*, 41:218-219, discussed previous confusion in Vietnam of *Tylototriton asperrimus* and *Tylototriton vietnamensis* and noted that the record for Tam Dao, northern Vietnam, may actually be referable to *Tylototriton hainanensis*. Fei, Hu, Ye, and Huang, 2006, *Fauna Sinica, Amph.* 1: 257-261, provided an account. Raffaëlli, 2007, *Les Urodèles du Monde*: 147-148, provided a brief account, figure, and map. See statement of geographic range, habitat, and conservation status in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, *Threatened Amph. World*: 643. Nguyen, Nguyen, H, Lê, and Nguyen, 2009, *Tp chí Công nghệ Sinh học*, 7: 325-333, discussed the species in Vietnam. Fei, Ye, and Jiang, 2010, *Colored Atlas of Chinese Amph.*: 72-73, provided a brief account including photographs of specimens and habitat.

Tylototriton broadoridgus Shen, Jiang, and Mo, 2012

Tylototriton broadoridgus Shen, Jiang, and Mo, 2012, *Asian Herpetol. Res.*, Ser. 2, 3: 26.

Holotype: HNUL 840513527, by original designation. Type locality: "Liaoyewan in the Tianping Mountains (29° 49' N, 110° 9' E) in Sangzhi County, Hunan", China.

English Names

None noted.

Distribution

Known only from the type locality (Liaoyewan, Tianping Mountains, Sangzhi County, Hunan, China).

Comment

In the *Tylototriton asperrimus* group, similar to *Tylototriton wenxianensis*, according to the original publication.

***Tylototriton dabienicus* Chen, Wang, and Tao, 2010**

Tylototriton wenxianensis dabienicus Chen, Wang, and Tao, 2010, Acta Zootaxon. Sinica, 35: 666. Holotype: HNNU 0908, by original designation. Type locality: "Huangbaishan National Forest Park of Henan Province, China (31° 24'N, 115° 20'E; alt. 698 m)".
Tylototriton dabienicus — Shen, Jiang, and Mo, 2012, Asian Herpetol. Res., Ser. 2, 3: 26.

English Names

None noted.

Distribution

Known only from the type locality (Huangbaishan National Forest Park of Henan Province, China, 698 m elevation).

Comment

In the *Tylototriton asperrimus* group and the sister taxon of *Tylototriton wenxianensis* according to Shen, Jiang, and Mo, 2012, Asian Herpetol. Res., Ser. 2, 3: 26.

***Tylototriton hainanensis* Fei, Ye, and Yang, 1984**

Tylototriton hainanensis Fei, Ye, and Yang, 1984, Acta Zool. Sinica, 30: 85-89. Holotype: CIB 64III1379, by original designation. Type locality: "Nalong, Wuzhi Shan, alt. 770 m", Hainan, China.
Pleurodeles (Tylototriton) hainanensis — Risch, 1985, J. Bengal Nat. Hist. Soc., N.S., 4: 142.
Pleurodeles (Echinotriton) hainanensis — Dubois, 1987 "1986", Alytes, 5: 11.
Tylototriton (Yaotriton) hainanensis — Dubois and Raffaëlli, 2009, Alytes, 26: 68.

English Names

Hainan Knobby Newt (Fei, 1999, Atlas Amph. China: 40).

Distribution

Wuzhishan, Diaoluoshan, and Jianfengling, Hainan Island, China, 770-950 m elevation.

Comment

See accounts by Ye, Fei, and Hu, 1993, Rare and Economic Amph. China 74, and Fei, 1999, Atlas Amph. China: 40. Synonymy with *Tylototriton asperrimus* by Zhao, Hu, Jiang, and Yang, 1988, Studies on Chinese Salamanders: 63; this rejected by Ye, Fei, and Hu, 1993, Rare and Economic Amph. China 74. In the *Tylototriton asperrimus* group of Fei, Ye, Huang, Jiang, and Xie, 2005, Illust. Key Chinese Amph.: 42 (although they only addressed Chinese species). See comment under *Tylototriton asperrimus*. Fei, Hu, Ye, and Huang, 2006, Fauna Sinica, Amph. 1: 261-265, provided an account. Raffaëlli, 2007, Les Urodèles du Monde: 148, provided a brief account and map. See photograph, map, description of geographic range and habitat, and conservation status in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 607. Fei, Ye, and Jiang, 2010, Colored Atlas of Chinese Amph.: 76, provided a brief account including photographs. Shi, 2011, Amph. Rept. Fauna Hainan: 36-38, provided an account.

***Tylototriton kweichowensis* Fang and Chang, 1932**

Tylototriton kweichowensis Fang and Chang, 1932, Sinensia, Nanking, 2: 112. Holotype: CIB 4664, by original designation. Type locality: "Kung-chi-shan, Dah-ting-hsien [Dading County,] Western Kweichow [Guizhou, China] . . . ; altitude about 2000 meters".

Tylototriton (Tylototriton) kweichowensis — Zhao and Hu, 1984, Stud. Chinese Tailed Amph.: 19. Dubois and Raffaëlli, 2009, Alytes, 26: 67.

Pleurodeles (Tylototriton) kweichowensis — Risch, 1985, J. Bengal Nat. Hist. Soc., N.S., 4: 141. Dubois, 1987 "1986", Alytes, 5: 11.

English Names

Kweichow Crocodile Newt (Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 36).

Red-tailed Knobby Newt (Fei, 1999, Atlas Amph. China: 42).

Distribution

Western Guizhou and northeastern Yunnan, China, 1500-2400 m elevation.

Comment

See account by Liu, 1950, Fieldiana, Zool. Mem., 2: 102-106; Yang, 1991, Amph. Fauna of Yunnan: 31-33, Ye, Fei, and Hu, 1993, Rare and Economic Amph. China 76; Fei, 1999, Atlas Amph. China: 42; and (as *Echinotriton asperrimus asperrimus*). Thorn and Raffaëlli, 2000, Salamand. Ancien Monde: 238-238. In the *Tylototriton verrucosus* group of Fei, Ye, Huang, Jiang, and Xie, 2005, Illust. Key Chinese Amph.: 42 (although they only addressed Chinese species). Fei, Hu, Ye, and Huang, 2006, Fauna Sinica, Amph. 1: 268-272. Raffaëlli, 2007, Les Urodèles du Monde: 146-147, provided a brief account, figure, and map. Yang, 2008, in Yang and Rao (ed.), Amph. Rept. Yunnan: 17-18, provided a brief account for Yunnan, China. See photograph, map, description of geographic range and habitat, and conservation status in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 607. Fei, Ye, and Jiang, 2010, Colored Atlas of Chinese Amph.: 78-79, provided a brief account including photographs of specimens and habitat.

Tylototriton lizhengchangi Hou, Zhang, Jiang, Li and Lu, 2012

Tylototriton (Yaotriton) lizhengchangi Hou, Zhang, Jiang, Li and Lu In Hou, Li, and Lu, 2012, J. Huangshan Univ., 14: 62. Holotype: SYNY HM20090501-NT001, by original designation.. Type locality: China, Hunan, Mangshan National Nature Reserve.

English Names

Mangshan Crocodile Newt (original publication).

Distribution

Known only from the type locality (Mangshan National Nature Reserve, Hunan, China).

***Tylototriton notialis* Stuart, Phimmachak, Sivongxay, and Robichaud, 2010**

Tylototriton (Yaotriton) notialis Stuart, Phimmachak, Sivongxay, and Robichaud, 2010, Zootaxa, 2650: 23. Holotype: FMNH 271121, by original designation. Type locality: "Laos, Khammouan Province, Boualapha District, Nakai-Nam Theun National Protected Area, Nam On River catchment, Phou Ak escarpment, 17° 38' 39.6" N 105° 44' 12.3" E (Fig. 4), 980 m elev."

English Names

None noted.

Distribution

Known only from the type locality (Laos, Khammouan Province, Boualapha District, Nakai-Nam Theun National Protected Area) although expected in adjacent Vietnam.

Comment

In the *Tylototriton asperrimus* group according to the original publication. Yuan, Jiang, Lü, Yang, Nguyen, Nguyen, Jin, and Che, 2011, Zool. Res., Kunming, 32: 57758, suggested that *Tylototriton notialis* is a junior synonym of *Tylototriton asperrimus*, but this conclusion was based on fewer data than the original recognition of the species.

***Tylototriton pseudoverrucosus* Hou, Gu, Zhang, Zeng, and Lu, 2012**

Tylototriton (Tylototriton) pseudoverrucosus Hou, Gu, Zhang, Zeng, and Lu *In* Hou, Li, and Lu, 2012, J. Huangshan Univ., 14: 63. Holotype: SYNY HM20110901-NT001, by original designation.. Type locality: Ningnan County, Sichuan, China.

English Names

Southern Sichuan Crocodile Newt (original publication).

Distribution

Da Liang Shan (mountains), southern Sichuan, China.

***Tylototriton taliangensis* Liu, 1950**

Tylototriton taliangensis Liu, 1950, Fieldiana, Zool. Mem., 2: 106. Holotype: FMNH 49388, by original designation. Type locality: "Pusakang, Fulinhsien, Sikang [now Sichuan], 8700 feet altitude", China.

Tylototriton (Tylototriton) taliangensis — Zhao and Hu, 1984, Stud. Chinese Tailed Amph.: 9. Zhao and Yang, 1997, Amph. Rept. Hengduan Mountains Region: 33.

Pleurodeles (Tylototriton) taliangensis — Risch, 1985, J. Bengal Nat. Hist. Soc., N.S., 4: 141. Dubois, 1987 "1986", Alytes, 5: 11.

Tylototriton (Tylototriton) taliangensis — Dubois and Raffaëlli, 2009, Alytes, 26: 68.

English Names

Pusakang Crocodile Newt (Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 36).

Taliang Knobby Newt (Fei, 1999, Atlas Amph. China: 42).

Distribution

Southwestern Sichuan, China, 1300-2700 m elevation.

Comment

See accounts by Ye, Fei, and Hu, 1993, Rare and Economic Amph. China 78; Fei, 1999, Atlas Amph. China: 42; and Thorn and Raffaëlli, 2000, Salamand. Ancien Monde: 229-231. Fei and Ye, 2001, Color Handbook Amph. Sichuan: 95, provided a brief account and illustration. See also brief account by Zhao and Yang, 1997, Amph. Rept. Hengduan Mountains Region: 33-34. In the *Tylototriton verrucosus* group of Fei, Ye, Huang, Jiang, and Xie, 2005, Illust. Key Chinese Amph.: 42 (although they only addressed Chinese species). Fei, Hu, Ye, and Huang, 2006, Fauna Sinica, Amph. 1: 277-280, provided an account and range map. Raffaëlli, 2007, Les Urodèles du Monde: 147, provided a brief account, figure, and map. See statement of

geographic range, habitat, and conservation status in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 642. Fei, Ye, and Jiang, 2010, Colored Atlas of Chinese Amph.: 80, provided a brief account including photographs of specimens and habitat.

***Tylototriton verrucosus* Anderson, 1871**

Tylototriton verrucosus Anderson, 1871, Proc. Zool. Soc. London, 1871: 423. Types: Not designated although syntypes evident. Slater, 1892, List Batr. Indian Mus.: 36, considered ZSIC 10397, 11396, 10366-81 to be syntypes, as is BMNH 1874.6.1.3 (according to Fei, Hu, Ye, and Huang, 2006, Fauna Sinica, Amph. 1: 280); see discussion by Nussbaum, Brodie, and Yang, 1995, Herpetologica, 51: 264, who designated as neotype KIZ 74II0061 VI.6. Type locality: "Nantin, Momien, and Hotha valleys, Western Yunan [sic], China." Neotype from "Gongwa, 1600 m elevation, Longchuan County, Yunnan Province, People's Republic of China".

Triturus (Tylototriton) verrucosus — Boulenger, 1878, Bull. Soc. Zool. France, 3: 308.

Tylotriton verrucosus — Boettger, 1885, Ber. Offenbach. Ver. Naturkd., 24-25: 165. Bourret, 1927, Fauna Indochine, Vert., 3: 255. Spelling error.

Glossolega verrucosa — Cope, 1889, Bull. U.S. Natl. Mus., 34: 201. Incorrect subsequent spelling of generic name.

Tylototriton verrucosus — Dunn, 1918, Bull. Mus. Comp. Zool., 62: 450. Wolterstorff and Herre, 1935, Arch. Naturgesch., Leipzig, N. F., 4: 224.

Tylototriton (Tylototriton) verrucosus — Zhao and Hu, 1984, Stud. Chinese Tailed Amph.: 9.

Pleurodeles (Tylototriton) verrucosus — Risch, 1985, J. Bengal Nat. Hist. Soc., N.S., 4: 141. Dubois, 1987 "1986", Alytes, 5: 11.

Tylototriton shanjing Nussbaum, Brodie, and Yang, 1995, Herpetologica, 51: 265. Holotype: KIZ II 0731 V.27, by original designation. Type locality: "Dingpa, 2150 m elevation, Jingdong County, Yunnan Province, People's Republic of China". Synonymy by Zhang, Rao, Yu, and Yang, 2007, Zool. Res., Kunming, 28: 430-436; this synonymy disputed by Stuart, Phimmachak, Sivongxay, and Robichaud, 2010, Zootaxa, 2650: 28.

Tylototriton verrucosus verrucosus — Yang, 2008, in Yang and Rao (ed.), Amph. Rept. Yunnan: 19.

Tylototriton verrucosus shanjing — Yang, 2008, in Yang and Rao (ed.), Amph. Rept. Yunnan: 19.

Tylototriton (Tylototriton) shanjing — Dubois and Raffaëlli, 2009, Alytes, 26: 68.

Tylototriton (Tylototriton) verrucosus — Dubois and Raffaëlli, 2009, Alytes, 26: 68.

Tylototriton (Tylototriton) verrucosus verrucosus — Hou, Li, and Lu, 2012, J. Huangshan Univ., 14: 63.

Tylototriton (Tylototriton) verrucosus pulcherrima — Hou, Zhang, Li, and Lu In Hou, Li, and Lu, 2012, J. Huangshan Univ., 14: 63. Holotype: SYNU HM2012501-NT001, by original designation. Type locality: Lvchun County, Yunnan, China.

English Names

Crocodile Newt (Frank and Ramus, 1995, Compl. Guide Scient. Common Names Amph. Rept. World: 36; Chan-ard, 2003, Photograph. Guide Amph. Thailand: 72).

Crocodile Salamander (Nutphund, 2001, Amph. Thailand: 50).

Himalayan Newt (Das and Dutta, 1998, Hamadryad, 23: 68; Schleich, Anders, and Kästle, 2002, in Schleich and Kästle (eds.), Amph. Rept. Nepal: 78; Ahmed, Das, and Dutta, 2009, Amph. Rept. NE India: 52; Dinesh, Radhakrishnan, Gururaja, and Bhatta, 2009, Rec. Zool. Surv. India, Occas. Pap., 302: 123; Mathew and Sen, 2010, Pict. Guide Amph. NE India: 123).

Red Knobby Newt (Fei, 1999, Atlas Amph. China: 44).

Orange-warted Salamander (Nutphund, 2001, Amph. Thailand: 50).

Inthanon Salamander (Nutphund, 2001, Amph. Thailand: 50).

Crocodile Newt (Nguyen, Ho, and Nguyen, 2005, Checklist Amph. Rept. Vietnam: 10).

Hoanglien Mountain Crocodile Newt (*Tylototriton verrucosus pulcherrima*: Hou, Li, and Lu, 2012, J. Huangshan Univ., 14: 63).

Distribution

Moderate (1200 m) to high (2150 m) elevations in western Yunnan (China), to northern Myanmar (Kakhyen Hills), hills of Arunachal Pradesh, West Bengal, Sikkim, Manipur, and West Bengal in India and extreme eastern Nepal; Xizang, China, adjacent to northeastern India and Myanmar; northern Thailand; and northern Vietnam (Lai Chau Province); presumably to be found in Laos and Bhutan.

Comment

Reviewed by Bourret, 1942, Batr. Indochine: 144-146. See also Kabisch, Herrmann, and Kühnel, 1994, Abh. Ber. Naturkd. Magdeburg, 17: 109-118. See accounts by Taylor, 1962, Univ. Kansas Sci. Bull., 43: 279-282; Anders, Schleich, and Shah, 1998, in Schleich and Kästle (eds.), Contr. Herpetol. S. Asia Nepal India, 4: 1-26; Ye, Fei, and Hu, 1993, Rare and Economic Amph. China 79; Fei, 1999, Atlas Amph. China: 44; and Thorn and Raffaëlli, 2000, Salamand. Ancien Monde: 222-226. Chanda, 2002, Handb. Indian Amph.: 183, provided a brief account for India. Wongratana, 1984, Nat. Hist. Bull. Siam Soc., 32: 107-110, discussed the range in Thailand. Zhang and Wen, 2000, Amph. Guangxi: 31, provided an account (for Guangxi), although this record requires verification. Panigrahi, 2000, Indian Biol., 32: 41-43, noted that the Darjeeling population differed distinctly in morphology and coloration from populations elsewhere in Asia. Anders, 2002, in Schleich and Kästle (eds.), Amph. Rept. Nepal: 134-140, provided an extensive account for Nepalese population. See account by Shrestha, 2001, Herpetol. Nepal: 62-71. Seglie, Roy, Giacoma, and Mushahiddunnabi, 2003, Russ. J. Herpetol., 10: 157-162, discussed range in the Darjeeling District of India. Palden, 2003, Hamadryad, 27: 286-287, provided records for Bhutan. Sarkar, Biswas, and Ray, 1992, State Fauna Ser., 3: 94-95, provided a brief account for West Bengal, India. Sarkar and Ray, 2006, In Alfred (ed.), Fauna of Arunachal Pradesh, Part 1: 313, provided a brief report for Arunachal Pradesh. Nutphund, 2001, Amph. Thailand: 50-51, provided a very brief account and photo. Chan-ard, 2003, Photograph. Guide Amph. Thailand: 72, provided a very brief account, map for Thailand, and photograph. Nguyen, Ho, and Nguyen, 2005, Checklist Amph. Rept. Vietnam: 10, provided a specific locality for Vietnam. In the *Tylototriton verrucosus* group of Fei, Ye, Huang, Jiang, and Xie, 2005, Illust. Key Chinese Amph.: 42 (although they only addressed Chinese species). Fei, Hu, Ye, and Huang, 2006, Fauna Sinica, Amph. 1: 280-283, provided an account and range map. Raffaëlli, 2007, Les Urodèles du Monde: 145, provided a brief account, figure, and map. Devi and Shamungou, 2006, J. Exp. Zool. India, 9: 317-324, provided specific localities within

Manipur, India (as *Pleurodeles verrucosus*). See account (as *Tylototriton shanjing*) by Thorn and Raffaëlli, 2000, Salamand. Ancien Monde: 226-227. See also brief account (as *Tylototriton shanjing*) by Zhao and Yang, 1997, Amph. Rept. Hengduan Mountains Region: 34-35. In the *Tylototriton verrucosus* group of Fei, Ye, Huang, Jiang, and Xie, 2005, Illust. Key Chinese Amph.: 42 (although they only addressed Chinese species). Fei, Hu, Ye, and Huang, 2006, Fauna Sinica, Amph. 1: 272-276, provided an account and range map (as *Tylototriton shanjing*). Raffaëlli, 2007, Les Urodèles du Monde: 145-146, provided a brief account, figure, and map (as *Tylototriton shanjing*). Zhang, Rao, Yu, and Yang, 2007, Zool. Res., Kunming, 28: 430-436, reported on population variation within China and considered *Tylototriton shanjing* to be conspecific with *Tylototriton verrucosus* on the basis of minimal sequence divergence. Hegde and Deuti, 2007, Cobra, Chennai, 1 (2): 29-36, provided specific localities from West Bengal, northeastern India. Chuaynkern, Chantipinthara, Songchan, and Duengkakae, 2008, Herpetol. Rev., 39: 361, described range in Thailand. Yang, 2008, in Yang and Rao (ed.), Amph. Rept. Yunnan: 18-19, provided a brief account for Yunnan, China. See statement of geographic range, habitat, and conservation status for nominal *Tylototriton shanjing* in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 642. Ahmed, Das, and Dutta, 2009, Amph. Rept. NE India: 52, provided a brief account for northeastern India. Chuaynkern, Chantipinthara, Songchan, and Duengkakae, 2008, Herpetol. Rev., 39: 361, provided a range extension in Thailand and discussed the range within that country. Mathew and Sen, 2010, Pict. Guide Amph. NE India: 123, provided a brief characterization and photograph. Nguyen, Nguyen, H, Lê, and Nguyen, 2009, Tạp chí Công nghệ Sinh học, 7: 325-333, discussed the species in Vietnam. Fei, Ye, and Jiang, 2010, Colored Atlas of Chinese Amph.: 77 (as *Tylototriton shanjing*) and (on page 81 as *Tylototriton verrucosus*), provided brief accounts including photographs. Li, Zhao, and Dong, 2010, Amph. Rept. Tibet: 11-12, provided an account for Xizang, China. See Shah and Tiwari, 2004, Herpetofauna Nepal: 31, for brief account for Nepal.

Tylototriton vietnamensis Böhme, Schöttler, Nguyen, and Köhler, 2005

Tylototriton vietnamensis Böhme, Schöttler, Nguyen, and Köhler, 2005, Salamandra, 41: 215.

Holotype: ZFMK 80637, by original designation. Type locality: "vicinity of Dong Vanh Village, Luc Son Commune, Luc Nam District, Bac Giang Province, northern Vietnam (21° 12' N, 106° 40' E, approximately 250-300 m a.s.l.)."

Tylototriton (Yaotriton) vietnamensis — Dubois and Raffaëlli, 2009, Alytes, 26: 68.

English Names

None noted.

Distribution

Northern and north-central Vietnam in Bac Giang and Phu Tho provinces; presumably in adjacent Laos and China.

Comment

See comments under *Tylototriton asperrimus*. Raffaëlli, 2007, Les Urodèles du Monde: 148-149, provided a brief account, figure, and map. Nguyen, Nguyen, H, Lê, and Nguyen, 2009, Tạp chí Công nghệ Sinh học, 7: 325-333, discussed the species and its distinctiveness from *Tylototriton hainanensis*. Stuart, Phimmachak, Sivongxay, and Robichaud, 2010, Zootaxa, 2650: 30, suggested that nominal *Tylototriton vietnamensis* may include more than one species.

***Tylototriton wenxianensis* Fei, Ye, and Yang, 1984**

Tylototriton asperrimus wenxianensis Fei, Ye, and Yang, 1984, Acta Zool. Sinica, 30: 89.

Holotype: CIB 638164, by original designation. Type locality: "Wenxian [= Wen County], Gansu [Province], alt. 946 m", China.

Tylototriton asperrimus pingwuensis Deng and Yu, 1984, Acta Herpetol. Sinica, Chengdu, N.S., 3 (2): 75. Holotype: KIZ 74005, by original designation. Type locality:

"Duiwoliang, Pingwu, Sichuan, alt. 1400 m", China. Synonymy by Ye, Fei, and Hu, 1993, Rare and Economic Amph. China: 80, following Zhao, Hu, Jiang, and Yang, 1988, Studies on Chinese Salamanders: 63, who considered it likely synonymous.

Pleurodeles (Tylototriton) asperrimus wenxianensis — Risch, 1985, J. Bengal Nat. Hist. Soc., N.S., 4: 142.

Echinotriton asperrimus wenxianensis — Zhao and Adler, 1993, Herpetol. China: 112. 1

Tylototriton wenxianensis — Ye, Fei, and Hu, 1993, Rare and Economic Amph. China: 80.

Tylototriton (Yaotriton) wenxianensis — Dubois and Raffaëlli, 2009, Alytes, 26: 68.

Tylototriton wenxianensis wenxianensis — Chen, Wang, and Tao, 2010, Acta Zootaxon. Sinica, 35: 666. By implication.

English Names

Wenxian Knobby Salamander (Fei, 1999, Atlas Amph. China: 42).

Wenxian Knobby Newt (Fei and Ye, 2001, Color Handbook Amph. Sichuan: 96).

Distribution

Wenxian in southern Gansu and Pingwu and Qinghuan in adjacent northern Sichuan, as well as isolated records in Guizhou, Hunan, Jiangxi, and southwestern Anhui, China, 650-2500 m elevation.

Comment

See accounts by Ye, Fei, and Hu, 1993, Rare and Economic Amph. China 81, and Fei, 1999, Atlas Amph. China: 42. Fei and Ye, 2001, Color Handbook Amph. Sichuan: 96, provided a brief account and illustration. In the *Tylototriton asperrimus* group of Fei, Ye, Huang, Jiang, and Xie, 2005, Illust. Key Chinese Amph.: 42 (although they only addressed Chinese species). Fei, Hu, Ye, and Huang, 2006, Fauna Sinica, Amph. 1: 265-268. Raffaëlli, 2007, Les Urodèles du Monde: 148, provided a brief account, figure, and map. See photograph, map, description of geographic range and habitat, and conservation status in Stuart, Hoffmann, Chanson, Cox, Berridge, Ramani, and Young, 2008, Threatened Amph. World: 607. Fei, Ye,

and Jiang, 2010, Colored Atlas of Chinese Amph.: 74-75, provided a brief account including photographs of specimens and habitat.

***Tylototriton yangi* Hou, Zhang, Zhou, Li, and Lu, 2012**

Tylototriton (Tylototriton) yangi Hou, Zhang, Zhou, Li, and Lu *In* Hou, Li, and Lu, 2012, J. Huangshan Univ., 14: 64. Holotype: SYNY HM20070801-NT001, by original designation. Type locality: Gejiu, Yunnan, China.

English Names

Tiannan Crocodile Newt (original publication).

Distribution

Southern Wenshan, Honghe, southern Yunnan, China.