

Continents, Between Two Seas. The University of Chicago Press, Chicago. 934 pp.). A single individual of *Tantilla reticulata*, collected from under moss on a tree limb at a height of 6.1 m, is the only documented case of any arboreal activity for this species (Wilson and Meyer 1971. *Herpetologica* 27:11–40).

In the course of several years of work in the canopy of Costa Rican rainforests, four individual of *T. reticulata* were observed crawling on tree branches at heights of over 27 m. None of these individuals, unfortunately, was vouchered. On 8 March 2003, during a visit to Rara Avis Rainforest Reserve, Heredia Province, Costa Rica (10°18.16'N, 84°02.62'W; 650 m elev.), an adult *T. reticulata* was observed falling from the thatched roof of a building from a height of ~5 m. In addition, on 12 March, about 1400 h another *T. reticulata* was observed actively moving about on an epiphyte-covered branch of an emergent canopy tree (*Vantanea barbouri*) at a height of 30.7 m above the ground. Both snakes were collected, photographed (YPM slide collection 1025–26), and released *in situ*. Gregory Watkins-Colwell verified identification of the present snakes.

These observations indicate that *T. reticulata* is more arboreal than previously assumed. The crowns of epiphyte-laden trees in the Rara Avis area provide a microhabitat with a humus layer and moss cover that is often more extensive than that of the local forest floor. It is not clear, however, how these small snakes detect the presence of a suitable habitat far overhead or how they succeed in reaching the canopy, crossing a vertical distance of 30 meters on smooth tree bark.

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TRIMORPHODON BISCUTATUS (Western Lyresnake). **PRE-DATION.** On 7 May 2003, 1250 h, we tracked a male *T. biscutatus*, 810 mm SVL and 153 g, implanted with a 5.2 g radio transmitter in the southern Tortolita Mountains near Oro Valley, Arizona, USA (32°28.201'N, 110°59.015'W). We located the transmitter signal

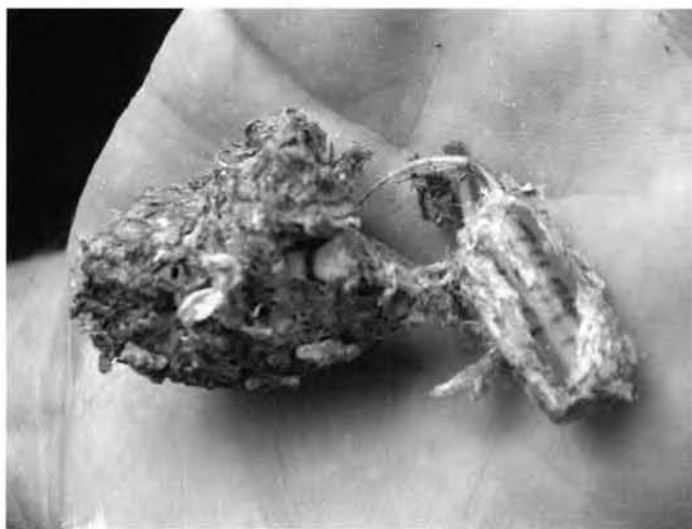


FIG. 1. A pellet from *Bubo virginianus* containing a 5.2 g radio-transmitter from *Trimorphodon biscutatus*.

from within 1 m of a *Bubo virginianus* (Great Horned Owl) nest site, which was actively defended by an adult pair of *B. virginianus*. Assuming the snake was dead, we left the site to avoid disturbing the owls further. On 14 May 2003, the owls were not present at the nest, and we found an owl pellet containing the snake's transmitter (Fig. 1) just below the nest. Great Horned Owls are generalist predators, preying on a variety of vertebrates including snakes (Houston et al. 1998. Great Horned Owl. Birds of North America. 372:1–28). We know of no previous records of avian predation on *T. biscutatus*.

We thank Kirk Setser for his critical reading of this manuscript.

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GEOGRAPHIC DISTRIBUTION

Instructions for contributors to Geographic Distribution appear in Volume 35, Number 1 (March 2004). Please note that the responsibility for checking literature for previously documented range extensions lies with authors. Do not submit range extensions unless a thorough literature review has been completed.

CAUDATA

AMBYSTOMA OPACUM (Marbled Salamander). USA: ARKANSAS: SEVIER Co: 8.0 km W Falls Chapel off Frog Level Rd. 28 February 2004. Z. D. Ramsey. Arkansas State University Museum of Zoology, Herpetological Collection (ASUMZ 28277). Verified by Stanley E. Trauth. New county record filling hiatus in extreme southwestern Arkansas (Trauth et al. In press. Amphibians and Reptiles of Arkansas, Univ. of Arkansas Press, Fayetteville). Also reported previously from adjacent McCurtain County, Oklahoma (Sam Noble Oklahoma Museum of Natural History Database of Amphibians [<http://www.snomnh3.ou.edu/db/amphibians/>]; Oklahoma Biological Survey's Distribution of Oklahoma Amphibians and Reptiles by Recorded Sightings, DOKARRS [<http://www.biosurvey.ou.edu/dokadesc.html>]).

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AMBYSTOMA ORDINARIUM (Mexican Stream Salamander). MÉXICO: MÉXICO: Municipality of Malinalco (18°56'32"N, 99°29'18"W). 27 May 1941 and 20 February 1948. L. Verdeja. ENCB 2548–2550, 2611–2615. Municipality of Tianguistenco: Laguna Santiago Tilapa (19°11'22"N, 99°25'4"W). 25 October 1964. R. Aguilar and R. Cruz C. ENCB 3545–3553. Municipality of El Oro de Hidalgo (19°48'4"N, 100°8'4"W). 9 May 1964. H. Romero and P. Reyes. ENCB 3485–3504. Verified by Fernando Mendoza-Quijano. First records from state of México (Casas-Andreu et al. 1997. Univ. Aunton. Edo. México. Ciencias y Técnicas/32. 201 pp.) and extends the known range southeastward ca. 140 km from Ciudad Hidalgo, Michoacán (Anderson 1975. Cat. Amer. Amphib. Rept. 164:1–2).

Submitted by **NOEMI MATIAS-FERRER** and **SERGIO MURILLO**, Laboratorio de Cordados Terrestres, Departamento de Zoología, Escuela Nacional de Ciencias Biológicas, IPN, Carpio y Plan de Ayala s/n, Ap. Postal 42-186, CP. 11340, Distrito Federal, México; e-mail noemigecko@hotmail.com.

AMBYSTOMA TIGRINUM (Tiger Salamander). USA: TENNESSEE: DECATUR CO: Bath Springs, 3965 Hwy 69 S, 0.3 km S of Mount Nebo Church on E side of highway (352524N, 880650W). 1 March 2004. Elizabeth Harden. Verified by A. Floyd Scott, Austin Peay State University Museum of Zoology, APSU 17485 (digital photo). One adult found on carport at ca. 1000 h following all-day rain. First record from Decatur County (Redmond and Scott. 1996. Atlas of Amphibians in Tennessee. Misc. Publ. No. 12, The Center for Field Biology, Austin Peay State University, Clarksville, Tennessee. 94 pp.; <http://www.apsu.edu/amatlas/>, accessed 4 March 2004).

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HEMIDACTYLIUM SCUTATUM (Four-toed Salamander). USA: INDIANA: MARTIN CO: Plaster Creek Seep, SW 1/4, NE 1/4, Sec. 11, T2N, R4W. 8 April 2003. Lee A. Casebere and Michael J. Lodato. Verified by Greg Schneider, University of Michigan Museum of Zoology, UMMZ 229816. First record for county; extends range ca 94 km W of nearest known locality in Jackson County (Minton 2001. Amphibians and Reptiles of Indiana. 2nd ed., revised. Indiana Acad. Sci. 404 pp.; Meretsky and Pyles. 2001. Herpetol. Rev. 32:268.) OWEN CO: Jordan Seep, SW 1/4, SW 1/4, Sec. 6, T11N, R4W. 15 April 2003. Lee A. Casebere and Michael J. Lodato. Verified by Greg Schneider, University of Michigan Museum of Zoology, UMMZ 229818. First record for county; extends range ca 37 km SW of nearest known record in Morgan County. (Minton, *op. cit.*) JEFFERSON CO: Chelsea Flatwoods, NE 1/4, NE 1/4, Sec. 33, T3N, R9E. 12 April 2003. Lee A. Casebere. Verified by Greg Schneider, University of Michigan Museum of Zoology, UMMZ 229817, and JEFFERSON CO: Western Wooded Parcel (0.8 km S of the southern boundary of Big Oaks National Wildlife Refuge), NE 1/4, Sec. 31, T5N, R10E. 5 May 2003. Hanover College Herpetology Class. Verified by Joseph R. Robb, U.S. Fish and Wildlife Service. Photo voucher in Illinois Natural History Survey (INHS 2004a–b). First records for county; extends range ca 38 km SE of nearest record in Jackson County (Minton, *op. cit.*; Meretsky and Pyles, *op. cit.*) and ca 16 km S from a recently vouchered (5 April 2003) record in adjacent Ripley County (Skilbred and Meretsky. 2003. Herpetol. Rev. 34:379).

The seep springs at the Martin and Owen county localities support bog-like conditions under or adjacent to hardwood forest canopy. Here the mucky, highly saturated soils are kept wet by perennial groundwater seepage. In contrast, the Jefferson County localities were in hardwood forest on flat, poorly drained, acid, clay soils. Unlike the seep spring sites kept wet year-round by seepage, the flatwoods sites depend on precipitation runoff for the creation of temporary breeding pools. At each of the new localities most of the salamanders encountered were females brooding egg masses, and were well hidden within moss mats, primarily *Thuidium*, on fallen logs and at the base of trees.

These new distributional records are significant in that *Hemidactylum scutatum* is an endangered species in Indiana. It is also noteworthy that all these new localities are from the southern portion of the state, where the species is extremely rare and known only from widely disjunct colonies.

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NOTOPHTHALMUS VIRIDESCENS LOUISIANENSIS (Central Newt). USA: ARKANSAS: LITTLE RIVER CO: 8.8 km E Ashdown off Arkansas St. Hwy 32 at Lake Millwood State Park, Waterfowl Way Trail. 26 January 2004. Z. D. Ramsey and J. P. Fuller. Arkansas State University Museum of Zoology, Herpetological Collection (ASUMZ 28106). Verified by Stanley E. Trauth. New county record (Trauth et al. *In press*. Amphibians and Reptiles of Arkansas, Univ. of Arkansas Press, Fayetteville) filling a distributional hiatus in extreme SW part of state. Also reported previously to the south in adjacent Bowie County, Texas (Dixon 2000. Amphibians and Reptiles of Texas. Texas A&M Univ. Press, College Station. 421 pp.) and west in McCurtain County, Oklahoma (Oklahoma Biological Survey's Distribution of Oklahoma Amphibians and Reptiles by Recorded Sightings DOKARRS [<http://www.biosurvey.ou.edu/dokadesc.html>]).

Red eft specimen (SVL = 26 mm) found under decaying log in bottomland forest along with sympatric *Ambystoma maculatum*, *A. opacum*, and *Rana catesbeiana*.

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ANURA

BUFO DEBILIS INSIDIOR (Western Green Toad). USA: NEW MEXICO: SIERRA CO: White Sands Missile Range, earthen tank at Martin Ranch HQ (T10S R4E NW1/4 Sec 30) E of Rio Grande (1 male, 1 female). 31 July 1997. Douglas W. Burkett and Larry K. Kamees. Museum of Southwestern Biology (MSB 60800–01). First county record, filling in distribution between SE Socorro Co. and SW Lincoln Co. records. SIERRA CO: NM Hwy 27, 5.6 rd miles N of Nutt (T19S R6W, Sec 30) W of Rio Grande (1 male). 7 June 2000. Bruce L. Christman. MSB 62031 Verified by J. Tomasz Giermakowski. MSB second county record extending range N from records in Luna Co. (Degenhardt et al. 1996, Amphibians and Reptiles of New Mexico. Univ. of New Mexico Press, Albuquerque. xii + 431 pp.).

Submitted by **BRUCE L. CHRISTMAN**, 3914 Simms SE, Albuquerque, New Mexico 87108, USA, **DOUGLAS W. BURKETT**, BAE Systems, Building 126, White Sands Missile Range, New Mexico, 88002 USA, and **LARRY K. KAMEES**, New Mexico Department of Game and Fish, 1 Wildlife Way, Santa Fe, New Mexico 87507, USA.

ELEUTHERODACTYLUS AUGUSTI CACTORUM (Western Barking Frog). USA: ARIZONA: SANTA CRUZ CO.: Patagonia Mts., E slope of Red Mtn., 4.0 km (airline) NNW Harshaw, 1620 m elev., 31°30.238'N, 110°42.766'W. 18 July 2003. E. Enderson, K. Bezy, R. Bezy. UAZ 55425. Verified by George Bradley. First record for Patagonia Mts.; extends the range of the species in Arizona (Goldberg 2003. *Sonoran Herpetol.* 15:54–57) 30 km SE from Madera Canyon, Santa Rita Mountains (Slevin 1931. *Copeia* 1931:140–141), and 46 km NW from Coronado National Memorial, Huachuca Mountains (Schwalbe et al. 1997. *Bajada* 5[3]:1). This specimen, one of over 30 *E. augusti* heard in the area on 18 July, was calling from a talus slope in chaparral with scattered oaks and piñons.

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ELEUTHERODACTYLUS RUGULOSUS (Central American Rain Frog). MÉXICO: MORELOS: Municipio de Tlalquitenango: Sierra de Huautla Biosphere Reserve, on paved road from Huautla to Xantiopa (18°25'52.0"N, 98°59'51.2"W), 1000 m elev. 23 June 2001. Jorge Chávez-Juárez, Harald Alcaraz-Cruz, and David Valenzuela Galván. Amphibian Collection, Centro de Educación Ambiental e Investigación Sierra de Huautla–Universidad Autónoma del Estado de Morelos (MOR-AN-146-04-03 No. 7). Verified by Edmundo Pérez Ramos. First record for Morelos and the Sierra de Huautla Biosphere Reserve, extending known range ca. 130 km NW from nearest known locality at Agua de Obispo, Guerrero (Flores-Villela 1998. *Formación de una base de datos y elaboración de un atlas de la herpetofauna de México. Colección de Anfibios y Reptiles, Museo de Zoología "Alfonso L. Herrera,"* Departamento de Biología, Facultad de Ciencias, Universidad Nacional Autónoma de México. Bases de Datos SNIB – CONABIO, Proyecto A 14, México, D.F.).

Submitted by **DAVID VALENZUELA GALVÁN**, Departamento de Ecología y Conservación de los Recursos Naturales, Centro de Educación Ambiental e Investigación Sierra de Huautla, UAEM, Morelos, México (e-mail: dvalen@buzon.uaem.mx), **JORGE CHÁVEZ-JUÁREZ** (e-mail: herpetologia@hotmail.com) and **HARALD ALCARAZ-CRUZ**, Facultad de Ciencias Biológicas, Universidad Autónoma del Estado de Morelos (UAEM), Morelos, México (e-mail: biohac@hotmail.com).

ELEUTHERODACTYLUS W-NIGRUM (Zurucuchu Robber Frog). PERU: PIURA: PROVINCIA HUANCABAMBA: Distrito Carmen de la Frontera: Santuario Nacional Tabaconas-Namballe (05°06'50.7"S, 79°21'16.3"W, 2200 m elev.). 23 and 26 April 2003. C. Aguilar. Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima, (MHNSM 19912), Museum fuer Tierkunde Dresden (MTD 45952). Verified by W. E. Duellman. Specimens were caught at night on ground in a secondary montane forest. First record for Peru and southernmost for its range (Lynch and Duellman 1997. *Univ. Kansas Nat. Hist. Mus. Spec. Publ.* 23:1–236). Extension of distribution ca. 230 km (airline) S of the

previously known locality records (Cuenca region) in southern Ecuador.

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GASTROPHRYNE USTA (Two-spaded Narrowmouth Toad). MEXICO: MORELOS: Municipio de Tlalquitenango: 1 km W Quilamula (18°30'28"N, 99°01'35"W), 1060 m elev. 27 June 2002. Jorge Chávez-Juárez, Harald Alcaraz-Cruz, and David Valenzuela Galván. Amphibian Collection, Centro de Educación Ambiental e Investigación Sierra de Huautla - Universidad Autónoma del Estado de Morelos (MOR-AN-146-04-03 Nos. 9–10). Verified by Edmundo Pérez Ramos and Georgina Santos. First record for Morelos and the Sierra de Huautla Biosphere Reserve, extending the known range ca. 66 km NE from the nearest record at Tecpán de Galeana, Guerrero (Flores-Villela 1998. *Formación de una base de datos y elaboración de un atlas de la herpetofauna de México. Colección de Anfibios y Reptiles, Museo de Zoología "Alfonso L. Herrera,"* Departamento de Biología, Facultad de Ciencias, Universidad Nacional Autónoma de México. Bases de Datos SNIB – CONABIO, Proyecto A 14, México, D.F.). Both specimens were collected while calling from a pool in a cornfield.

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OSTEOPILUS SEPTENTRIONALIS (Cuban Treefrog). USA: FLORIDA: MARION CO.: Ocala, 611 SE 9th Ave. (29°10'51"N, 82°07'39"W). 30 October 2003. Gerald R. Johnston. Verified by Kenneth L. Krysko. Florida Museum of Natural History (UF 140125). New county record. Adult male (50 mm SVL) found on balcony of apartment building. This species has been reported from many counties throughout peninsular Florida (Meshaka 2001. *The Cuban Treefrog in Florida: Life History of a Successful Colonizing Species*. Univ. Press of Florida, Gainesville, Florida, 208 pp.).

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PROCERATOPHRYNUS AVELINOI (Cow Frog). BRAZIL: PARANÁ: Guarapuava municipality, Municipal Park of Araucarias (25°21'S, 51°28'W, ca. 1073 m elev.). 16 February and 19 November 2002. C. Hiert. Museu Nacional do Rio de Janeiro, Rio de Janeiro (MNRJ 33193–94). At night in a freshwater swamp (ca. 9 x 6 m), in a mixed temperate rain forest (Araucária Forest). Previously known from Moncholito, Misiones, República Argentina

(Mercadal de Barrio and Barrio. 1993. *Amphibia-Reptilia* 14:13–18), and Ipuacu municipality, Santa Catarina (Hatmann and Garcia. 2001. *Herpetol. Rev.* 32:272), and Londrina and Tres Barras do Paraná municipality, Paraná, Brazil (Bernarde and Machado. 2000. *Cuad. Herpetol.* 14:93–104). Third record from Paraná state; extends known distribution 222 km SW from Londrina and 175 km N from Três Barras do Paraná, the previously cited localities in Paraná state.

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RANA CLAMITANS (Green Frog). USA: TENNESSEE: ROBERTSON CO: Tilley Spring, ca. 25 m N of Hoopers Hollow Road (36.3771N, 87.0593W). 31 March 2003. Timothy D. Brown and Nathan L. Parker. Verified by A. Floyd Scott, Austin Peay State University Museum of Zoology, APSU 3344. First record from Robertson County (Redmond and Scott 1996. *Atlas of Amphibians in Tennessee*. Misc. Publ. No. 12, The Center for Field Biology, Austin Peay State University, Clarksville, Tennessee. 94 pp.; <http://www.apsu.edu/amatlas/>, accessed 15 January 2004).

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RANA ZWEIFELI (Zweifel's Frog). MÉXICO: MORELOS: Municipio de Tepalcingo: Sierra de Huautla Biosphere Reserve, near El Limón (18°31'17.0"N, 98°56'18.3"W), 1040 m elev. 22 October 2002. Jorge Chávez-Juárez, Harald Alcaraz-Cruz, and David Valenzuela Galván. Amphibian Collection, Centro de Educación Ambiental e Investigación Sierra de Huautla – Universidad Autónoma del Estado de Morelos (MOR-AN-146-04-03 No. 47). Verified by Edmundo Pérez Ramos. First verified record for Morelos and the Sierra de Huautla Biosphere Reserve, extending the known range of the species ca. 130 km SE from nearest known locality at Amatepec, México (Casas-Andreu 1999. *Sistema de información geográfica sobre la herpetofauna del Estado de México*. Departamento de Zoología, Instituto de Biología, Universidad Nacional Autónoma de México. Bases de Datos SNIB – CONABIO, Proyecto H 103, México, D.F.). Bustos-Zagal et al. (2002. Abstracts of the 49th Annual Meeting of the Southwestern Association of Naturalists, 25–27 April, Cuernavaca, Morelos, Mexico, 0-59:23) reported its occurrence in the Amacuzac River Basin, Morelos, but no voucher specimens are available from that area. The El Limón specimen was found near a small creek surrounded by tropical dry forest.

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SCINAX WANDAE (NCN). VENEZUELA: ESTADO BARINAS: 3 km up Acequias River, 8°24'N, 70°42'W, 200 m. 24 September 2002. A. Buitrago. Colección de Vertebrados, Universidad de los Andes, Facultad de Ciencias (CVULA 6613–4). First state record. ESTADO MERIDA: Santa María de Caparo, Sector el Vegón, 215 m. September 2000. CVULA 6492. First state record. Both verified by O. Fuentes. This species has been reported only recently from Amazonian Venezuela (Barrio-Amorós and Fuentes 2003. *Herpetol. Rev.* 34:163). These are the first reports from the llanos-piedmont bio-region (*sensu* Barrio-Amorós 1998. *Acta Biol. Venez.* 18[2]:1–93.). Both records are about 450 km NE of the type locality at Villavicencio, Colombia, and about 480 km ESE from the closest record known in Venezuela, Puerto Ayacucho (Barrio-Amorós and Fuentes, *op. cit.*).

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SPEA MULTIPLICATA (Mexican Spadefoot Toad). MEXICO: MORELOS, Municipio de Tlalquiltenango: along a creek N of Quilamula (18°32'01.2"N, 99°01'07.3"W), 1116 m elev. 6 September 2002. Jorge Chávez-Juárez, Harald Alcaraz-Cruz, and David Valenzuela Galván. Amphibian Collection, Centro de Educación Ambiental e Investigación Sierra de Huautla – Universidad Autónoma del Estado de Morelos (MOR-AN-146-04-03 No. 6). Verified by Rafael Aguilar Cortés. First record for Sierra de Huautla and for southern Morelos, extending the known range ca. 36 km SE from the nearest locality at Alpuyeca and Puente de Ixtla, Morelos (Flores-Villela 1998. *Formación de una base de datos y elaboración de un atlas de la herpetofauna de México*. Colección de anfibios y reptiles, Museo de Zoología "Alfonso L. Herrera," Departamento de Biología, Facultad de Ciencias, Universidad Nacional Autónoma de México. Bases de Datos SNIB – CONABIO, Proyecto A 14, México, D.F.). The area surrounding the creek is in tropical dry forest.

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GYMNOPHIONA

GYMNOPHIS MULTIPLICATA (Culebra de Dos Cabezas). NICARAGUA: MATAGALPA: Selva Negra (12°59.92'N, 85°54.66'W), 1250 m elev. 3 September 1997. T. Leenders. Herpetological Media Collection (YPM 1099–1100). Verified by G. Köhler. First records for Matagalpa and extends the range ca. 100 km SW of the closest known locality at El Naranjo, Atlántico Norte (Köhler 2001. *Anfibios y Reptiles de Nicaragua*. Offenbach

[Herpeton], Verlag, Germany. 208 pp.). They are also the first records from a highland locality in Nicaragua, where previously it had been found only below 150 m elevation (Köhler, *op. cit.*).

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TESTUDINES

APALONE SPINIFERA (Spiny Softshell). USA: ILLINOIS: McDONOUGH Co: S of Macomb on IL 67, 16 km S of intersection of IL 67 and county road 700 N. 6 June 2003. James T. Lamer. INHS photographic record 2004.01. Verified by Chris Phillips, Illinois Natural History Survey. First county record (Phillips et al. 1999. Field Guide to Amphibians and Reptiles of Illinois. Illinois Nat. Hist. Surv. Manual 8, 282 pp.).

Submitted by **JAMES T. LAMER**, Department of Biological Sciences, Western Illinois University, 1 University Circle, Macomb, Illinois 61455, USA, and **JOHN K. TUCKER**, Illinois Natural History Survey, 8450 Monclair Ave, Brighton, Illinois 62012, USA.

GOPHERUS POLYPHEMUS (Gopher Tortoise). USA: GEORGIA: IRWIN Co.: Sterling Conservation Area, 10 individuals observed in an area beginning 1.6 km N of Crystal Lake and 1.6 km E of Big Bend Lake and ending 3.14 km N of Crystal Lake and 1.48 km E of Turner Lake. Four occupied burrow locations recorded with global positioning system (31°41'4.83"N, 83°26'42.47"W; 31°41'11.11"N, 83°26'43.22"W; 31°41'37.51"N, 83°26'59.85"W; 31°41'51.84"N, 83°26'40.63"W). 9 June 2003. Christopher R. Wilson. Verified by M. E. McGhee. Georgia Museum of Natural History (GMNH 49219 color photograph). First vouchered and published county record (Williamson and Moulis 1994. Distribution of Amphibians and Reptiles in Georgia. Special Publication No. 3. Savannah Science Museum. 712 pp). Portions of this population occur on a conservation easement held by North American Land Trust.

Submitted by **CHRISTOPHER R. WILSON**, North American Land Trust / NC Field Office, 196 Arnett Hollow Road, Vilas, North Carolina 28962, USA.

GRAPTEMYS GEOGRAPHICA (Northern Map Turtle). USA: New Jersey: SUSSEX Co: E side of Delaware River (41°05'34"N, 74°59'28"W), Delaware Water Gap National Recreation Area (DEWA). 13 June 2001. John L. Behler, Christina M. Castellano, and Timothy J. Crockett. Adult female with palpable eggs; maximum carapace and plastron lengths, and mass were 177.3 mm and 160.0 mm, and 605 g, respectively. Photographic voucher deposited in Research and Resource Planning Division files, DEWA, National Park Service (NPS/WCS043-045). Verified by Alvin R. Breisch. Prior to capture, the specimen was observed basking on an exposed, flat rock ca. 9 m away from the shoreline with several common mergansers (*Mergus merganser*) and mallard ducks (*Anas platyrhynchos*). This species' occurrence in the Delaware River, in Bucks County, Pennsylvania, was not detected until recently (Arndt and Potter 1973. J. Herpetol. 7:373-375).

Since that time, anecdotal reports (Serrao 2000. The Reptiles and Amphibians of the Poconos and Northeastern Pennsylvania. Llewellyn & McKane Inc., Wilkes-Barre. 49 pp.) suggest that the species' range has extended northward to Northampton Co., Pennsylvania. Between June 2000 and September 2002, more than 50 observations of basking *G. geographica* were recorded in DEWA while surveying turtle riverine habitat. The Delaware River was surveyed from river mile 247 in Sussex (NJ)-Pike (PA) counties at the north end of the park to mile 210 (from the river's mouth) in Warren (NJ)-Monroe (PA) counties near the park's southern boundary. The majority of observations occurred between miles 228 and 218 and in the vicinity of large river islands with sizable sandbanks and adjacent sections of deep water. Basking turtles were typically > 5m from the shoreline on the distal ends of wind-thrown trees, or on exposed logs and flat rocks. The capture location cited above represents a new county record for the species and extends the northward expansion of its range upriver ca. 40 km.

We appreciate the assistance of survey team members Stanley Boder, David Wood, and Sandy Mattfeldt.

Submitted by **JOHN L. BEHLER**, Department of Herpetology, Wildlife Conservation Society, 2300 Southern Boulevard, Bronx, New York 10460-1099, USA (e-mail: jbebler@wcs.org), **CHRISTINA M. CASTELLANO**, Department of Biological Sciences, Fordham University, 441 East Fordham Road, Bronx, New York 10458, USA (e-mail: expansa@aol.com), and **TIMOTHY J. CROCKETT**, Department of Environmental Science and Biology, State University of New York College at Brockport, 350 New Campus Drive, Brockport, New York 14420, USA (e-mail: crocke08@hotmail.com).

PSEUDEMYIS RUBRIVENTRIS (Red-bellied Cooter). USA: New Jersey: WARREN Co.: Depew Access Road 0.2 km W of Old Mine Road (41°03'31"N, 75°00'17"W), Delaware Water Gap National Recreation Area (DEWA). 4 May 2001. Christina M. Castellano and John L. Behler. Adult female, maximum carapace and plastron lengths were 301 mm and 291 mm, respectively. Photographic voucher deposited in Research and Resource Planning Division files, DEWA, National Park Service (NPS/WCS040-042). Verified by Alvin R. Breisch. Prior to capture, the specimen was observed basking on 24 April 2001 with several *Chrysemys picta* on a small hummock in a 1.5 m deep beaver pond in Miller Farm Marsh 400 m S of its capture site which is located 600 m E of the Delaware River. The distribution of this species in the Delaware River drainage is thought to be restricted to the coastal plain. However, it is likely that viable populations of this species ranged more broadly in the past as it was heavily exploited for eastern food markets in the late 1800s and probably extirpated from its range north of southern New Jersey (Hulse et al. 2001. Amphibians and Reptiles of Pennsylvania and the Northeast. Cornell University Press, Ithaca, 419 pp.). This capture location is ca. 60 km NW of the northernmost locality in the New Jersey Herp Atlas database (Raritan River, vicinity of Somerville, Somerset County; Jason Tesauero, pers. comm.), and is the first report of this species' occurrence above New Jersey's piedmont region.

Submitted by **CHRISTINA M. CASTELLANO**, Department of Biological Sciences, Fordham University, 441 East Fordham Road, Bronx, New York 10458, USA (e-mail: expansa@aol.com),

and **JOHN L. BEHLER**, Department of Herpetology, Wildlife Conservation Society, 2300 Southern Boulevard, Bronx, New York 10460-1099, USA (e-mail: jbehrer@wcs.org).

TRACHEMYS SCRIPTA ELEGANS (Red-eared Slider). USA: CALIFORNIA: SACRAMENTO CO: 500 m NE of intersection of East Bidwell and Blue Ravine Road (38°39'N, 121°09'W). 22 May 2003. Eric W. Stitt, Dustin Brown, and Peter S. Balfour. Verified by Cecil R. Schwalbe. Slide voucher, University of Arizona Collection of Amphibians and Reptiles (UAZ 55579-PSB). Female, 218 mm midline carapace length, 1515 g. Captured on the bank of a man-made pond ca. 3 m from water's edge, possibly preparing to lay eggs (although no eggs could be felt by palpation). Several other adult *Trachemys* have been observed here, together with the native *Actinemys marmorata*. This subspecies is native to eastern New Mexico through Louisiana, and has been widely introduced throughout the western states (Stebbins 2003. Western Reptiles and Amphibians, Third Edition. Houghton Mifflin Co., New York, NY. 533 pp.). In northern California, this turtle occurs in the Sacramento-San Joaquin Delta, but the status of most populations is unknown (Stebbins, *op. cit.*). Also, although this species is occasionally recorded in local field guides (e.g., The American River Natural History Association. 1993. The Outdoor World of the Sacramento Region: A Local Field Guide. ARNHA, 214 pp.) specific locality data are lacking. Museum records exist from Putah Creek near Davis, Yolo County, California, ca. 60 km ESE of this new locality (CAS 203705-06, 203710). This verifies the turtle's presence in Sacramento County, in the vicinity of Folsom Lake and Lake Natoma.

Submitted by **ERIC W. STITT**, University of Arizona, School of Renewable Natural Resources, 125 Biological Sciences East, Tucson, Arizona 85721, USA (e-mail: estitt@u.arizona.edu), **DUSTIN BROWN**, The Masters College, 21726 Placerita Canyon Road, Santa Clarita, California 91321, USA, and **PETER S. BALFOUR**, ECorp Consulting, Inc., 2260 Douglas Blvd., Suite 160, Roseville, California 95661, USA.

LACERTILIA

ANOLIS CAROLINENSIS CAROLINENSIS (Northern Green Anole). USA: TEXAS: KERR CO: Kerrville, off Texas Hwy 16, 2145 Sidney Baker Street, at Econo Lodge. 5 March 2004. Z. D. Ramsey and S. F. Barclay. Arkansas State University Museum of Zoology, Herpetological Collection (ASUMZ 28279). Verified by Stanley E. Trauth. New county record partially filling hiatus in Edward's Plateau of Hill Country (Dixon 2000. Amphibians and Reptiles of Texas. Texas A&M University Press, College Station, Texas. 421 pp.).

Submitted by **ZACHARY D. RAMSEY**, **STEPANIE F. BARCLAY**, and **CHRIS T. McALLISTER**, Department of Biology, Texas A&M University-Texarkana, Texarkana, Texas 75505, USA; e-mail: chris.mcallister@tamut.edu.

CNEMIDOPHORUS LONGICAUDA. ARGENTINA: BUENOS AIRES: Partido Monte Hermoso: Monte Hermoso (38°59'S, 61°21' S). 16 February 2002. C. H. F. Perez and P. F. Petracci. Verified by L. J. Avila. Fundación Miguel Lillo Herpetological Collection, San Miguel de Tucumán, Argentina (FML 15208). *Cnemidophorus*

longicauda is widely distributed in western Argentina following the Monte phytogeographic province (Cei 1993. Mus. Reg. Sci. Nat. Torino, Mon. XIV:1-949) reaching the Atlantic shores in Buenos Aires, Chubut, and Rio Negro provinces. This represents the easternmost record for this teiid species in Buenos Aires province and extends known range 100 km E of type locality at Bahía Blanca (Williams 1991. CIC 1[4]:1-21; Cei 1993, *op. cit.*). In Buenos Aires province, the species was cited with "doubts" for Partido de Puan, and as "confirmed" for Partido de Villarino and Partido de Bahía Blanca (Williams 1991, *op. cit.*) but without mention of voucher specimens.

The Bahía Blanca record is in the original description but the species was never found again in this locality, probably because of human disturbance of the area. The Monte Hermoso populations probably represent isolated remnants of a more extensive, historical distribution in Buenos Aires province. The lizard was collected in a seashore dune system, outside urban limits of Monte Hermoso City, with typical psammophyllous vegetation and in sympatry with *Liolaemus multimaculatus* and *L. gracilis*.

Submitted by **CRISTIAN HERNAN FULVIO PEREZ**, Agustín Alvarez 1182 A, 8000, Bahía Blanca, Buenos Aires, Argentina (e-mail: liolaemu@criba.edu.ar), and **PABLO FABRICIO PETRACCI**, Patricios 712, 8000, Bahía Blanca, Buenos Aires, Argentina.

GERRHONOTUS LIOCEPHALUS (Texas Alligator Lizard). MEXICO: HIDALGO: 12 km N Metztitlán, 1200 m elev. 16 September 1976. Oscar J. Polaco. Verified by Fernando Mendoza-Quijano. Herpetozoarios Collection of the Escuela Nacional de Ciencias Biológicas (IPN. ENCB-9019). First vouchered record for Hidalgo and a range extension of ca. 253 airline km NW from the nearest record at Cacaloapan, Puebla (Good 1994. Herpetol. Monogr. 8:180-202). Smith (1984. Bull. Maryland Herpetol. Soc. 20:152-158) indicated that *G. liocephalus* occurs in Hidalgo, but gave no corroborating evidence. The subadult female was collected in xerophytic scrub vegetation.

Submitted by **JOSÉ ISMAEL CAMPOS-RODRÍGUEZ** (e-mail: ismaelcampos@msn.com) and **JUAN CARLOS LÓPEZ-VIDAL**, Laboratorio de Cordados Terrestres, Departamento de Zoología, Escuela Nacional de Ciencias Biológicas, Instituto Politécnico Nacional, Apdo. Post. 42-186, Carpio y Plan de Ayala s/n. Santo Tomás, México D.F., 11340, Mexico (e-mail: jclopez@bios.enb.ipn.mx).

HEMIDACTYLUS GARNOTII (Indo-Pacific Gecko). USA: FLORIDA: MARION CO: Ocala, 611 SE 9th Avenue (29°10'51"N, 82°07'39"W). 2 November 2003. Gerald R. Johnston, Jennifer C. Johnston, and Vaughn A. Newman. Verified by Kenneth L. Krysko. Florida Museum of Natural History (UF 140123-24). New county record. Two individuals (juvenile 26 mm SVL, adult 42 mm SVL) captured on wall of apartment building. This species has been reported from many counties throughout peninsular Florida (Townsend and Krysko 2003. Florida Sci. 66:204-208).

Submitted by **GERALD R. JOHNSTON**, Department of Natural Sciences, Santa Fe Community College, Gainesville, Florida 32606, USA; and **JENNIFER C. JOHNSTON**, 225 NW 4th Street, High Springs, Florida, 32643, USA. e-mail: jerry.johnston@sfc.edu.

HEMIDACTYLUS TURCICUS TURCICUS (Mediterranean Gecko). USA: MISSOURI: ST. LOUIS CO.: A hatchling sized (SVL = 21.7 mm) gecko was collected in the offices of Beta Gamma Sigma (BGS) at 125 Weldon Parkway, Maryland Heights, Missouri, 63043, 38°42.460'N, 90°26.487'W. 16 October 2003. Debi Galloway. Verified by A. F. Scott, Austin Peay State University Museum of Zoology, APSU 17482. Employees of BGS continued to observe at least one other hatchling sized individual basking on the outside of their building during warm/sunny days into the last week of October 2003. This is the first documented occurrence of *H. t. turcicus* in Missouri (Johnson 2000. The Amphibians and Reptiles of Missouri. Missouri Department of Conservation, Jefferson City, Missouri. 400 pp.)

Conant and Collins (1998. A Field Guide to Reptiles and Amphibians: Eastern and Central North America, 3rd ed., expanded. Houghton Mifflin, Boston, Massachusetts. 616 pp.) comment on the rapid expansion of *H. t. turcicus* across the southern USA and speculate that it is likely due to humans inadvertently transporting geckos or their egg clutches. The offices of BGS are in the suburbs of St. Louis, Missouri. The large commercial complex is surrounded by residential neighborhoods and retail shopping district. It seems likely that these animals arrived with a shipment of goods to one of the businesses in the commercial complex.

I thank the employees of BGS for reporting the lizard activities they observed, especially my mother-in-law, Donna Binek, for telling me about the lizards running around her new office and Debi Galloway for capturing one.

Submitted by **ANGELO P. BUFALINO**, Department of Biology, Saint Louis University, 3507 Laclede Avenue, St. Louis, Missouri 63103, USA; e-mail: bufalino@slu.edu.

OPHISAURUS VENTRALIS (Eastern Glass Lizard). USA: FLORIDA: LAFAYETTE CO: 4.7 km N of Dixie Co. line on County Road 357 (29°01'50"N, 82°18'04"W), DOR at 2044 h. 9 September 2003. Michael E. Welker and Michael Arnold. Verified by Kenneth L. Krysko. Florida Museum of Natural History (UF 138411). New county record (Ashton and Ashton 1991. Handbook of Reptiles and Amphibians of Florida. Part 2. Lizards, Turtles and Crocodilians. Second ed. Windward Publishing, Miami, Florida, 191 pp.).

Submitted by **MICHAEL E. WELKER** and **MICHAEL ARNOLD**, 1911 NW 55th Terrace, Gainesville, Florida 32605, USA; e-mail: herpconservation69@yahoo.com.

PRISTIDACTYLUS ACHALENSIS. ARGENTINA: SAN LUIS: Merlo (32°21'S, 65°02'W), 1955 m elev. 2 January 2004. N. E. Salas. Herpetological Collection of Universidad Nacional de Río Cuarto, Ecología, Río Cuarto, Córdoba, Argentina. (UNRC-ECO 781-2). Verified by R. Martori. First province record. Endemic species from Argentina, previously known from Pampa de Achala, departments of San Alberto, Santa María, and Punilla, Córdoba (Gallardo 1964. Neotropica 10[33]:132; di Tada et al. 1980. I Reunión Iberoamer. Zool. Vert. 493-512; Avila et al. 2000. In Lavilla et al. [eds.], Categorización de los Anfíbios y Reptiles de República Argentina, pp. 51-74. Asociación Herpetológica Argentina) and La Paz, department San Javier, Córdoba (Cabrera and Speroni 1986. Hist. Nat. 6[1]:1-12; Cabrera 1996. In di Tada

and Bucher [eds.], pp. 215-238. Ed. UNRC). Present record extends the known distribution 30 km S from the previously known record.

Submitted by **NANCY E. SALAS** (e-mail: nsalas@exa.unrc.edu.ar), **M. BELEN GIORDANA**, and **ISMAEL E. DI TADA**, Ecología, Departamento de Ciencias Naturales, Facultad de Ciencias Exactas, Físico-Químicas y Naturales, Universidad Nacional de Río Cuarto, Km 601, Ruta N° 36 (X5804BYA) Río Cuarto, Córdoba, Argentina.

SCELOPORUS LUNDELLI (Lundell's Spiny Lizard). MEXICO: TABASCO: 7 km NW Tenosique (17°24'36.3"N, 91°29'9.7"W), ca. 250 m elev. 25 April 2002. Julio César Bolón López. MZFC 14414 (formerly Colección de Amphibios y Reptiles de Tabasco [CART 00321]), CART 00327. Verified by Edmundo Pérez Ramos. First record for Tabasco and extends range ca. 120 km S of Laguna de Términos, Campeche (Lee 1996. The Amphibians and Reptiles of the Yucatán Peninsula. Cornell Univ. Press, Ithaca, New York, 500 pp.).

Submitted by **ROSARIO BARRAGÁN-VÁZQUEZ**, Div. Académica de Ciencias Biológicas, Universidad Juárez Autónoma de Tabasco, Km 0.5 Carr. Villahermosa-Cárdenas, Tabasco, Mexico, **LUIS CANSECO MÁRQUEZ**, and **OSCAR FLORES VILLELA**, Museo de Zoología, Facultad de Ciencias, Universidad Nacional Autónoma de México, A.P. 70-399, México, D.F. 04510, México (e-mail: ofv@hp.fcencias.unam.mx).

SCELOPORUS UNDULATUS (Eastern Fence Lizard). USA: NEW YORK: KINGS CO: Sunset Park. Private property ca. 20 m N of 44th Street between 3rd and 4th Avenues (40°39'02"N, 74°00'36"W). 4-5, 12 September 2002. Jeremy A. Feinberg. Verified by Michael Klemens. American Museum of Natural History (AMNH 153364-68). Locality is the first record from county as well as for the entirety of Long Island, extending the range of this species northeast from the nearest known population in Richmond Co., New York by a distance of ca. 25 km (A. R. Breisch, pers. comm.). Specimens include two hatchlings, one sub-adult, and two adults collected among rocks and wood in the backyard of a private residence. Additional lizards were observed in the yards of adjacent properties. The occurrence of this population within New York City (and on Long Island) is likely the result of an introduction.

Submitted by **JEREMY A. FEINBERG**, United States Fish and Wildlife Service, Brookhaven National Laboratory, Building 120, 81 Cornell Avenue, Upton, New York 11973, USA; e-mail: jerfein@aol.com.

STENOCERCUS FIMBRIATUS (NCN). PERU: JUNÍN: Tarma: Pampa Hermosa (10°59'33.3"S, 75°25'58.0"W, 1540 m elev.). 28 August 2003. Rudolf von May and Edgar Lehr. Museum für Tierkunde Dresden (MTD 45664). Verified by Omar Torres-Carvajal. First record for Departamento de Junín (Avila-Pires 1995. Lizards of Brazilian Amazonia [Reptilia: Squamata]. Zool. Verh. Leiden 299:151-159; Carrillo de Espinoza and Icochea 1995. Publ. Mus. Hist. Nat. UNMSM(A) 49:1-27), and extension of altitudinal distribution. Previously known up to 1050 m on the eastern slopes of the Andes in Peru (Avila-Pires 1995, *op. cit.*). The specimen was caught on a tree branch ca. 1 m above ground in a primary

forest at night.

Submitted by **EDGAR LEHR** (e-mail: edgar.lehr@snsd.smwk.sachsen.de), Staatliche Naturhistorische Sammlungen Dresden, Museum fuer Tierkunde, Königsbruecker Landstrasse 159, 01109 Dresden, Germany, and **RUDOLF VON MAY**, Asociación para la Conservación de la Cuenca Amazónica (ACCA), Calle Cuzco 499, Puerto Maldonado, Madre de Dios, Peru (e-mail: vonmay@terra.com).

TARENTOLA MAURITANICA MAURITANICA (Moorish Gecko). SPAIN: ALMERÍA: Alborán Island (35°56'24"N, 3°02'04"W; in Alborán Sea, the westernmost area of the Mediterranean Sea), 13 m elev., an isolated island 86 km S and 56 km N from the continental coasts of Adra, Almería, Spain and Tres Forcas Cape, Beni-Bu-Gafar, Morocco, respectively. 13 November 2003. Mariano Paracuellos. Dept. of Animal Biology and Ecology, Granada University, Granada, Spain (DBAG-TAMA-30). Verified by Juan M. Pleguezuelos and Xavier Santos. First island record. Two more individuals, belonging to the same species, were observed on the same day, but were not collected. The paucity of herpetofauna on Alborán Island (Ludwig Salvador 1898. Alborán. Heinr. Mercy Sohn, Prag; García and Salas 1984. Jábega 45:76–80; Yus and Cabo 1986. Guía de la naturaleza de la región de Melilla. Exmo. Ayuntamiento de Melilla, Melilla) might be attributed to its small size (7.1 ha) and distance from the mainland. Discovery of three *T. m. mauritanica* on the same day of 2003, after periodic unsuccessful searches since 1994, might indicate a recent colonization probably in association with recent, frequent, transportation of building materials and equipment from the Iberian Peninsula coast, where the species occurs (Hódar 2002. In Pleguezuelos et al. [eds.], Atlas y Libro Rojo de los Anfibios y Reptiles de España, pp. 188–190. Dirección General de Conservación de la Naturaleza-AHE, Madrid: for similar cases on other islands, see Pleguezuelos [2002. In Pleguezuelos, *op. cit.*, pp. 501–532]).

Submitted by **MARIANO PARACUELLOS** and **JUAN C. NEVADO**, Dept. of Flora and Fauna, Consejería de Medio Ambiente, Junta de Andalucía, C/ Reyes Católicos, 43, Almería E-04071, Spain; e-mail: mparacuellos@cajamar.es.

SERPENTES

ATRACTUS MAJOR (Big Ground Snake). BRAZIL: PARÁ: "Estação Científica Ferreira Penna" (ECFP), between the basins of the Xingu and Tocantins Rivers (01°42'33"S, 51°31'45"W), in the eastern Brazilian Amazon. 11 October 2000. A. L. Prudente. Museu Paraense Emílio Goeldi, Belém, Pará, Brazil, (MEPG 19967). 6 March 2002. R. Vaz. (MEPG 20189). Verified by M. Hoogmoed. First vouchered state record; extends known range ca. 1000 km W from previous records at Manaus, Preto da Eva River, and Presidente Figueiredo municipality (Martins and Oliveira 1993. Zool. Meded. Leiden 67[2]:21–40). This species was cited previously from Pará state without a voucher specimen or locality reference (Vogt and Bernhard 2003. Biodiversidade e Biogeografia de Répteis e Anfíbios da Amazônia, Instituto Amazônia, 40 pp.).

Submitted by **ANA LÚCIA DA COSTA PRUDENTE**, Museu Paraense Emílio Goeldi, Departamento de Zoologia, Setor de Herpetologia, CxP: 399, CEP: 66040-170, Belém, Pará, Brazil (e-

mail: prudente@museu-goeldi.br); and **MARIA CRISTINA DOS SANTOS COSTA**, Universidade Federal do Pará, Departamento de Biologia, Cx.P.479, CEP: 66.075-110, Belém, Pará, Brazil (e-mail: mscosta@museu-goeldi.br).

ATRACTUS RETICULATUS (NCN). URUGUAY: RIVERA: Establecimiento "Trinidad," Campos de COFUSA, Potrero 9 (31°01'55"S, 55°26'41"W). 22 November 2003. R. Maneyro. Colección Zoología Vertebrados, Reptiles, Facultad de Ciencias, Montevideo, (ZVC-R 6237, juvenile female). Captured in a pitfall trap in a forested area (*Pinus*, 6–8 yr old stand) near a small stream. The range of the species includes southern Brazil from São Paulo to São Lourenço do Sul and Argentina, Corrientes and Misiones (Peters and Donoso-Barros 1970. Bull. U.S. Nat. Mus. 297[1]: 33; Cei 1993. Mus. reg. Sci. nat. Torino, Monograf. 14:526; Fernandes 1995. Comun. Mus. Ciênc. Tecnol. PUCRS, Sér. Zool., Porto Alegre 8:37–53; Scrocchi and Giraudo 2002. Smithsonian Herpetol. Infor. Serv. 132:11). First country record, extends known distribution 300 km S from São Lourenço do Sul, Rio Grande do Sul, Brazil (Fernandes 1995, *op. cit.*). We thank Raul Maneyro for collecting the specimen.

Submitted by **SANTIAGO CARREIRA** (e-mail: carreira@fcien.edu.uy), **MELITTA MENEGHEL**, and **FEDERICO ACHAVAL**, Sección Zoología Vertebrados, Facultad de Ciencias, Iguá 4225, CP 11400, Montevideo, Uruguay.

BOTHROPS BRAZILI (Brazil's Lancehead). ECUADOR: PROVINCIA DE ZAMORA-CHINCHIPE: Bombuscaro River (entrance to the Podocarpus National Park), ca. 04°07'S, 78°58'W, 1000 m elev.). 13 August 1997. R. Tapia. Laboratorio de Anfibios & Reptiles, Universidad San Francisco de Quito & Fundación Herpetológica G. Orcés, Quito (FHGO-USFQ 1639). ECUADOR: PROVINCIA DE MORONA-SANTIAGO: Centro Makuma and surroundings, ca. 02°08'S, 77°42'W, 600 m elev. November 1993–January 2000. D. Holmes, C. Kayap, R. Mangkash, G. Wisurna, et al. (FHGO-USFQ 043 + 16 others). Verified by Jean-Marc Touzet. First locality for Zamora-Chinchipe province, extending its range ca. 200 km SW and 80 km NNW from nearest localities (Río Cusuime, Ecuador and Bagua, Perú; Schatti and Kramer 1993. Rev. Suisse Zool. 100[2]:235–278; Carrillo de Espinosa 1983. Publ. Mus. Hist. Nat. Javier Prado [30]:1–55), representing the westernmost locality of the species and among the highest altitudinal records. Second locality for Morona-Santiago province fills the gap between Pastaza and Morona-Santiago localities, and extends its range 50 km N and 70 km WSW from previous known localities (Schatti and Kramer, *op. cit.*). Despite the species being widely distributed in the Amazon Basin, it is considered rare and was not reported from Ecuador until 1989 (C. Myers in Campbell and Lamar 1989. The Venomous Reptiles of Latin America. Cornell Univ. Press. Ithaca, New York. 425 pp.), remaining known from only three localities at Pastaza and Morona-Santiago provinces (Schatti and Kramer, *op. cit.*, Pérez-Santos and Moreno 1991. Mus. Reg. Sci. Nat. Monogr. 11:1–538).

Submitted by **DIEGO F. CISNEROS-HEREDIA**, Laboratorio de Anfibios & Reptiles, FHGO-USFQ, Universidad San Francisco de Quito, Ave. Interoceánica y calle Diego de Robles, Campus Cumbaya, edif. Newton Plaza, Casilla Postal 17-12-841, Quito, Ecuador; e-mail: diegofrancisco_cisneros@yahoo.com.

CHARINA BOTTAE (Rubber Boa). USA: WYOMING: Yellowstone National Park, south of Gibbon Meadows on The Grand Loop Highway, 0.64 km S of Artist Paint Pot trailhead, 2256 m (UTM 520183, 4948444). 11 July 1994. Stephen R. Sullivan. Verified by Charles R. Peterson. Idaho Museum of Natural History (IMNH 1921). Found dead in road at 2230 h. First museum collection record from Yellowstone and Grand Teton National Parks (Koch and Peterson 1995. Amphibians and Reptiles of Yellowstone and Grand Teton National Parks. Univ. Utah Press, Salt Lake City. 188 pp.)

Submitted by **STEPHEN R. SULLIVAN**, Department of Biology and Chemistry, Carroll College, Helena, Montana; 1601 N. Benton Ave Helena, Montana 59625, USA; e-mail: ssulliva@u.washington.edu.

CONIOPHANES LATERITIUS (Stripeless Snake). MEXICO: MORELOS: Municipio de Tlaquiltenango: Sierra de Huautla Biosphere Reserve, 600 m SW of Estación Biológica Sierra de Huautla, on old trail to Huatla (18°27'36.1"N, 99°02'05.2"W), 900 m elev. 20 June 2001. Jorge Chávez-Juárez, Harald Alcaraz-Cruz, and David Valenzuela Galván. Reptile collection, Centro de Educación Ambiental e Investigación Sierra de Huautla - Universidad Autónoma del Estado de Morelos (MOR-REP-145-04-03 No. 46). Verified by Edmundo Pérez Ramos. First record for Sierra de Huautla Biosphere Reserve and southern Morelos, extending its range ca. 60 km S from the nearest collection site at Corredor Biológico Chichinautzin, Morelos (Castro-Franco and Bustos-Zagal 1994. Southwest. Nat. 39:171–213). Juvenile found at 1228 h in rocky terrain adjacent to Lorenzo Vazquez Dam in riparian forest that was surrounded by steep slopes covered by tropical dry forest.

Submitted by **HARALD ALCARAZ-CRUZ** (e-mail: biohac@hotmail.com), **JORGE CHÁVEZ-JUÁREZ** (e-mail: herpetologia@hotmail.com), Facultad de Ciencias Biológicas, Universidad Autónoma del Estado de Morelos (UAEM), Morelos, Mexico; and **DAVID VALENZUELA**, Departamento de Ecología y Conservación de los Recursos Naturales, Centro de Educación Ambiental e Investigación Sierra de Huautla, UAEM, Morelos, Mexico (e-mail: dvalen@buzon.uaem.mx).

CONOPHIS VITTATUS (Striped Road Guarder). MÉXICO: MÉXICO: Municipality of Texcoco: San Salvador Atenco (19° 33' 29" N, 98° 55' 11" W), 2000 m elev. 25 July 1965. F. Aguilar. ENCB 1657. Verified by Fernando Mendoza-Quijano. First record for the state of México (Casas-Andreu *et al.* 1997. Univ. Auntón. Edo. México. Ciencias y Técnicas/32. 201 pp.) and extends the known range 80 km northwest of the closest known locality, 7 mi (11.2 km) south of Cuernavaca, Morelos (MVZ 32258).

Submitted by **NOEMI MATIAS-FERRER** and **SERGIO MURILLO**, Laboratorio de Cordados Terrestres, Departamento de Zoología, Escuela Nacional de Ciencias Biológicas, IPN, Carpio y Plan de Ayala s/n, Ap. Postal 42-186, CP. 11340, Distrito Federal, México; e-mail: noemigecko@hotmail.com.

CORALLUS RUSCHENBERGERII (Ruschenberger Tree Boa; Falsa Mapanare; Dormilona). VENEZUELA: ESTADO TRUJILLO: MUNICIPIO TRUJILLO: Quebrada Valerita, Monay. February 1982. R. Pérez. Colección de Vertebrados de la

Universidad de Los Andes, Mérida, Venezuela (CVULA 3299). Verified by Fabián Zerpa. First state record (Roze 1966. La Taxonomía y Zoogeografía de los Ofidios en Venezuela. Univ. Central de Venezuela, Edic. Biblioteca. Caracas, 362 pp.; Lancini and Kornacker 1989. Die Schlangen von Venezuela. Verlag Armitano ed. Caracas, Venezuela, 381 pp.; Henderson 1997. Caribb. J. Science 33 [3–4]: 198–221). *Corallus ruschenbergerii* is distributed from Costa Rica to northern South America (Colombia, Venezuela and the islands of Margarita, Trinidad and Tobago), according to Henderson (*op. cit.*). The new record is the first intra Andean locality for this relatively widespread species. In Venezuela, this boa snake was previously known north and west of the Guianan shield in Amazonas and Bolívar states, and north of the Orinoco river, in Zulia and Falcón states (Mijares-Urrutia 2000. Herpetofauna of estado Falcón, northwestern Venezuela: a checklist with geographical ecological data, Smithson. Herpetol. Infor. Serv. 123:1–20), Distrito Federal, Carabobo, and Miranda states (Roze 1966, *op. cit.*; Henderson 1997. Carib. J. Sci. 33[3–4]:198–221), Apure, Barinas Bolívar, Delta Amacuro, Guárico, Nueva Esparta, Portuguesa, and Sucre states (Henderson, *op. cit.*; Markezich 2002. Herpetol. Rev. 33:69–74). None of these records predicted this new unsuspected location within the Andes, since all the remaining Colombian and Venezuelan records are from outside the main Cordillera de Los Andes. The new locality record additionally documents the species for the first time from the Lake Maracaibo versant of the Cordillera de Mérida. The closest published geographical records are from near 270 km to the W, in Zulia state, near 250 km to the NE in Falcón state, and ca. 100 km to the E, in Portuguesa state, across the Venezuelan Andean Cordillera de Mérida.

Submitted by **LUIS FELIPE ESQUEDA**, Centro Universitario Herpetológico Forestal y Laboratorio de Biogeografía, Facultad de Ciencias Forestales y Ambientales, Universidad de Los Andes, Mérida 5101, Venezuela (e-mail: adenomera@hotmail.com), and **ENRIQUE LA MARCA**, Laboratorio de Biogeografía, Escuela de Geografía, Facultad de Ciencias Forestales y Ambientales, Universidad de Los Andes, Apartado Postal 116, Mérida 5101-A, Venezuela (e-mail: lamarca1@telcel.net.ve).

CROTALUS ATROX (Western Diamond-backed Rattlesnake). MEXICO: MEXICO: Municipality of Atizapán de Zaragoza: Calocoaya (19°32'N, 99°14'32"W). 13 November 1970. H. Hernández. ENCB 6276. Verified by Fernando Mendoza-Quijano. First record for the state and extends known range ca. 140 km SW of Metztlán, Hidalgo (Campbell and Lamar 1989. The Venomous Reptiles of Latin America. Cornell Univ. Press, Ithaca, New York. xii + 425 pp.).

Submitted by **NOEMI MATIAS-FERRER** and **SERGIO MURILLO**, Laboratorio de Cordados Terrestres, Departamento de Zoología, Escuela Nacional de Ciencias Biológicas, IPN, Carpio y Plan de Ayala s/n, Ap. Postal 42-186, CP 11340, Distrito Federal, México; e-mail: noemigecko@hotmail.com.

CROTALUS OREGANUS CONCOLOR (Midget Faded Rattlesnake). USA: ARIZONA: COCONINO Co: Labyrinth Canyon. July 1954. Jim Rigg. University of Arizona (UAZ 39830). State record. Originally in the Arizona Sonora Desert Museum collection as ASDM 916. The original ASDM card associated with this

specimen lists "Labyrinth Canyon" in the 'Specific Locality' field, and "Arizona: Coconino Co., Colo. River" under the 'General Locality' field, all in the same handwriting and pen. In a different pen, someone later added "34.5 river miles N. of Lees Ferry," apparently in reference to the confluence of Labyrinth Canyon and the Colorado River. An American Museum of Natural History specimen (AMNH 75814) collected in adjacent Utah from a "sandbar on the Colorado River about 40 mi upstream from Lee's Ferry, Arizona" by R. Zeller on 19 June 1956 and is also *concolor*. The collection locality of AMNH 75814 appears to lie ca. 6–7 km upstream of UAZ 39830 in Glen Canyon. Both of these specimens agree with all scutulation, color, and pattern characters as described in the original description (Woodbury 1929. *Bull. Univ. Utah* 20:3–4) and in Gloyd (1940. *The Rattlesnakes, Genera Sistrurus and Crotalus*. Chicago Acad. Sci. Spec. Publ. 4). Counts of dorsal scale rows at midbody, ventrals, subcaudals, supralabials, infralabials, body blotches, and tail blotches all fall within the ranges (and usually near the means) presented for *concolor* by Gloyd (*op. cit.*). Both specimens are nearly identical to published portraits of the form in systematic or authoritative works (e.g., Plate 25 in Gloyd, *op. cit.* and Fig. 2:66 in Klauber 1972. *Rattlesnakes, Their Habits, Life Histories, and Influence on Mankind*. 2 Vol. 2nd ed. University of California Press, Berkeley and Los Angeles), and neither shows any morphological evidence of intergradation with adjacent forms.

Although most specimens from San Juan County, Utah appear to be *Crotalus viridis* based on mtDNA haplotype, a single specimen from "27.8 km E of Halls Crossing Marina" on the Colorado River had a *concolor* haplotype (Douglas et al. 2002. *In* Schuett et al. [eds.], *Biology of the Vipers*, pp. 11–50. Eagle Mountain Publishing, Eagle Mountain, Utah.). Gloyd (*op. cit.*) illustrates the southern terminus of the range of *concolor* in the general vicinity of Halls Crossing. We believe that the *concolor* lineage probably occupied much of Cataract Canyon, and portions of Glen Canyon as far downstream as its confluence with Labyrinth Canyon. Further downstream, specimens from Antelope Island and Wahweap Marina agree morphologically and by mtDNA haplotype with *abyssus* (Douglas et al., *op. cit.* and pers. comm.). The collection localities of both UAZ 39830 and AMNH 75814 in Glen Canyon have been flooded since the late 1960s by Powell Reservoir. It remains to be seen if this form is extant in the side canyons of Glen Canyon (Arizona and Utah).

Submitted by **THOMAS C. BRENNAN** and **ANDREW T. HOLYCROSS**, School of Life Sciences and Museum, Arizona State University, Tempe, Arizona 85287-4501, USA.

CROTALUS SCUTULATUS (Mojave Rattlesnake). MEXICO: MEXICO: Municipality of Ixtapaluca: Cerro del Pino (19°20'N, 99°55'18"W). 2500 m elev. 13 July 1967. R. Cruz C. ENCB 6276. Verified by Fernando Mendoza-Quijano. This confirms the presence of this species in the state of México (Casas-Andreu et al. 1997. *Univ. Aunton, Edo. México. Ciencias y Técnicas* 32: 201 pp.). The previous record is a fossil specimen from Zumpango (Brattstrom 1955. *Bull. South. California Acad. Sci.* 54:1–4).

Submitted by **NOEMI MATIAS-FERRER** and **SERGIO MURILLO**, Laboratorio de Cordados Terrestres, Departamento de Zoología, Escuela Nacional de Ciencias Biológicas, IPN, Carpio y Plan de Ayala s/n, Ap. Postal 42-186, CP. 11340, Distrito Federal, México; e-mail: noemigecko@hotmail.com.

DENDROASPIS POLYLEPIS (Black Mamba). CAMEROON: Adamaoua Province: Nyassar (ca. 50 km NE of Ngaoundéré: 7°32'20"N, 14°02'38"E, 800 m elev.). Elevated soudanian savanna. 15 August 2001. Matthew LeBreton and Laurent Chirio. Verified by Ivan Ineich. MNHN 2002.921 (Field No. 4582X). First confirmed record for this species in Cameroon. A number of authors have indicated the uncertainty of the occurrence of this species in Cameroon (Håkansson and Madsen 1983. *J. Herpetol.* 17:186–189; Rasmussen 1994. *Nord. herpetol. Forening* 37:61–65; Chippaux 2001. *Les serpentes d'Afrique occidentale et centrale*. IRD Paris 292 pp.) despite the presence of at least one record of possible sighting there (Stark 1986. *J. Herpetol. Assoc. Africa* 32:31, without voucher specimens).

Submitted by **MATTHEW LEBRETON**, CAMHERP Project C/- Cameroon Biodiversity Conservation Society, BP 3055 Messa Yaoundé, Cameroon (present address: Johns Hopkins Cameroon Program, BP 7039, Yaounde, Cameroon), and **LAURENT CHIRIO**, 14 Rue des Roses, 06130 Grasse, France.

DRYMOLUBER BRAZILI. BRAZIL: BAHIA: Municipality of João Dourado, District of Gruta dos Brejões (11°00'S, 41°25'W). 1 August 2002–31 August 2003. Collector unknown. Museu de Zoologia da Universidade Estadual de Santa Cruz, Ilhéus, Bahia (MZUESC 3815). Verified by Miguel Trefaut Rodrigues. Previously known only from southcentral Brazil (Nogueira 2001. *Herpetol. Rev.* 32:285; Peters and Orejas-Miranda 1986. *Bull. U.S. Nat. Mus.* 297:100). First record for northeastern Brazil; extends range ca. 1000 km NE of Brasília municipality (Nogueira, *op. cit.*), the previous northernmost limit for the species.

Submitted by **ANTÔNIO JORGE SUZART ARGÔLO**, Universidade Estadual de Santa Cruz – UESC, Km 16 Rodovia Ilhéus-Itabuna, CEP 45650-000, Ilhéus, Bahia, Brazil; e-mail: lachesis@uesc.br.

FARANCIA ABACURA ABACURA (Eastern Mudsnake). USA: FLORIDA: UNION Co: 0.8 km N of State Road 100 on County Road 231 (29°55'55"N, 82°19'41"W), 105 meters elevation, 2248 hours. 6 June 2002. Michael E. Welker. Verified by Kenneth L. Krysko. Florida Museum of Natural History (FLMNH), Gainesville, Florida, USA (UF 133816). New county record (Ashton and Ashton 1988. *Handbook of Reptiles and Amphibians of Florida*. Part 1. The Snakes. Second edition. Windward Publishing, Miami, Florida. 176 pp.). This specimen was found DOR.

Submitted by **MICHAEL E. WELKER**, 1911 NW 55th Terrace, Gainesville, Florida 32605, USA; e-mail: herpconservation69@yahoo.com.

GEOPHIS BLANCHARDI (Blanchard's Earth Snake). MÉXICO: OAXACA: Municipality of San Bernardino: Sierra Mazateca, Puerto Soledad. (18°09.499'N, 96°59.981'W), 2510 m elev. 10 June 1993. Luis Canseco Márquez and Alejandro Ramos Torres. MZFC 13303 (regurgitated by a *Thamnophis godmani*). 1 km SW Puerto Soledad, 2240 m elev. 13 November 1993. MZFC 13304. Both verified by Edmundo Pérez Ramos. First records for Oaxaca and extends the range ca. 69 km (airline) SE of Acultzingo, Veracruz (Downs 1967, *Misc. Publ. Mus. Zool., University of Michigan* 131:1–193). Both specimens were found in cloud forest.

Submitted by **LUIS CANSECO MÁRQUEZ, ALEJANDRO RAMOS TORRES, and OSCAR FLORES VILLELA**, Museo de Zoología, Facultad de Ciencias, Universidad Nacional Autónoma de México, A.P. 70-399, México, D.F. 04510, México; e-mail: ofv@hp.fciencias.unam.mx.

HETERODON PLATIRHINOS (Eastern Hog-nosed Snake). USA: FLORIDA: DIXIE Co: 0.03 km E of County Road 351 on County Road 353 (29°41'37"N 83°01'52"W). 1 November 2003. Michael E. Welker and Michael Arnold. Verified by Kenneth L. Krysko. Florida Museum of Natural History (UF 141054). New county record (Ashton and Ashton 1988. Handbook of Reptiles and Amphibians of Florida. Part 1. The Snakes. Second edition. Windward Publishing, Miami, Florida. 176 pp.). This specimen was found on the shoulder of the road in the grass.

Submitted by **MICHAEL E. WELKER and MICHAEL ARNOLD**, 1911 NW 55th Terrace, Gainesville, Florida 32605, USA; e-mail: herpconservation69@yahoo.com

LAMPROPELTIS TRIANGULUM ELAPSOIDES (Scarlet Kingsnake). USA: FLORIDA: LAFAYETTE Co: 1.4 km N of Dixie Co. line on County Road 357 (29°51'18"N 83°14'40"W), 2021 hours. 13 September 2003. Michael E. Welker and Michael Arnold. Verified by Kenneth L. Krysko. Florida Museum of Natural History (UF 141055 photographic voucher). New county record (Ashton and Ashton 1988. Handbook of Reptiles and Amphibians of Florida. Part 1. The Snakes. Second edition. Windward Publishing, Miami, Florida. 176 pp.). Female found crossing the road. It is currently maintained in captivity and will be deposited at FLMNH upon death.

Submitted by **MICHAEL E. WELKER and MICHAEL ARNOLD**, 1911 NW 55th Terrace, Gainesville, Florida 32605, USA; e-mail: herpconservation69@yahoo.com.

NINIA ATRATA (Hallowell's Earth Snake; Culebra de Tierra; Viejita). VENEZUELA: ESTADO BARINAS: MUNICIPIO BOLÍVAR: Barinitas, Parque Moromoy. E. La Marca, D. Briceño and F. Ayaach. 22 March 1997. Colección de Anfibios y Reptiles, Laboratorio de Biogeografía, Universidad de Los Andes, Mérida, Venezuela (ULABG 4334). First state record. Second record from a Venezuelan Andean locality, fills the gap between a Táchira state record located 220 km to the SW at Burgua River (Roze 1966. La Taxonomía y Zoogeografía de los Ofidios en Venezuela. Univ. Central de Venezuela, Edic. Biblioteca. Caracas, p. 106) and a Portuguesa state record at Mesa de Cavacas, 75 km to the NE (Markezich 2002. Herpetol. Rev. 33:69–74), corroborating its presence in the lowland versant of the Andean Cordillera de Mérida (Lancini and Kornacker 1989. Die Schlangen von Venezuela. Verlag Armitano ed. Caracas, Venezuela, 381 pp.). ESTADO BOLÍVAR: MUNICIPIO CARONÍ: Las Piñas, Guri. Ciudad Guayana. 150 m elev. 28 January 1985. Grupo de Ecología Animal. Colección de Vertebrados de la Universidad de Los Andes, Mérida, Venezuela (CVULA 3696). First state record and first Venezuelan locality south of the Orinoco River (Roze 1966, *op. cit.*; Rivas and Oliveros 1997, Memoria Soc. Cienc. Nat. La Salle 94:36–43). This specimen documents a range extension of 300 km S from the closest northern Venezuelan locality at Cueva del Guácharo in Monagas State (Roze 1966, *op. cit.*; Gorzula and Señaris 1999 "1998". Contribution to

the Herpetofauna of the Venezuelan Guayana I. A Data Base. Scientia Guaianae 8:i-xviii + 1–269 + 32 pls.) and brings the species into the Venezuelan Guayanian shield area, making this taxon part of its Herpetofauna, a fact that was previously explicitly denied (Gorzula and Señaris, *op. cit.*: 174).

Submitted by **ENRIQUE LA MARCA**, Laboratorio de Biogeografía, Escuela de Geografía, Facultad de Ciencias Forestales y Ambientales, Universidad de Los Andes, Apartado Postal 116, Mérida 5101-A, Venezuela (e-mail: lamarca@telcel.net.ve), **LUIS FELIPE ESQUEDA**, Centro Universitario Herpetológico Forestal y Laboratorio de Biogeografía, Facultad de Ciencias Forestales y Ambientales, Universidad de Los Andes, Mérida 5101, Venezuela (e-mail: adenomera@hotmail.com); **JESÚS MANZANILLA**, Museo del Instituto de Zoología Agrícola, Universidad Central de Venezuela, Maracay, Aragua, Venezuela (e-mail: jmanzanilla@mncn.csic.es).

OPHEODRYS AESTIVUS AESTIVUS (Northern Rough Greensnake). USA: FLORIDA: HAMILTON Co: 3.9 km W of County Road 135 on County Road 6 (30°30'37"N, 82°50'01"W), 107 m elev. 30 May 2003. 0.1 km W of County Road 135 on County Road 6 (30°30'05"N, 82°44'17"W), 108 m elev. 19 June 2003. Michael E. Welker and Michael Arnold. Verified by Kenneth L. Krysko. Florida Museum of Natural History (UF 137230–231). New county record (Ashton and Ashton 1988. Handbook of Reptiles and Amphibians of Florida. Part 1. The Snakes. Second edition. Windward Publishing, Miami, Florida. 176 pp.). The first specimen was found alive on the road and is represented by a photograph. The second specimen was found DOR and is represented by a preserved specimen.

Submitted by **MICHAEL E. WELKER and MICHAEL ARNOLD**, 1911 NW 55th Terrace, Gainesville, Florida 32605, USA; e-mail: herpconservation69@yahoo.com.

OPHEODRYS VERNALIS BLANCHARDI (Smooth Green Snake). USA: SOUTH DAKOTA: MARSHALL Co: vegetable garden at home-site in Sacred Hills Circle Community, ca. 1.6 km NW Veblen (45°52'42.8"N; 97°18'30.8"W). 22 September 2003. Laurs Bryan James Williams. Verified by Stanlee Miller. Campbell Museum, Clemson University (CUSC 2169). County record. Previously reported in adjacent Roberts County. (Fishbeck and Underhill 1959. Proc. South Dakota Acad. Sci. 38:107–113).

Submitted by **LAURS BRYAN JAMES WILLIAMS and STEVEN G. PLATT**, Department of Math and Science, Oglala Lakota College, P.O. Box 490, Kyle, South Dakota 57752-0490, USA.

PITUOPHIS LINEATICOLLIS LINEATICOLLIS (Middle American Gopher Snake). MÉXICO: JALISCO: Rancho San Francisco, ca. 1.5 km NE Tapalpa, 2134 m elev. 21 June 1983. Jonathan A. Campbell, William W. Lamar, and David M. Hillis. UTA R-25959. Verified by Eric N. Smith. New state record and extends the range ca. 150 km SW from the nearest record at Dos Aguas, Michoacán (Duellman 1961, Univ. Kansas. Publ. Mus. Nat. Hist. 15:1–148).

Submitted by **PAULINO PONCE-CAMPOS**, Bosque Tropical, A. C., Apartado Postal 5-515, Guadalajara, Jalisco 45042, México; (e-mail: poncecp@hotmail.com), and **PAUL C. USTACH**,

Department of Biology, The University of Texas at Arlington, Arlington, Texas 76019-0498, USA.

RAMPHOTYPHLOPS BRAMINUS (Brahminy Blind Snake). USA: FLORIDA: HILLSBOROUGH Co.: Tampa, 12801 N 52 Street (28°3.748'N, 82°23.826'W). 29 November 2003. K. C. Hennessy and M. Michalak. Verified by Kenneth L. Krysko. Florida Museum of Natural History, University of Florida (UF 140726). Found within leaf litter. New county record (Wilson and Porras 1983. Univ. Kansas Mus. Nat. Hist., Spec. Publ. 9, 89 pp.).

Submitted by **KELLY C. HENNESSY** and **MARTIN MICHALAK**, Florida Museum of Natural History, Division of Ichthyology, University of Florida, Gainesville, Florida 32611, USA; e-mail: kelly3@ufl.edu.

SIBYNOMORPHUS TURGIDUS (Slug-eating Snake). ARGENTINA: CÓRDOBA: DEPARTAMENTO MARCOS JUÁREZ: Marcos Juárez city (32°42'S, 62°06'W). 6 December 2001. Herpetological collection, Fundación Miguel Lillo, Tucumán, Argentina (FML 12522). Verified by G. Scrocchi. Species known from northern and central Argentina, Bolivia, Paraguay, south of Mato Grosso in Brazil, and Uruguay (Franco 1994. O gênero *Sibynomorphus* Fitzinger 1843, no Brasil [Colubridae; Xenodontinae; Dipsadini], Dissertação de Mestrado em Zoologia, Pontifícia Universidade Católica do Rio Grande do Sul, Brazil, 148 pp.; Achával and Olmos 1997. Anfíbios y reptiles del Uruguay, Montevideo, Uruguay, 128 pp.; Giraudo and Scrocchi 2002. Smithsonian. Herpetol. Infor. Serv. 132, 53 pp.). Second record for the province (205 km S airline from previous citation: Cabrera and Merlini 1989. Iheringia, Ser. Zool. 69:151–153), extends known distribution in Argentina 180 km (airline) SW from previous southernmost record (Scrocchi et al. 1993. Rev. Brasil. Biol. 53[2]:197–208).

Submitted by **GERARDO C. LEYNAUD** and **RAQUEL SILMARA CERVANTES**, Centro de Zoología Aplicada, Universidad Nacional de Córdoba, Casilla de Correo 122, Córdoba (5000), Argentina; e-mail: gleynaud@efn.uncor.edu.

SISTRURUS MILIARIUS BARBOURI (Dusky Pygmy Rattlesnake). USA: FLORIDA: HAMILTON Co.: 5.2 km N of US 41 on County Road 135 (30°25'58"N, 82°41'08"W), 108 m elev. 1.1 km W of County Road 135 on County Road 6 (30°29'07"N, 82°45'79"W). 13 October 2002. Michael E. Welker and Michael Arnold. Verified by Kenneth L. Krysko. Florida Museum of Natural History (UF 137117, 137116). New county record (Ashton and Ashton 1988. Handbook of Reptiles and Amphibians of Florida. Part 1. The Snakes. Second edition. Windward Publishing, Miami, Florida, 176 pp.).

Submitted by **MICHAEL E. WELKER** and **MICHAEL ARNOLD**, 1911 NW 55th Terrace, Gainesville, Florida 32605, USA; e-mail: herpconservation69@yahoo.com.

STORERIA DEKAYI WRIGHTORUM (Midland Brownsnake). USA: ARKANSAS: SEVIER Co.: 8.0 km W Falls Chapel off Frog Level Rd. 28 February 2004. Z. D. Ramsey. Arkansas State University Museum of Zoology, Herpetological Collection (ASUMZ 28278). Verified by Stanley E. Trauth. New county record partially filling hiatus in extreme southwestern Arkansas (Trauth

et al. *In press*. Amphibians and Reptiles of Arkansas, Univ. of Arkansas Press, Fayetteville). *Storeria dekayi* has also been reported previously from adjacent McCurtain Co., Oklahoma (Webb 1970. Reptiles of Oklahoma. Univ. Oklahoma Press, Norman, Oklahoma, 370 pp.; Secor and Carpenter 1984. Oklahoma Herp. Soc. Spec. Publ. 1:1–57; Sam Noble Oklahoma Museum of Natural History Database of Reptiles [<http://www.snomnh3.ou.edu/db/reptiles/>]; Oklahoma Biological Survey's Distribution of Oklahoma Amphibians and Reptiles by Recorded Sightings, DOKARRS [<http://www.biosurvey.ou.edu/dokadesc.html>]).

Submitted by **ZACHARY D. RAMSEY** and **CHRIS T. McALLISTER**, Department of Biology, Texas A&M University-Texarkana, Texarkana, Texas 75505, USA; e-mail: chris.mcallister@tamut.edu.

TROPIDODRYAS STRIATICEPS (Jiboinha). BRAZIL: RIO GRANDE DO SUL: Municipality of Osório (29°53'S, 50°16'W). 17 November 2002. C. Hofstadler-Deiques and P. Schmitt. Museu de Zoologia da Universidade do Vale do Rio dos Sinos, São Leopoldo, Rio Grande do Sul (MZU 451). Municipality of Viamão: Capão da Porteira (30°06'S, 50°41'W). 16 November 1996. A. Amaral. Museu de Ciências e Tecnologia da Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre (MCP 9058). Verified by R. Fernandes. Species previously known from northeastern to southern Brazil, from the state of Bahia to Rio Grande do Sul (Thomas and Dixon 1977. The Pearce-Sellards Series 27:1–20; Argôlo 1999. Herpetol. Rev. 30:56; Lema 2002. Os Répteis do Rio Grande do Sul: atuais e fósseis - biogeografia - ofidismo. Edipucrs, Porto Alegre, 264 pp.). First records outside the municipality of São Pedro de Alcântara (cited as Torres by Lema 2002, *op. cit.*), in the state of Rio Grande do Sul. Extends southern range ca. 81 km airline, and southwestern range ca. 115 km airline.

Submitted by **CLARICE HOFSTADLER-DEIQUES** and **PAULA SCHMITT**, Laboratório de Embriologia, Centro de Ciências da Saúde da Universidade do Vale do Rio dos Sinos, Avenida Unisinos, 950, 93022-900 São Leopoldo, Rio Grande do Sul, Brazil (e-mail: deiques@bios.unisinos.br), and **MARCOS DIBERNARDO**, Laboratório de Herpetologia, Museu de Ciências e Tecnologia & Faculdade de Biociências, Pontifícia Universidade Católica do Rio Grande do Sul, Avenida Ipiranga, 6681, 90619-900 Porto Alegre, Rio Grande do Sul, Brazil (e-mail: madibe@pucrs.br).

Amphibian and Reptile Distribution Records for Louisiana

JEFF BOUNDY

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The following records add to a comprehensive summary of the occurrence of amphibians and reptiles within Louisiana, based on specimens housed in the Louisiana State University Museum of Natural Science (LSUMZ). Receipt of new records is largely due to the accession into LSUMZ of the collections formerly housed at the University of Louisiana at Lafayette and Southeastern Louisiana University, uncatalogued material from Northwestern State University, as well as recent collecting efforts by several individuals credited within the following accounts. All records are new for their respective parishes, based on Dundee and Rossman (1989), unless otherwise noted.

Caudata

Ambystoma maculatum (Spotted Salamander). SABINE PARISH: Bayou Toro at LA 392. 16 August 1973. Jack Deshotels, Philip St. Romain, Mark Staton. LSUMZ 60050.

Amphiuma tridactylum (Three-toed Amphiuma). SAINT JOHN THE BAPTIST PARISH: Frenier Rd, 200 m W of Lake Pontchartrain. 15 April 1988. Cliff Fontenot. LSUMZ 58689.

Hemidactylium scutatum (Four-toed Salamander). EAST FELICIANA PARISH: Idilwild LSU Experimental Farm, SC boundary on Gross Rd, 2.2 km E of Idilwild Rd. 1 February 2001. Jeff Boundy. LSUMZ 82992.

Necturus louisianensis (Red River Mudpuppy). NATCHITOCHES PARISH: Kisatchie Bayou approx. 9 km NE of Kisatchie. 9 April 1977. Tom Hardaway. LSUMZ 62955.

Anura

Eleutherodactylus planirostris (Greenhouse Frog). LAFAYETTE PARISH: Memory Ln, Lafayette. 30 July 2000. David Patton. LSUMZ 81452. PLAQUEMINES PARISH: LA 23, E side of Boothville. 7 September 2000. Jeff Boundy. LSUMZ 81461. Latter record extends range of this introduced species to near mouth of Mississippi River.

Gastrophryne carolinensis (Eastern Narrow-mouthed Toad). RED RIVER PARISH: 14.4 km E of Coushatta on LA 155. 12 May 1973. N. Loftin. LSUMZ 85447–449.

Hyla avivoca (Bird-voiced Treefrog). WEST FELICIANA PARISH: LA 964, 3.6 km SE of US 60. 28 April 1966. William Fullilove. LSUMZ 14756.

Hyla chrysoscelis (Cope's Gray Treefrog). ST. JAMES PARISH: 1.0 km N of Grand Point. 20 February 2003. Jeff Boundy. LSUMZ 86113–114.

Hyla femoralis (Pine Woods Treefrog). LIVINGSTON PARISH: LA 22, 3.6 km W of Killian. 26 July 1996. Steve Karsen. LSUMZ 57774,

57775. Also from Livingston Parish: LSUMZ 87350.

Hyla squirella (Squirrel Treefrog). ST. JAMES PARISH: 1.0 km N of Grand Point. 19 April 2003. Jeff and Scot Boundy. LSUMZ 87155.

Pseudacris crucifer (Spring Peeper). WINN PARISH: 4.8 km S of Winnfield. 4 April 1971. Collector unknown. LSUMZ 85163.

Rana palustris (Pickerel Frog). BEAUREGARD PARISH: LA 111, 3.6 km N of US 190. 8 April 1967. Larry D. Wilson. EAST FELICIANA PARISH: LA 10, 11.3 km W of Clinton. 27 April 1969. J. Moore. LSUMZ 69957. VERNON PARISH: LA 111, 2.9 km S of LA 392. 19 February 1966. Larry D. Wilson. LSUMZ 42249.

Rana sphenoccephala (Southern Leopard Frog). WINN PARISH: 3.6 km E of Brewton's Mill. 1 July 1974. B. Stewart. LSUMZ 70332. An additional record from Winn Parish: LSUMZ 70333.

Scaphiopus huerterii (Hurter's Spadefoot). RED RIVER PARISH: 14.4 km E of Coushatta on LA 155. 12 May 1973. N. Loftin. LSUMZ 84987. A supporting record from Red River Parish: LSUMZ 85318.

Crocodylia

Alligator mississippiensis (American Alligator). RED RIVER PARISH: Red River near Coushatta. 15 September 1964. John H. Champion. LSUMZ 14567.

Testudines

Apalone spinifera (Spiny Softshell). VERMILION PARISH: LA 70, 1.8 km E of LA 92. 28 April 1975. Lou Wahlen. LSUMZ 75144.

Chelydra serpentina (Snapping Turtle). BIENVILLE PARISH: Friendship Lake on LA 4. 15 April 1969. G. Alvarez, Douglas Rossman, D. Ramsden. LSUMZ 32820. A supporting record from Bienville Parish: LSUMZ 86121. ST. JOHN THE BAPTIST PARISH: Edgard. 3 February 1969. C. G. Boerne. LSUMZ 32823.

Deirochelys reticularia (Chicken Turtle). ALLEN PARISH: US 190, 13.9 km WNW of Kinder. 14 April 1968. Douglas A. Rossman, Nita J. Rossman. LSUMZ 19202.

Graptemys ouachitensis (Ouachita Map Turtle). EAST BATON ROUGE PARISH: Baton Rouge. 11 May 1963. Brent Nickog. LSUMZ 34026. TENSAS PARISH: Louisiana side of Rodney Lake. 18 November 1995. Steve Shively. LSUMZ 57267.

Malaclemys terrapin (Diamond-backed Terrapin). LAFORCHE PARISH: Bayou Ferblanc, approx. 5.4 km NW of Jefferson Parish line. 15 August 1970. Jim Bishop, Bo Blackman. LSUMZ 29569. VERMILION PARISH: University of Southwestern Louisiana Biological Field Station. 18 February 1961. C. R. Norden. LSUMZ 74149.

Pseudemys concinna (River Cooter). EAST FELICIANA PARISH: Amite River at LA 10. 3 June 1971. Patricia Kimmich Blaney. LSUMZ 41103. GRANT PARISH: 3.6 km S of Georgetown. 21 April 1950. J. Pharis. LSUMZ 1661. LAFAYETTE PARISH: D. S. Young Farm, Kaliste Saloom Rd 2.2 km W of Flanders Rd. 5 May 1973. Kenneth M. Fahey. LSUMZ 74179, 74180.

Terrapene carolina (Eastern Box Turtle). VERMILION PARISH: 43 km S of Kaplan. 19 April 1964. Larry D. Wilson. LSUMZ 32916. RED RIVER PARISH: 3.2 km S of Coushatta on LA 1. 25 April 1973. Tom Damico. LSUMZ 86169. 20.8 km E of Coushatta. 12 May 1973. N. Loftin. LSUMZ 86170.

Lacertilia

Anolis sagrei (Brown Anole). EAST BATON ROUGE PARISH: Louisiana Nursery near Bluebonnet Blvd and Perkins Rd, Baton Rouge. 9 October 2001. Ryan Chabarria. LSUMZ 83818. Adults and juveniles persisted at this site through mid-2002, but it could not be determined whether they represented a reproducing population or repetitious importations via plants (R. Chabarria, pers. comm.). LAFAYETTE PARISH: Lafayette Nursery, Lafayette. 1975. No collector. LSUMZ 71668. ORLEANS PARISH: jct of Decatur and Esplanade, New Orleans. 24 September 2000. Frank Burbrink. LSUMZ 81976. *Anolis sagrei* was found in substantial numbers in the LaPlace area, Saint John the Baptist Parish at various times during the 1980s and early 1990s, supposedly introduced accidentally by reptile dealers, but populations never persisted, evidently due to winter mortality (L. Prima, D. Vicknair, pers. comm.; no vouchers).

Eumeces anthracinus (Coal Skink). ALLEN PARISH: 20 km S of jct of LA 26 and LA 1156. 9 April 1973. Marion Moore. LSUMZ 71698. BEAUREGARD PARISH: Smyrna Rd, 24 km E of DeRidder. 3 April 1980. Mike Harbison. LSUMZ 85891.

Eumeces fasciatus (Common Five-lined Skink). ASCENSION PARISH: NW Intersection of I-10 and LA 22, Sorrento. 5 March 1998. Jeff Boundy. LSUMZ 59491. Bluff Swamp directly E of Bayou Braud. 17 March 1999. Jeff Boundy, Steve Shively. LSUMZ 80890. An additional specimen from ASCENSION PARISH: LSUMZ 86480. BIENVILLE PARISH: 4.8 km S of Castor. 20 June 1976. John Bruza. LSUMZ 85895.

Eumeces laticeps (Broad-headed Skink). SAINT JOHN THE BAPTIST PARISH: 0.5 mi S of US 61, W of Evangeline Rd, LaPlace. 1 October 1997. Jeff Boundy. LSUMZ 58581.

Hemidactylus turcicus (Mediterranean House Gecko). PLAQUEMINES PARISH: Belle Chasse Naval Air Station. 20 April 1998. Jeff Boundy, Steve Karsen. LSUMZ 59610. ST. CHARLES PARISH: Bonne Carre Spillway, W side, 0.8 km S of US 61. 14 February 2001. Jeff Boundy, Adam Leache. LSUMZ 83029-030. TANGIPAHOA PARISH: Southeastern Louisiana University Campus. 23 March 1987. C. Knight. LSUMZ 59591. Also from Tangipahoa LSUMZ 59592. WEST BATON ROUGE PARISH: LA 76, 0.9 km E of LA 417. 18 January 1963. M. J. Fouquette. LSUMZ 75397.

Ophisaurus attenuatus (Slender Glass Lizard). ACADIA PARISH: Egan. 5 February 1966. E. M. Trumps. LSUMZ 73501. EVANGELINE PARISH: LA 10, 7.6 km SE of Beaver. 28 June 1965. Jack Fouquette, Jim Delahoussaye. LSUMZ 73497. LAFAYETTE PARISH: LA 92 bridge E of Maurice city limits. 26 April 1975. Michael Courville. LSUMZ 73511. NATCHITOCHES PARISH: Red Dirt Wildlife Management Area, jct of Longleaf Trail and Bluff Camp Rd. 2 June 1995. Darrel O'Quinn. LSUMZ 57077. Also from Natchitoches Parish: LSUMZ 57639, 80998, 83492, 84660, 85797. ST. TAMMANY PARISH: Lake Ramsey Rd, 0.5 km E of Lake Ramsey Subdivision. 16 October 1998. Steve Karsen, Brian Horn. LSUMZ 80718. AVOYELLES PARISH: road between Marksville and Alexandria. 9 April 1959. Harold Cleveland. LSUMZ 86417.

Sceloporus consobrinus (Prairie Lizard). AVOYELLES PARISH: 1.7 km W of Cottonport on Bayou Rouge. 15 April 1965. Glenda Tarver. LSUMZ 75562-75564. EVANGELINE PARISH: Clearwater. 15 November 1958. G. M. Stokes. LSUMZ 75530. Additional

specimens from Evangeline Parish: LSUMZ 75535, 75539-40, 75545.

Serpentes

Agkistrodon contortrix (Copperhead). ACADIA PARISH: near Eunice. 15 November 1961. McClendon. LSUMZ 82238. Additional specimens from Acadia Parish: LSUMZ 82239-243.

Carphophis amoenus (Eastern Worm Snake). ASCENSION PARISH: near Gonzales. September 1966. Collector unknown. LSUMZ 18218.

Cemophora coccinea (Scarletsnake). CALCASIEU PARISH: LA 12, 18 km NE of Starks. 19 June 1971. Jim Roberts. LSUMZ 75938.

Crotalus horridus (Timber Rattlesnake). NATCHITOCHES PARISH: Longleaf Trail, 1.8 km E of Kisatchie Bayou. 21 April 1990. Douglas A. Rossman. LSUMZ 49582. Additional vouchers from Natchitoches Parish include: LSUMZ 58462, 83711, 84967. RAPIDES PARISH: LA 8 at Sharp. 23 April 1997. Theron Magers. LSUMZ 58475. Additional specimens from Rapides Parish: LSUMZ 78817-18.

Diadophis punctatus (Ring-necked Snake). ASCENSION PARISH: 5.4 km S of Kleinpeter. 23 February 1962. Laurence Binford, Burt Monroe Jr. LSUMZ 11969-70. Additional vouchers from Ascension Parish: LSUMZ 16688, 22956, 29341, 58257, 80895.

Farancia abacura (Red-bellied Mudsnake). ACADIA PARISH: Interstate 10, 9 km E of Jennings. 11 May 1975. James McLean. LSUMZ 28594. Additional vouchers from Acadia Parish: LSUMZ 75906, 59063.

Heterodon platirhinos (Eastern Hog-nosed Snake). ASCENSION PARISH: LA 44, 12.6 km NE of Donaldsonville. 1 July 1966. Larry D. Wilson. LSUMZ 43565.

Lampropeltis calligaster (Yellow-bellied Kingsnake). GRANT PARISH: US 71 between Colfax and Montgomery. 2 May 1997. Theron Magers. LSUMZ 58514.

Lampropeltis getula (Common Kingsnake). ASCENSION PARISH: near Belle Helene Plantation. 8 May 1965. E. Breaux. LSUMZ 23761. Additional vouchers from Ascension Parish: LSUMZ 47464, 59492, 86472.

Nerodia erythrogaster (Plain-bellied Watersnake). ST. BERNARD PARISH: LA 46, 3.6 km E of St. Bernard. 26 April 1998. Steve Karsen. LSUMZ 59622.

Opheodrys aestivus (Rough Greensnake). SABINE PARISH: 1.6 km E of Many on LA 6. 23 September 1986. Jodi Werfal. LSUMZ 86308.

Regina rigida (Glossy Crayfish Snake). ASCENSION PARISH: Bluff Swamp. 8 December 1982. C. Yates. LSUMZ 41510. Additional specimens from Ascension Parish: LSUMZ 42161, 42174.

Storeria dekayi (Dekay's Brownsnake). ASSUMPTION PARISH: LA 308, 9.6 km SE of Napoleonville Courthouse. 28 January 1973. James D. Rives III. LSUMZ 77903.

Storeria occipitomaculata (Red-bellied Snake). ASCENSION PARISH: Gonzales. 15 October 1998. Frank Marabella. LSUMZ 80971. EVANGELINE PARISH: approximately 6.5 km N of Basile. 5 April 1969. Paul Meier. LSUMZ 77955. WINN PARISH: 11.2 km E of

Atlanta. 21 April 1962. Keith A. Arnold. LSUMZ 12254. Also from Winn Parish LSUMZ 23902.

Thamnophis proximus (Western Ribbonsnake). WINN PARISH: LA 501, 2.3 km N of Calvin. 26 April 1969. R. Munz. LSUMZ 23861.

Thamnophis sirtalis (Common Gartersnake). ASSUMPTION PARISH: 8 km S of Napoleonville on LA 401. 15 April 1968. A. J. Kern. LSUMZ 79299. LAFORCHE PARISH: Kraemer. 5 April 1975. Collector unknown. LSUMZ 47312. NATCHITOCHES PARISH: near Robeline. No date. Theron Magers. LSUMZ 85826, 86342–43.

Virginia striatula (Rough Earthsnake). EVANGELINE PARISH: Basile. 10 April 1969. Mark Meier. LSUMZ 81527. Additional records from Evangeline Parish: LSUMZ 81528, 81529, 81530. VERMILION PARISH: Vermilion Bayou 1.8 km S of Abbeville. 15 May 1971. Cecil LeBlanc. LSUMZ 81561–62.

Virginia valeriae (Smooth Earthsnake). GRANT PARISH: Pollock. April 1996. Kristi Wharton. LSUMZ 57754–57758. WEST FELICIANA PARISH: Butler's Mansion, 3.6 km N of St. Francisville. 16 March 1963. Douglas H. Morse. LSUMZ 17901.

Acknowledgments.—I thank James Jackson and Robert Jaeger (ULL), and Brian Crother and Richard Seigel (SLU) for presenting their estimable collections to the LSUMZ, and Jonathan Akin for donations from NSU. I also wish to thank Jim McGuire and Tom Devitt for taking the time to confirm the identification of specimens.

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Additional Records and Range Extensions of Reptiles from Morelos, México

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As a part of the project entitled Herpetofauna of the Sierra de Huautla and Biological Corridor Chichinautzin in central Mexico, we collected six species previously unknown in Morelos and documented range extensions for three others. The new records were found in the Sierra de Huautla in southern Morelos, an extensive natural protected area of tropical dry forest and oak forest. The specimens were captured and preserved using the standard methods proposed by Simmons (1987). The specimens were deposited in the herpetological collection of the Universidad Autónoma del Estado de Morelos (EBUM). All specimen identifications were

verified by Fausto Mendez de la Cruz.

Testudines

Apalone spinifera spinifera (Eastern Spiny Softshell). An adult female (EBUM 2898), found in the Río Amacuzac near the Las Huertas spa, Municipality of Tlaquiltenango (18°33'50"N, 99°33'50"W), 947 m elev., 17 October 1999. The first vouchered record for Morelos. An individual was previously observed in Cruz Pintada pond, Sierra de Huautla, but not reported by Castro-Franco and Bustos (1994). These turtles were introduced to Morelos as pets released near rivers.

Lacertilia

Cnemidophorus communis (= *Aspidoscelis communis*) (Colima Giant Whiptail). One subadult (EBUM 2355) captured in Ajuchitlán (18°28'30"N, 99°0'6"W), Municipality Tlaquiltenango 1053 m elev., 25 October 1997. Previously known from the coastal lowlands of Colima, Jalisco, and Michoacán, from the plateau region of Colima, and the low valleys of the Sierra de Coalcoman and Tepalcatepec Valley, Michoacán (Duellman and Zweifel 1962).

Cnemidophorus lineattissima (= *Aspidoscelis lineattissima*) (Twelve-lined Whiptail). One female (EBUM 2435) collected in Chimalacatlán (18°23'13"N, 99°7'20"W), Municipality Tlaquiltenango, 760 m elev., 8 February 1998. This species was known to occur in lowlands, northwestward from the Río Balsas Basin in Tepalcatepec Valley, Michoacán and Nayarit (Duellman and Wellman 1960).

Phrynosoma asio (Giant Horned Lizard). Two adult males (EBUM 3421–22), collected 2 km S of the pyramids archaeological zone Chimalacatlán, Municipality of Tlaquiltenango, 1065 m elev., 8 February 1998. Previously reported by Smith and Taylor (1950) from Colima through coastal Michoacán, Guerrero, Oaxaca, Chiapas, and Mexcala, Guerrero along the Río Balsas.

Sceloporus utiformis (Largescale Spiny Lizard). An adult male (EBUM 2373), collected 4 km S of Tilzapotla (18°27'7"N, 99°16'6"W) in Puente de Ixtla county, in a tropical dry forest, "Los Cocos" canyon, bordering the state of Guerrero. Three adult females (EBUM 2371–72, 2374) were collected on "Cerro Frio" (18°27'7"N; 99°16'8"W) 1 km S of Tilzapotla in oak forest. Recorded previously by Smith and Taylor (1950) near Colima. They described the distribution as being on Pacific slopes from southern Sinaloa to western Guerrero, extending inland about 125 miles in the southern part of the range. Previously known in Sinaloa, Nayarit, Jalisco, Colima, Michoacán, Guerrero (Smith and Taylor 1950; Ramírez-Bautista 1994).

Serpentes

Agkistrodon bilineatus bilineatus (Mexican Cantil). One male (EBUM 3422) was collected SE of Coaxitlán, Municipality of Tlaquiltenango (18°26'39"N, 99°10'21"W) under fallen leaves in a dry forest. Previously known in Morelos from Progreso (18°53'0"N, 99°10'0"W), Jiutepec 9 km E of Cuernavaca City (Davis and Smith 1953).

Coniophanes lateralis (Stripeless Snake). An adult male (EBUM 3420) captured in Rancho la Herradura, Ahuatepec, 7 km NE of Cuernavaca (18°57'30"N, 99°12'10"W) 1850 m elev., 7 August 1988, and another observed in the Sierra de Huautla in southern

Morelos, 15 April 2002. Previously known in Morelos from Huajintlán, south of Puente de Ixtla (Smith and Taylor 1945).

Ficimia publia (Blotched Hook-nosed Snake). One male (EBUM 2446) was found dead on the road 2 km S of Chimalacatlán (18°26'21"N, 99°06'22"W) Municipality of Tlaquiltenango, in tropical dry forest. Smith and Smith (1976) reported *F. publia*, *F. ruspatur*, and *F. olivacea* near Cuernavaca, Morelos, where we have frequently observed *Pseudoficimia frontalis* but not specimens of *Ficimia*. Hardy (1972) believed that records of *Ficimia* from Cuernavaca were misidentified specimens of *P. frontalis*. Castro-Franco and Bustos (1994) supported Hardy (1972) and commented that *Ficimia* does not occur in the Cuernavaca area. Thus, our record of *F. publia* from Chimalacatlán is the first confirmed report of this species from Morelos.

Micrurus laticollaris (Balsan Coral Snake). Several records extend the range of this species within Morelos. EBUM 2390, a female collected near Cruz Pintada pond, Sierra de Huautla, Municipality of Tlaquiltenango (18°33'39"N, 99°01'26"W) at 1050 m elev., 25 October 1997; EBUM 055 and 502, females captured in El Texcal, Municipality of Jiutepec (18°50'00"N, 99°10'00"W) at 1380 m elev., 23 November 1978; EBUM 500, 503 in Cuautla (18°50'45"N, 98°56'30"W); EBUM 501, 2 km E of Palpan, Municipality of Miaatlán (18°51'0"N, 99°25'0"W); EBUM 504, 6 km N of Michapa pond, Coatlán del Río (18°39'45"N, 99°29'0"W). All specimens were found in dry forest. Previously recorded from Cuernavaca, Morelos (Smith and Taylor 1945) and Progreso, Jiutepec (Davis and Smith 1953).

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BOOK REVIEWS

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Biology of the Vipers, edited by Gordon W. Schuett, Mats Höggren, Michael E. Douglas, and Harry W. Greene. 2002. Eagle Mountain Publishing, 7705 North Wyatt Earp Avenue, Eagle Mountain, Utah 84043, USA. Hardcover. xii + 580 pp., 16 pls. US \$75.00. ISBN 0-9720154-0-X.

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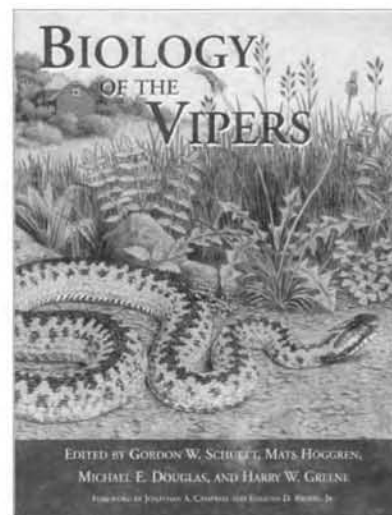
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Multi-authored volumes always strike me as potentially iffy propositions. When the chapters are carefully edited and united by a common conceptual theme, the result can be a well-integrated body of work that makes a major collective contribution to its field. Too often, however, such volumes are simply collections of loosely related chapters that could just as easily have been published separately in disparate outlets.

Biology of the Vipers does have a common theme, but it is a taxon rather than a conceptual area, and the chapters that comprise the book cover the map in terms of subject matter. Thus, the likely audience is clear (and fairly narrow): snake biologists. I study snakes, so I naturally was drawn to *Biology of the Vipers*, and, although I cannot offer unqualified praise, I found my time reading it to have been quite well spent.

Biology of the Vipers originated in an international conference held in May 2000 in Marielund, Sweden. The book also serves as a companion and, in some ways, successor to an earlier multi-authored volume, edited by Campbell and Brodie (1992), on pitvipers. The two books are identical in size and format and *Biology of the Vipers* even has a foreword by Campbell and Brodie, cementing this line of succession. The main difference is the increase in breadth of the newer work to include all vipers. Appropriately enough for this wider embrace and for the location where the conference was held, the picture on the dust jacket, by William B. Montgomery, is of the adder, *Vipera berus*. The authors comprise a virtual who's-who of students of viper biology, both seasoned veterans and younger practitioners. Coverage is biased towards New World and European taxa, with relatively little on Asiatic species and no chapters on African species. This presumably reflects bias both in where research is being done and in who participated in the conference.

Biology of the Vipers is a big book, 580 pages long, with 35



chapters under four section headings: Systematics, Taxonomy, and Phylogeography; Behavior, Ecology, Natural History, and Evolution; Physiology and Reproductive Biology; and Conservation. Chapters range in type from reviews to more particular studies on a single species. Several chapters discuss work that is in its early stages; one such chapter essentially amounts to a detailed research proposal. The biggest section, with 21 chapters, is the second one on Ecology. It seems to be a bit of a catch-all for papers that did not fit obviously under any of the other headings. This section in fact easily could have been subdivided into more cohesive units. Several papers on envenomation and predatory behavior (Cundall; Hayes et al.; Kardong and Smith; Stiles et al.) are clearly closely related, but they do not even appear close to one another in the apparently random order of chapters in this section. The section on Conservation is the shortest, with only two chapters. The book concludes with 16 pages of fine color plates showing most (or all? —I didn't count) of the many species mentioned in the text, complete with notes on natural history in the captions.

The most cohesive section, it strikes me, is the first one on Systematics. Not only were there common themes here, but the various authors seemed to be aware of each other's chapters and made appropriate cross-references. I am neither a molecular biologist nor a systematist, but I found these chapters, while not a gripping read, a very useful overview and update (among the latter being the genus *Daboia*, which was new to me). Because of the snake fauna in the region where I live, I was especially interested in the chapter by Douglas et al. on the phylogeography of the Western Rattlesnake (*Crotalus viridis*) complex, which has been the subject of much analysis, including some recent papers. Douglas et al.'s conclusions are strongly shaped by their support for the phylogenetic species concept, which in turn leads to some important differences with other workers in taxonomic assignments. Thus, the Northern Pacific Rattlesnake (*Crotalus oregonus*) is either a separate species (Douglas et al.) or a subspecies of a more widely distributed Western Rattlesnake (Ashton and de Queiroz 2001). This is an important debate, but I think that it could be conducted with a little more temperate language: Douglas et al.'s dismissal of the conclusions of others as "gratuitous" is impolite, at best.

As an ecologist, I found myself on more familiar and comfortable ground in the long section on behavior, ecology, etc. However, I also found the papers in this section to be very uneven in quality. Some, though, were models of their kind. For example, the chapter by Hayes et al. on factors influencing venom expenditure was a well-written, comprehensive, and critical review that also incorporated some new data. I was especially interested in the differences between defensive and predatory strikes, which I must admit I had thought about only fleetingly in the past. Most important, though, Hayes et al. (p. 225) encourage researchers to widen their view beyond just snakes in order to put envenomation by snakes into a broader evolutionary context. I say "Amen" to that sentiment. Other authors in this book also make clear links between their work and general theory (e.g., Douglas et al., Höggren and Tegelström), but this kind of connection is lacking in some chapters. In fact, I was reminded in places of an article by Bonnet et al. (2002), on taxonomic chauvinism in publishing, in which they complained that papers on ectothermic vertebrates in "high-impact" ecological journals had to be framed more conceptually than those on endotherms. Bonnet et al. (2002) supported

this argument with data showing, among other things, that the first mention of the study organism appeared significantly later in papers on ectotherms. I'm not so sure that this is a bad thing, and not just for papers on ectotherms.

A number of other chapters in the Ecology section were highlights for me. Greene et al. combine detailed natural history observations, experiments, and phylogenetic analysis in revealing strong evidence for postpartum (or post-hatching) parental behavior in many vipers. One of the points that intrigued me in this chapter was the extreme care that the authors took to minimize disturbance when they observed wild rattlesnakes. This can only be a good thing, but I was left wondering: "Are rattlesnakes really that sensitive?" In my experience, rattlesnakes are among the most watchable of snakes in the wild, an observation supported by the details presented in this chapter, which would be difficult to obtain for many (most?) other kinds of snakes. Sealy, in a chapter in the later section on Conservation, also touches on this point. He observes, for example, that Timber Rattlesnakes (*Crotalus horridus*) in woodlands can be approached very closely without any apparent response unless directly disturbed. Snakes away from cover, by contrast, exhibit various defensive behaviors when approached. Thus, context matters.

Greene et al. also go to some lengths to reduce the effects of handling on short- or long-term behavior, taking all measurements from their snakes with the animal under anesthesia. But how important are these effects? Are they necessarily worse than the grogginess accompanying recovery from anesthesia? No doubt there is variation among taxa, but I doubt that the requirement for anesthesia is a general one for handling snakes. For example, I have watched garter snakes return to foraging and catching food within seconds of release, just after I have stretched, weighed, and palpated them for food. Greene et al. raise an important issue, though, and one that I've thought about a lot, but also one that is difficult or impossible to test. How can we study any animal, even just watching it, without potentially disturbing it? How can we know that what we are seeing is natural?

Another chapter that caught my attention was that by Mori et al. on the subtropical Hime-Habu (*Ovophis okinavensis*), a low-temperature binge-feeder on breeding ranid frogs. This chapter reminded me of the Rubber Boa (*Charina bottae*), which is sometimes active at night at quite low temperatures that are below its apparent preferred body temperature (Dorcas and Peterson 1998). The Hime-Habu shows little evidence of physiological adaptation to low temperature; for example, it cannot digest food quickly at low temperatures (although it can retain it for digestion). Apparently, activity on cool nights and low-temperature feeding are seen in some other Asiatic vipers: in their chapter, Orlov et al. note such behavior in at least two other species of *Ovophis* and in *Azemiops*.

The chapter by Orlov et al. is in fact one of the real services that this book provides, one that would be unlikely to be duplicated in a journal article. Orlov et al. summarize distribution, taxonomy, and natural history information for 21 species and subspecies of little-known Asiatic viperids. Coupled with the color plates at the back of the book, this chapter provides the beginnings of what could be a very useful field guide.

The third section (Physiology) of *Biology of the Vipers* consists of six chapters, of which three struck me as particularly interest-

ing, albeit in different ways. Almeida-Santos and Salomão report on reproduction in tropical vipers, discussing, among other things, uterine muscular twisting (apparently similar in function to the copulatory plug of natricines), evidence for parthenogenesis (surely molecular tools could be used to settle this question), and the occurrence of inter-sex females in *Bothrops insularis*. In another chapter, Beaupre uses an individually based physiological simulation to model growth and reproduction in rattlesnakes. The model itself is informative enough, but so are Beaupre's introductory admission to having seen the error of his ways about the utility of models and his good advice about the role that models can play in the development of hypotheses to test experimentally. He provides plenty of such ideas. Bonnet et al., in the following chapter, argue for applying the complementary approaches of physiological experiment and mark-recapture population analysis to determine costs of reproduction. Although I think that Bonnet et al. misconstrue the aims of some other studies, including one of my own, I found much of value in this chapter. One fascinating observation for me is that female Aspik Vipers (*Vipera aspis*), which Bonnet et al. study, have extremely high costs of reproduction, especially manifested in postpartum mortality, which makes these animals effectively semelparous (see also Luiselli and Zuffi's chapter in the Ecology section). This contrasts markedly with the rattlesnakes discussed elsewhere that experience long lives and multiple opportunities for reproduction (see chapters by Greene et al., Beaupre, Martin). Why are the costs so different in these two groups of vipers? Even more important, why is there no discussion of this among authors?

The selection of chapters mentioned above is biased to some extent by my own interests, but there are far too many chapters for me to discuss them all individually in any case. I will not even attempt to list them all. However, topics covered, in addition to those I already have noted, include: phylogenetic correlates of food habits (Martins et al.), caudal luring (Reiserer), patterns of rattle loss (Rowe et al.), the fossil record of vipers (Szyndlar and Rage), translocation of "problem" rattlesnakes (Nowak et al.; Sealy), and what I can only describe as adaptive constipation (Lillywhite et al.).

Despite numerous strengths, *Biology of the Vipers* also has significant weaknesses. The more trivial of these are technical details that suggest inattentive proofreading and editing. After awhile, I gave up trying to keep track of the numerous typographical and grammatical errors, but examples are not difficult to find (e.g., "Craycraft" instead of "Cracraft" on p. 40; "climactic" instead of "climatic," p. 287; "determinate" instead of "determinant," p. 567). The book generally is well presented and has a nice appearance, but there are signs of running ink in Fig. 4 of Reiserer's chapter. These points, however, are minor; my somewhat muted enthusiasm for this book is based on more substantive criticisms.

First, I think that the editors should have been much more ruthless in limiting the length of some of the longer chapters, including their own. Second, the detail in a couple of chapters verges on presentation of raw data. Readers cannot be expected to assimilate that which has not been properly digested (and this book is a big meal to begin with). In some cases, the data simply are too thin for meaningful inferences to be drawn, a situation that will not be helped by further analysis (or catalysis), only by further fieldwork or experimentation. Thus, one real problem with this

volume is that some of the work presented is incomplete and prematurely published. Schuett et al. even acknowledge this in a curious paragraph concluding the introduction to their chapter. Admittedly, it can be difficult to recognize the logical stopping point for a study, and all studies are snapshots of ongoing work, but in the end, something is either publishable or it is not. *Biology of the Vipers* would have benefited from application of some of the same standards used in most journals. It also would have benefited from closer integration among chapters. The result would have been a leaner, tighter, and better book.

All this makes me ask: What motivates an author to publish a chapter in a book rather than a paper in a journal? After all, the latter is usually seen as more valuable from the point-of-view of earning grant funds, etc. I suspect that the answer lies, at least partly, in the opportunity to review a body of work (e.g., Hayes et al.) or to expand on a topic in a detailed way that might not be possible in the confines of a journal article (e.g., Greene et al.). Also, book chapters, especially those based on conference proceedings like this one, offer an opportunity to publish "works in progress," which may or may not see the light of day later in more fully developed form in a journal. These are worthwhile aims and, done well, this kind of diversity is more than welcome. However, it also is a bit risky.

Would *Biology of the Vipers* have been a better book had it not been based on proceedings of a conference? Not necessarily—but I think conference proceedings work better when the resulting volume is more selective and focused on specific, well-integrated topics. I, and others who study snakes, will find this book valuable and no doubt use it frequently in both research and teaching. Others will consult it now and then to find a snake example of this or that. However, with no clear conceptual focus, it likely will not attract a broader audience. *Biology of the Vipers* is a good book with some very bright spots indeed, but it is not as good a book as it could have been.

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True Vipers: Natural History and Toxinology of Old World Vipers, by David Mallow, David Ludwig, and Göran Nilson. 2003. Krieger Publishing Company, Malabar, Florida (www.krieger-publishing.com). 410 pp. Cloth US \$79.50. ISBN 0-89464-877-2.

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Vipers are in! This is demonstrated by a wealth of recently published studies (e.g., Thorpe et al. 1997; Joger 1999; Schuett et al. 2002). This was not always the case, however, as the genesis of this book demonstrates. David Mallow, a keeper of several viper species and an amateur herpetologist, started this project ten years ago because he could not find any specific books about his passion. He was quickly joined in this task by his friend David Ludwig. The initial phase was an extensive literature search that soon produced a massive listing of references. The authors then tackled the formidable task of collecting these documents, driving around the country, spending nights in motels and days in universities or museums, photocopying hundreds of papers. Finally, these articles were read and summarized (D. Mallow, pers. comm.). The manuscript was almost ready for publication when the editor strongly advised the authors to bring Nilson (Head of the Vertebrate Department, Göteborg Natural History Museum) into the project: “We used your [Golay et al.] 1993 collaborative book on endoglyphs as the foundation for our [taxonomic] system. However, as we were finishing the book it was brought to our attention by our editors that the taxonomy we were using was evoking a great deal of criticism especially with [respect to] the European vipers” (D. Mallow, in litt.).

True Vipers is divided into 14 taxonomic chapters preceded by a table of contents, a preface, authors’ acknowledgments, and an introduction, and followed by the bibliography and a glossary. Within the taxonomic accounts species are ordered alphabetically within genera (or subgenera), and genera are likewise alphabetical within subfamilies. Oddly, however, non-nominate subgenera do not appear to follow any particular pattern.

The Preface clearly states the objective of the work, which is to “furnish the reader with a summary of taxonomy, general biology, and toxinology for vipers.” The Introduction defines the scope of the study, which is limited to the “true vipers,” which, among the Viperidae, are distinguished from the Crotalinae by the lack of thermo-receptive pit between the nostril and eye. Thus, this book is devoted to the subfamilies Azemiopinae, Causinae, and Viperinae. Parts of this introduction are real masterpieces,

especially the sections treating the venom delivery system, toxinology, venom effects, and the treatment of snakebites. The authors do their very best to explain complex phenomena in a simple and didactic way; Sherman Minton would have been proud of his protégés. In this section, we also see the first signs of the most striking aspect of this publication, its lack of cohesion. This singularity, found all through the work, is evident in the disparity between the taxonomic and natural history/toxinology parts of the introduction (1.5 vs 9.5 pp.); despite his undeniable experience, Nilson did not have enough time (six months – G. Nilson, pers. comm.) to bring his contribution to the level of thoroughness of his coauthors.

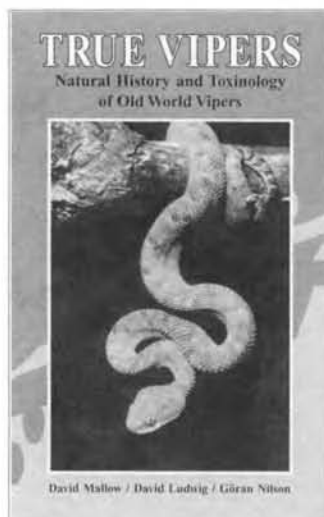
The format of the taxonomic accounts was mostly inspired by Carl Ernst’s (1992) *Venomous Reptiles of North America* (D. Mallow, pers. comm.), but because of the great disparity of information available, the authors were unable to strictly follow this model. This fact is clearly illustrated by the variable size of entries (from the thickest account, for *Bitis gabonica* – 14 pp., to the thinnest one, for *B. worthingtoni* – 1.5 pp.). The accounts are divided into sections: Recognition (Head, Body, Size, Pattern), Taxonomy and Distribution, Habitat, Food and Feeding, Behavior, Reproduction and Development, Bite and Venom (Epidemiology, Yield, Toxicity, Content, Symptoms and Physiological Effects, Hematological Activity, Case Histories, Treatment and Mortality) and Remarks (i.e., breeding, conservation, enemies, longevity, mimicry). Smaller accounts often lack the Remarks section and in many cases no information is provided under one or more of the other headings.

The bulk of the book is divided into 14 chapters. The content of six of them, Azemiopinae (genus *Azemiops* – 1 species), Causinae (genus *Causus* – 6 spp.), *Cerastes* (3 spp.), *Eristicophis* (1 sp.), *Montatheris* (1 sp.), and *Proatheris* (1 sp.) is non-controversial and raises no particular problems. The same cannot be said of the remaining taxonomic sections.

Chapter 3 Viperinae (genus *Adenorhinos* – 1 sp.) exhibits an especially disconcerting feature of this volume – the inconsistency of criteria used for the recognition of taxa. Not surprisingly, Nilson’s decisions are mostly based on biochemical investigations performed by Ulrich Joger and his team. Although the authors “understand that full taxonomic agreement is not likely for some time to come,” some taxonomic units seem to reflect an underlying “splitter’s” point of view, whereas others follow a “lumping” approach. The most significant systematic changes espoused are derived from a single paper by Lenk et al. (2001). However, the way Nilson analyzes the results obtained is puzzling. Concerning *Adenorhinos*, the “splitting” policy was used, despite the fact that Lenk et al. demonstrated that *A. barbouri* and *Atheris ceratophora* are sister taxa.

Chapter 4 (genus *Atheris* – 12 species) reveals a problem in accounting: according to the table of contents, the genus *Atheris* contains 11 species; however, we later learn that “the genus *Atheris* currently includes 12 species” (p. 39) (the recently described *Atheris hirsuta* being mentioned only in the Taxonomy and Distribution section of the generic account).

Chapter 5 (genus *Bitis* – subgenera *Bitis* [1 sp.], *Calechidna* [11 spp.], *Macrocerastes* [3 spp.], and *Keniabitis* [1 sp.]) presents another inconsistency: “the two subspecies *Bitis g. gabonica* and *B. g. rhinoceros* are separated on species level by Lenk et al. 2001”



(p. 60) and "Currently two subspecies are recognized: *B. g. gabonica* ... and *B. g. rhinocerus* (sic)" (p. 102); the "lumping" policy being here followed.

A significant taxonomic change is proposed in Chapter 7 (genus *Daboia* – 2 spp.) with the inclusion of *D. (Vipera) palaestinae* based on the findings of Lenk et al. However, the results of Lenk et al. are not taken to their logical conclusion, as following this would imply that *Macrovipera deserti* and *M. mauritanica* should also be included in the genus *Daboia*. Thus, Nilson here adopts a "splitting" policy.

Chapter 8 (*Echis* – 10 spp.) confirms the elevation of *Echis khosatzkii* (formerly included in the synonymy of *E. p. pyramidum*) to species level, as well as the questionable validity of the species *E. multisquamatus*, a probable subspecies of *E. carinatus*. The presence of *E. leucogaster* in Morocco is overlooked.

Chapter 10 deals with *Macrovipera* (4 spp.). As already mentioned, *Macrovipera deserti* and *M. mauritanica* should be included in the genus *Daboia* according to the results of Lenk et al. In this chapter Nilson resurrects *Macrovipera schweizeri siphnensis*, a form originally described by Wettstein (1952) on the basis that "the form from Siphnos is larger and has a different color pattern than the nominate subspecies" (Cattaneo 1989). The taxonomic conclusions expressed here are a good illustration of mixed "lumping" and "splitting" policies.

Chapter 13, *Pseudocerastes* (1 sp.), is another example of the "lumping" policy, Lenk et al. having clearly demonstrated that *Pseudocerastes fieldi* and *P. persicus*, here regarded as subspecies, should be treated as separate species.

As expected, Chapter 14, which considers *Vipera* with its subgenera *Pelias* (8 spp.), *Acridophaga* (6 spp.), *Montivipera* (8 spp.), and *Vipera* (5 spp.), is the most controversial part of the book. Concerning the subgenus *Pelias*, there is once again a mismatch between the table of contents and the systematic accounts, *Vipera magnifica* and *V. orlovi* being mentioned only in the *V. kaznakovi* account. To be fair, however, Nilson mentions that "additional research will demonstrate whether these taxa are full species or incipient species." The *V. darevskii* and *V. dinnicki* accounts clearly exemplify the danger of the "cut and paste" technique; the two accounts feature identical paragraphs concerning the mean length and weight of newborns. In this section, the "splitting" policy is invariably followed: "*Vipera nikolskii* could either be looked upon as a subspecies of *V. berus*, or as a full species;" moreover, *Vipera pontica* retains its species status, whereas according to Baran et al. (2001), it should be placed in the synonymy of *V. barani*.

In the subgenus *Vipera*, *V. transcaucasiana* is treated as a full species (see Herrmann et al. 1987); however, the possibility of the convergent evolution of *V. latastei* and *V. ammodytes transcaucasiana* albumins cannot be definitively ruled out. The *Vipera aspis* and *berus* accounts illustrate some irritating features: (1) In the Distribution section, the authors repeatedly cite general references (e.g., Street 1979; Mehrtens 1987, etc.), whereas David and Ineich (1999) and various European herpetological atlases are entirely ignored. (2) Statements are sometimes quite loosely interpreted. For example, in the Food and Feeding section, the authors write that "neonates eat insects and worms" whereas the original sentence is "the very young are said to eat insects and worms" (Street 1979, without substantiation). Further, their

assertion that amphibian prey are not taken is incorrect (see Monney 1993 for evidence of frogs as prey of this species); (3) Blinded by their quest to be exhaustive, the authors were not critical enough to properly evaluate the reliability and currency of different sources of information, such as peer-reviewed articles, compilations, and "gray" literature; a good illustration of this failure is the sempiternal citation of U.S. Navy (1991) (which should be correctly cited as Moore 1991), an unaltered reprint of a 1966 book that is significantly out of date in many respects; (4) truisms, such as "most bites occur from March through October," are found even in Nilson's "secret garden" (the *V. berus* account).

In such a thorough review of the world literature, a bibliography plays an essential role; one must be able to easily retrieve cited works. Alas, in the preface alone, two out of four citations contain errors (Golay et al. 1993 and Herprint International [i.e., Ulber] 1994) and a third one (David and Ineich 1999) is not to be found in the bibliography. These unexpected errors drove me to test this section for its completeness. I verified that the citations mentioned in every 10th page (i.e., pp. xi, 7, 17, 27 ... 297) were present among the bibliographic entries. One citation was lacking (Cherlin 1990) and I spotted two misprints (Laurent instead of Laurenti 1768 and Schnurrenburger instead of Schnurrenberger 1959). I accidentally found other missing entries (Darevsky 1956, Herrmann et al. 1987, Nilson et al. 1994) and misprints (Stucki-Stern instead of Stucki-Stirn 1979, Mierite instead of Meirte 1992).

Checking the accuracy of the bibliography, I was stunned! I found countless errors concerning dates of publication (e.g., Laurenti 1798 instead of 1768), editors (e.g., Calmette A. 1907 *In* Bucherl W., editor. 1967), pagination (Pitman 1938, 27 pp. instead of 362 pp.), patronyms (e.g., Boonpucknoaviq instead of Boonpucknavig), publishers (e.g., Klemmer 1967a *In* Bucherl W. – Masson, Paris instead of Academic Press, New York), and titles (e.g., *Historic Amphiorum naturalia et litterariae* instead of *Historiae Amphibiorum naturalis et literariae* Schneider 1801). Moreover, out of 65 French references, 52 contain errors! Among these is a real howler: "Geoffroy E, Saint-Hilaire T. 1827 Description del reptiles quo se trouvent en Egypt. In: Audouin V [editor]. Description de l'Egypte, ou recueil observations et Del recherches quo Ott en Egypt pendant l'expedition de l'Armee Franchise. Hist. Nat 1(1):121–160." However, accuracy is much better for Spanish and German, despite the failure to capitalize some words or use proper diacritical marks.

Unfortunately, the manuscript of this potential bestseller apparently received little, if any, copyediting and was not subject to rigorous peer review. It is obvious that my complaints are negligible relative to the formidable amount of work produced by the authors. Therefore, I have no hesitation in recommending this excellent summation of the natural history and toxinology of true vipers as a reference. However, the taxonomic part of this volume proves that Krieger has come closer to the goal of gaining maximum profit on minimal investment than it has to reaching "the frontier of knowledge of viper taxonomy" (quote from rear cover of *True Vipers*).

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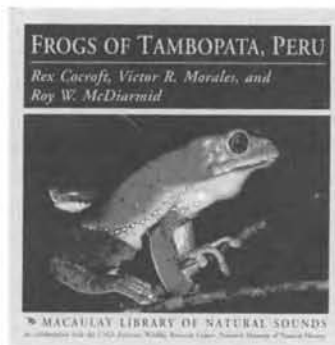
South American Frog Calls

Frogs of Tambopata, by Rex Cocroft, Victor R. Morales, and Roy W. McDiarmid. 2002. Macaulay Library of Natural Sounds, Cornell Laboratory of Ornithology, 159 Sapsucker Woods Road, Ithaca, New York 14850, USA (<http://birds.cornell.edu>). 1 CD, 1 booklet (27 pp.). US \$18.95. ISBN 0-938027-57-3.

Sounds of Frogs and Toads of Bolivia (Guía Sonora de las Ranas y Sapos de Bolivia), edited by Rafael Márquez, Ignacio De la Riva, Jaime Bosch, and Eloisa Matheu. 2003. ALOSA, Sonidos de la Naturaleza, Apartado de Correos 9259, E-08080, Barcelona, Spain (<http://www.sonidosdelanaturaleza.com>). 2 CDs, 1 booklet (47 pp.). 25€ + 9€ shipping (approx. US \$29 + \$10.40). ISBN 84-607-4138-9.

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Nearly half a century has passed since the calls of North American anurans recorded by the late Charles M. Bogert with archaic recording equipment were transcribed onto a vinyl record (Bogert, 1958). Since then the recording of animal sounds has become a routine effort for many field biologists. Many recordings have been edited, grouped, and transcribed onto compact discs, especially by the Cornell Laboratory of Ornithology, which currently offers dozens of CDs of bird songs and three of North American anurans.

In recent years, herpetologists have been blessed with CDs of calls of frogs from various parts of the world (e.g., West Africa by Grafe 2000 and Panama by Ibáñez et al. 1999, containing recordings of 24 and 52 species, respectively). The two sets of discs reviewed here are the results of ambitious projects that required untold effort. With few exceptions the recordings are of good quality, although in many, background noise, principally calls of other species, is distracting. Both CDs are accompanied by small booklets (12 x 12 cm) containing brief comments on, and small color

photographs of, each species. Throughout the following commentary, the two works are referred to as "Bolivia" and "Tambopata."

Tambopata contains recordings of 70 species—3 bufonids, 1 centrolenid, 5 dendrobatids, 36 hylids, 21 leptodactylids, and 4 microhylids. All are identified to species, except a *Dendrophryniscus*, a *Hyalinobatrachium*, a member of the *Eleutherodactylus lacrimosus* Group, and a member of the *Hyla parviceps* Group that likely is *Hyla bokermanni*. Two distinctly different calls referred to *Osteocephalus "leprieurii"* are given; likewise there are recordings of *Adenomera* Species 1 and Species 2, in addition to *Adenomera andreae* and *A. hylaedactyla*. The call of a *Phyllomedusa*, noted as a yet-to-be-described species, is that of *P. camba* (De la Riva 2000a). The nomenclature of *Scarthyia ostinodactyla* should read *Scarthyia goinorum* (De la Riva 2000b). All recordings are from the vicinity of the Explorer's Inn on the Río Tambopata, Departamento de Madre de Dios, Peru, except for two each from Cocha Cashu and Pakitza in the same department. The brief account of each species includes a statement on breeding and specifics about the recording, usually temperature and always tape number in the United States National Museum or the Macaulay Library of Natural Sounds. Most of the color photographs are of good quality and despite their small size (27 x 23 mm) are useful in identifying the frogs.

Bolivia contains 166 recordings; 151 of these are of 129 species—8 bufonids, 3 centrolenids, 8 dendrobatids, 53 hylids (including 2 pseudines), 53 leptodactylids, and 5 microhylids. All are identified to species, except one *Colostethus* and one *Adenomera*, neither of which is represented by a photograph in the booklet. There are two recordings of 12 species, three of two species, and four of another. Most of these are simply recordings from two or more localities, but there is a release call of *Atelopus tricolor*, an aggressive call of *Ceratophrys cranwelli*, and a distress call of *Pseudis paradoxa*. The brief account of each species (English and Spanish) includes statements on breeding and distribution, calls of other species in the background, locality and temperature at time of recording, and name of person responsible for the recording. There is no documentation regarding the disposition of the recordings, but they are deposited in the Fonoteca Zoologica Digital in the Museo Nacional de Historia Natural (I. De la Riva, pers. comm.). Most of the 15 recordings of choruses include calls of 2–10 species, but three are of large choruses of single species—*Leptodactylus fuscus*, *L. rhodonotus*, and *Pseudopaludicola mystacalis*. Most of the photographs are reasonably good, but their small size (18 mm square) limits their utility.

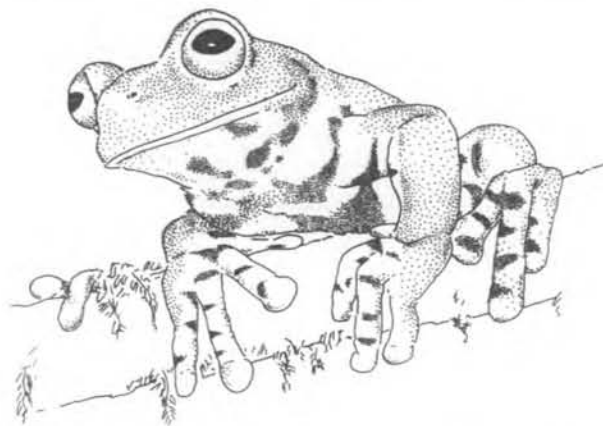
Together, these two sets of CDs contain recordings of 151 species of anurans; 48 of the species nominally are included in both sets. However, taxonomic issues plague both publications. For example, the systematics of the toads of the "*Bufo typhonius* complex" is unresolved; a member of this complex is referred to *Bufo* cf. *typhonius* in Tambopata and as *Bufo margaritifera* in Bolivia; their calls are different. The distinctiveness of calls among cryptic species of *Adenomera* probably will result in at least two new taxa being recognized in Bolivia and Peru (Angulo and Icochea 2003). Two "species" of *Osteocephalus leprieurii* are recognized in Tambopata and another as *Osteocephalus* sp. in Bolivia. Three different calls are involved; most likely none of these is *O. leprieurii* as defined by Jungfer and Hödl (2002). However, these CDs are

incredibly valuable for anyone studying calls of South American anurans. Individual calls can be downloaded into sound analysis programs (e.g., Canary) that can measure call parameters and produce waveforms and spectrograms, thus allowing other recordings to be compared with those on the CDs.

Both booklets emphasize that the CDs will be helpful in identifying frogs in the field and in monitoring frog populations. Theoretically, if a biologist is in the rainforest in southern Peru or adjacent Bolivia, and if he/she has a portable CD player, he/she could identify frogs by comparing calls heard in the field with those on the CDs. This is easier said than done. Very few persons have the auditory abilities and memory to recognize scores or even hundreds of sounds, as did the late Theodore H. Parker III for bird songs. Nevertheless, as stated by Zimmerman (1994), CDs such as these can be useful learning tools for auditory monitoring of anuran populations in the regions covered.

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Hyla larinyopygion. Colombia: Reserva Natural La Sirena, Cordillera Central, Valle del Cauca. Illustration by Fernando Vargas Salinas.

PUBLICATIONS RECEIVED

Crocodiles: Inside Out, A Guide to the Crocodilians and their Functional Morphology, by K. C. Richardson, G. J. W. Webb, and S. C. Manolis. 2002. Surrey Beatty & Sons, Chipping Norton NSW, Australia (distributed in the US by Bibliomania! – www.herplrit.com). viii + 172 pp. Hardcover. AU\$ 99.00 (US\$ 65.00). ISBN 0-949324-90-6.

This book is a detailed guide to the anatomy of crocodilians, aimed at a wide audience, including those working with crocodiles and alligators commercially, as well as veterinarians and zoologists. It opens with an introductory chapter on crocodilian taxonomy and diversity and another on topographic dissection. It then takes a classic systems approach to anatomy, with chapters on the integument, skeleton, musculature, cardiovascular system, respiratory system, digestive system, urogenital system, and nervous and special sensory systems. These contain boxed insets on a variety of peripheral, but related topics, such as indicators of age in crocodilians, growth, diving, and vocalization. A chapter on histology covers tissues from all organ systems. A series of appendices cover muscle topography, the vascular system, and neuroanatomy, providing details of terminology, function, and position in tabular form. The book concludes with a "Further Reading" section of more than 200 references and a list of relevant websites, a glossary of more than 250 terms, and a comprehensive index. The volume is illustrated throughout, chiefly in color. Although many of the illustrations and observations are based on the two Australian species of crocodiles, the work is aimed at a more global audience including all crocodilian biologists as well as reptile morphologists.

De Dos Mundos, Las Ranas, Sapos y Salamandras de la Península de Yucatán, México/ Of Two Worlds, The Frogs, Toads and Salamanders of the Yucatan Peninsula, Mexico, by Carlos Galindo-Leal. 2003. Pangaea, Saint Paul, Minnesota (info@pangaea.org). xvii + 133 pp. Softcover. US \$19.95. ISBN 1-929165-52-8.

This small bilingual book, with Spanish and English text on facing pages, covers the two species of salamanders and 20 species of anurans occurring on the Yucatan Peninsula. It is illustrated throughout by Roberto Arreola Alemón. Although clearly aimed at a non-technical audience, the book provides a good deal of detailed information in accessible form. Among the topics covered are activity, reproduction, life history stages, vocalization, diet, and defense. These are grouped under whimsically entitled chapters such as "Multiple Personalities" and "Tenors, Baritones and Basses." What makes the book unique is the integration into the main text of quotes, poems, proverbs, and stories relating to amphibians. These derive from sources as diverse as Aesop and Jimmy Buffet songs and originate from countries from China to Germany to Argentina, and of course Mexico. Species accounts are just a few paragraphs in length and provide etymological information, basic identifying features, a summary of habitat and

reproduction, and a statement of distribution. Each is accompanied by a color illustration. The book concludes with sections on human uses of amphibians, from Mayan rain invocation rituals to pregnancy tests, and a consideration of conservation, with details relating to vulnerable amphibians of the Yucatan and the success of the cane toad, *Bufo marinus*. Short lists of relevant literature and websites are also provided.

Reptiles and Amphibians of the Amazon: An Ecotourist's Guide, by R. D. Bartlett and Patricia Bartlett. 2003. University Press of Florida, Gainesville, Florida (www.upf.com). xviii + 310 pp. Softcover, US \$29.95. ISBN 0-8130-2623-7.

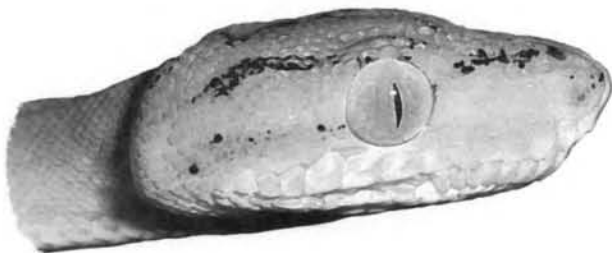
This latest offering from the prolific herpetological writing team of Bartlett and Bartlett provides travelers to Amazonian South America a convenient and colorful introduction to the region's impressive herpetofaunal diversity. Aside from the 310 pages of text, there are an additional 128 pages (unnumbered) containing 297 color photographs of herps, habitats, and predators. Photo quality is mostly good to excellent, with more than 250 taxa depicted. Although not exhaustive in its coverage, the authors have included those species most likely to be encountered by ecotourists, especially in Amazonian Peru. Brief written accounts for each of the included species offer information on size, identification, reproduction, similar species, habitat and range, and voice (for anurans). Tips for travel in the neotropics include things like clothing, medications, currency exchange, field gear, and items useful when trading with the locals.

Parental Behavior in Lepidosaurian and Testudinian Reptiles, A Literature Survey by Louis A. Somma. 2003. Krieger Publishing Company, Melbourne, Florida (www.krieger-publishing.com). x + 174 pp. Hardcover. US \$33.50. ISBN 1-57524-201-X.

This book brings together the extensive literature on parental behavior (defined as "all behavioral contributions by the parent(s) to offspring survival after parturition"). After a brief overview of selected historical, legendary, and folkloric views of parental behavior in non-archosaurian reptiles, the author defines 19 categories of parental behavior (including several reflecting varying degrees of reliability). These are employed in a series of three tables (one each for turtles, snakes, and non-ophidian lepidosaurs) that list the type(s) of parental care and the reference(s) reporting for each of 336 species of lepidosaurs and 7 turtles. Two summary tables list the number of genera and species exhibiting parental behavior by family, and the prevalence of maternal, paternal, and biparental behavior across lepidosaurs. Additional tables more briefly overview parental behavior in other extant vertebrates and in extinct reptiles, experimentally-derived studies of parental behavior, and historical literature dealing with snakes swallowing their young. The bibliography of parental behavior is 100 pages long and includes citations from Gesner and Topsell to the 21st Century, derived from the literature of natural history, herpetoculture, and other sources. A combined subject and taxon index to the tables and introductory material completes this useful reference.

Interpretive Atlas of Texas Lizards, by Ralph W. Axtell. 1986–2003, *et. seq.* Privately published by and available from the author (Ralph W. Axtell, 1033 Randle Street, Edwardsville, Illinois 62025, USA; e-mail: raxtell@siue.edu). Individual accounts available separately. Cost: US \$0.15/page + postage and handling.

The most recent installments (numbers 27–28) in this series are *Scincella lateralis* (Little Brown Skink) and *Cnemidophorus exsanguis* (Chihuahuan Spotted Whiptail). These new accounts comprise 41 and 10 pages, respectively, in addition to a detailed range map. Axtell provides an in-depth discussion of distribution for each species in Texas, along with current taxonomy, geographic variation, conservation status, and suggestions for future work. He retains usage of *Cnemidophorus sensu lato*, treating *Aspidoscelis* as a subgenus (by extension, *Ameiva* and *Kentropyx* are also regarded as subgenera) pending further resolution of phylogenetic relationships among teiids.

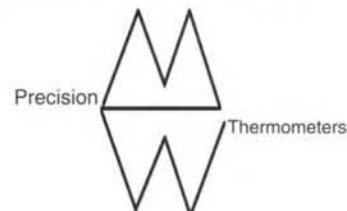


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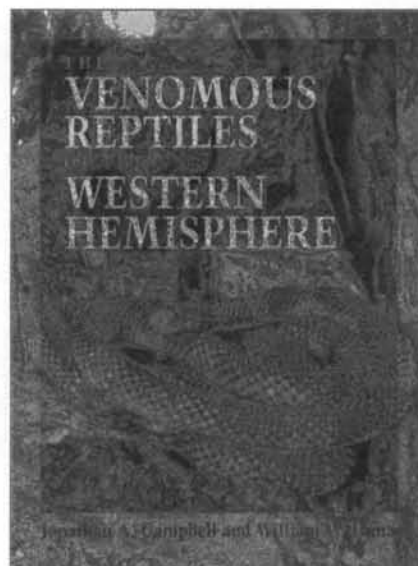
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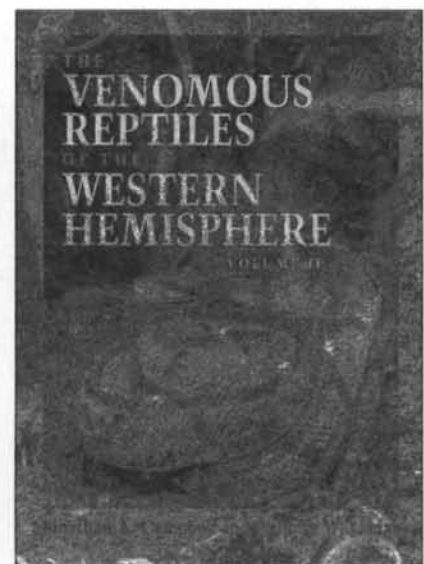
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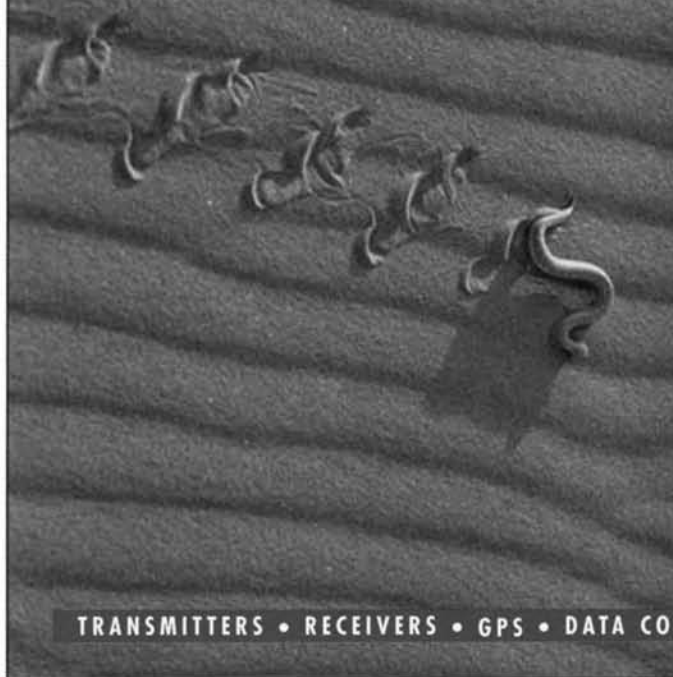
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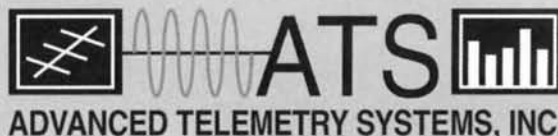
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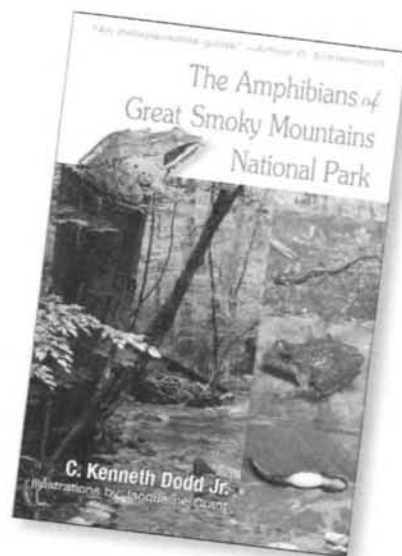
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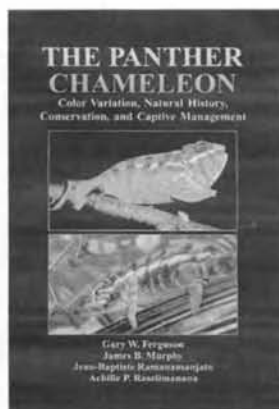
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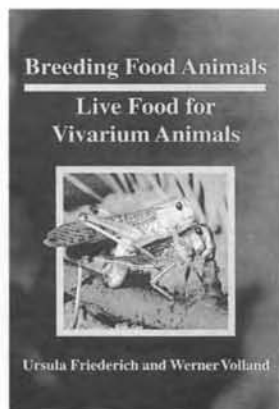
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THE PANTHER CHAMELEON:
Color Variation, Natural History,
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 by Gary W. Ferguson, James B. Murphy,
 Jean Baptiste Ramanamanjato, &
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 Orig. Ed. 2004 166 pp.
 ISBN 1-57524-194-3 \$35.50

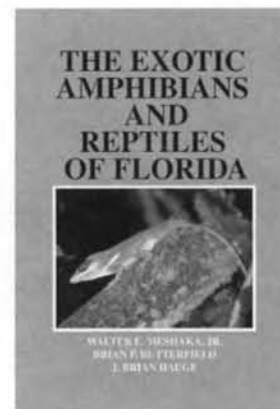
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THE EXOTIC AMPHIBIANS AND
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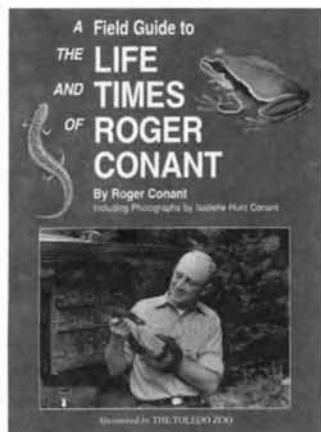
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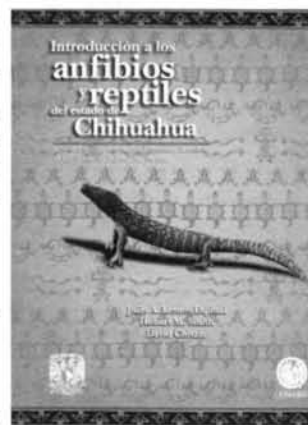


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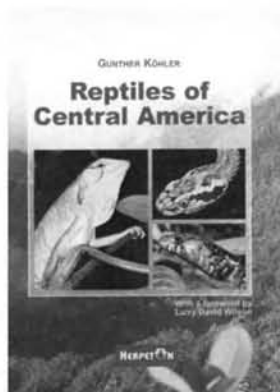
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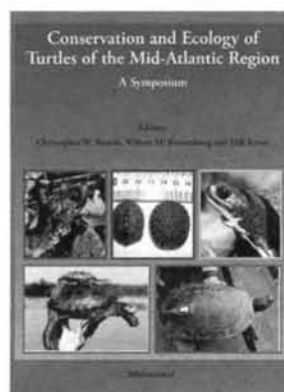
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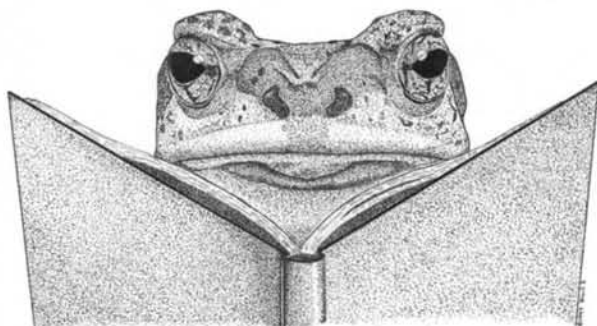


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