

GEOGRAPHIC DISTRIBUTION

Instructions for contributors to *Geographic Distribution* appear in Volume 28, Number 1 (March 1997).

GYMNOPHIONA

SIPHONOPS HARDYI (Hardy's Caecilian): BRAZIL: ESPÍRITO SANTO: MUNICIPALITY OF MARECHAL FLORIANO: Alto Nova Almeida near Sítio Tres Marias (20°24'36"S, 40°49'26"W, ca. 680 m elev.). 11 September 1994. C. Zamprogno and M. Zamprogno. Coleção Zoológica da Universidad Federal do Espírito Santo (ZUFES 140348). Verified by M. Wilkinson. Known only from localities in the states of Rio de Janeiro and São Paulo, south-eastern Brazil (Dunn 1942, Bull. Mus. Comp. Zool. 91:339–540). First record for the state; extends the distribution northward and is the first record for over 50 years.

Submitted by **CLAUDIO ZAMPROGNO** and **MARIA DAS GRAÇAS ZAMPROGNO**, Departamento de Biologia, Universidad Federal do Espírito Santo, 29040-090 Vitória, Espírito Santo, Brazil.

CAUDATA

AMBYSTOMA TALPOIDEUM (Mole Salamander). USA: TENNESSEE: CANNON CO: jct. Burt-Burgen and Hollow Springs Roads. 27 September 1996. B. T. Miller, J. L. Miller. Middle Tennessee State University (MTSU 315C). Verified by W. H. Redmond. Adult male captured on road during evening rain storm. County record that decreases distributional hiatus in the Eastern Highland Rim of middle Tennessee (Redmond and Scott 1996, Atlas of Amphibians in Tennessee. Austin Peay St. Univ. Misc. Publ. 12:1–89).

Submitted by **BRIAN T. MILLER** and **JOYCE L. MILLER**, Department of Biology, Middle Tennessee State University, Murfreesboro, Tennessee 37132, USA.

EURYCEA LONGICAUDA GUTTOLINEATA (Three-Lined Salamander). USA: GEORGIA: WHITE CO: Skylake Private Residential Community, Chattahoochee National Forest, Sautee Trail, 4.16 km E Sautee Trail/Georgia Rt. 255 Spur (301) jct. (7.52 km ENE Helen). 26 October 1996. Michael G. Frick and Anne M. Lindsay. Savannah Science Museum (SSM 96.13761). Verified by John B. Jensen. New county record (Williamson and Moulis 1994, Savannah Sci. Mus. Spec. Publ. 3:1–712). Specimen was caught crossing bituminous surfaced road at ca. 0130 h during light rain.

Submitted by **MICHAEL G. FRICK** and **ANNE M. LINDSAY**, Savannah Science Museum, 4405 Paulsen Street, Savannah, Georgia 31405, USA.

EURYCEA LONGICAUDA LONGICAUDA (Longtail Salamander). USA: ALABAMA: WINSTON CO: Haleyville. N 1/2 Sec. 32, T9S, R10W. 5 October 1996. AUM 34301. Verified by Craig Guyer. New county record (Mount 1975, The Reptiles and Amphibians of Alabama. Publ. Alabama Agric. Exp. Sta., Auburn. 347 pp.).

Submitted by **BRIAN P. BUTTERFIELD**, **DANIEL R. FRENCH**, **SCOTT R. FEARS**, **MICHELLE D. HARGREAVES**, **ANGELA J. LEWIS**, **CHRISTINE D. ROBY**, **LEAH M. HOOD** and **JENNIFER R. ROBINSON**, Department of Biology, Freed-Hardeman University, Henderson, Tennessee 38340-2399, USA.

HEMIDACTYLUM SCUTATUM (Four-Toed Salamander). USA: GEORGIA: WHITE CO: Skylake Private Residential Community, Chattahoochee National Forest, Sautee Trail, 4.64 km E Sautee Trail/Ga. Rt. 255 Spur (301) jct. (7.52 km ENE Helen). 26 October 1996. Michael G. Frick and Anne M. Lindsay. Savannah Science Museum (SSM 96.13762). Verified by John B. Jensen. New county record (Williamson and Moulis 1994, Savannah Sci. Mus. Spec. Publ. 3:1–712). Specimen was caught crossing bituminous surfaced road at approx. 0200 h during light rain.

Submitted by **MICHAEL G. FRICK** and **ANNE M. LINDSAY**, Savannah Science Museum, 4405 Paulsen Street, Savannah, Georgia 31405, USA.

ANURA

BUFO VARIEGATUS (Eden Harbour Toad): ARGENTINA: SANTA CRUZ: shores of Lago del Desierto and Río de las Vueltas, 49°05'S, 72°54'W, 420 m elev. 10–12 December 1996. Néstor G. Basso, Carlos A. Galliari, Gustavo R. Spinelli, and Jorge D. Williams. Verified by Gustavo Carrizo. MLP A 1281–84. Reproductive adults, juveniles and tadpoles were found in a shallow eutrophic limnotope fed by groundwater ("mallín"), surrounded by the temperate forest of lenga (*Nothofagus pumilio*). Adults and juveniles also were found at night crossing the road bordering the Río de las Vueltas, near Lago del Desierto. Tadpoles were observed forming aggregations of several individuals. *Bufo variegatus* is distributed in Chile in the Andean range of the *Nothofagus* forests, from Malleco (ca. 39°S) to the Magellanic channels (ca. 52°S) (Ceí 1962, Batracios de Chile. Univ. Chile, Santiago. cviii+128 pp; Formas 1978, J. Herpetol. 12:243–246). The southernmost population of *B. variegatus* in Argentina was recorded from the western shores of Lago Belgrano, Perito Moreno National Park, Santa Cruz province, 47°48'S, 72°22'W, 950 m elev. (Biolé and Williams 1984, Neotropica 30(84):243–244). This discovery extends the distribution of the species 150 km southwards in the Argentinian Patagonian forest.

Submitted by **NESTOR G. BASSO**, Instituto de Limnología "Dr. Raúl A. Ringuelet," Casilla de correo 712, 1900 La Plata, Argentina, and **JORGE D. WILLIAMS**, Departamento Zoología Vertebrados, Museo de La Plata, Paseo del Bosque s/n, 1900 La Plata, Argentina.

BUFO WOODHOUSII FOWLERI (Fowler's Toad). USA: ALABAMA: WINSTON CO: William B. Bankhead National Forest, ca. 1.5 km NE Adkins Cemetery. N 1/2 Sec. 16, T9S, R8W. 5 October 1996. AUM 34300. Verified by Craig Guyer. New county record (Mount 1975, The Reptiles and Amphibians of Alabama. Publ. Alabama Agric. Exp. Sta., Auburn. 347 pp.).

Submitted by **BRIAN P. BUTTERFIELD**, **DANIEL R. FRENCH**, **SCOTT R. FEARS**, **MICHELLE D. HARGREAVES**, **ANGELA J. LEWIS**, **CHRISTINE D. ROBY**, **LEAH M. HOOD** and **JENNIFER R. ROBINSON**, Department of Biology, Freed-Hardeman University, Henderson, Tennessee 38340-2399, USA.

HYLA CALLIPYGIA (Bocaina Treefrog). BRAZIL: MINAS GERAIS: Itamonte Municipality, 1800 m. 26 September 1992. M. R. Gomes and O. L. Peixoto. Universidade Federal do Rio de Janeiro (ZUF RJ 5275–76); Itatiaia Municipality, 1800 m, boundary between states of Rio de Janeiro and Minas Gerais. 26 September 1992. M. R. Gomes and O. L. Peixoto. (ZUF RJ 5248) and Universidade Federal Rural do Rio de Janeiro (EI 9326). Verified by S. P. de Carvalho e Silva. Previously known only from the state

of São Paulo (Bocaina Range and Campos do Jordão); extends range to the states of Minas Gerais and Rio de Janeiro. The Itatiaia record was based on males collected while calling from rocky crevices ca. 0.3 m deep.

Submitted by **M. R. GOMES**, Instituto de Biologia, Universidade Federal do Rio de Janeiro, Cidade Universitária, Rio de Janeiro 21941-590, Brazil, and **O. L. PEIXOTO**, Instituto de Biologia, Universidade Federal Rural do Rio de Janeiro, Seropedica, Rio de Janeiro 23851-970, Brazil.

HYLA CHRYSOSCELIS (Cope's Gray Treefrog). USA: WISCONSIN: WAUKESHA CO: city of Eagle, Center Sec. 22, T5N, R17E, at road jct. 67 and 59. 31 May 31 1996. M. G. Bolek. Milwaukee Public Museum (MPM 29589). Verified by Gary S. Casper. Frogs were identified by mating call and mean erythrocyte length which was compared to a known *H. versicolor* population (Matson 1990, *Herpetologica* 46:457-462). A statistically significant difference existed between the mean erythrocyte length of *H. chrysoseleis* (19.71 μ m) and mean erythrocyte length of *H. versicolor* (25.07 μ m, $p < 0.0001$, two sample *t* test). Documentation for *H. chrysoseleis* from the eastern part of the state is needed. Specimen extends the known range of this species in eastern Wisconsin and is the first definite record for Waukesha County (Casper 1996, *Geographic Distributions of the Amphibians and Reptiles of Wisconsin*. Publ. Milwaukee Pub. Mus. 87 pp.).

Submitted by **MATTHEW G. BOLEK**, Department of Biological Sciences, University of Wisconsin Milwaukee, Milwaukee, Wisconsin 53201, USA.

HYLA CINERA (Green Treefrog). USA: TEXAS: ROCKWALL CO: Rockwall. 2 July 1996. D. Glaze. University of Texas Collection of Vertebrates (UTA Color Slide 21506, photographed by Dixon Glaze). Verified C. L. Stewart. New county record. (Dixon 1987, *Amphibians and Reptiles of Texas*. Texas A&M Univ. Press, College Station. 434 pp.).

Submitted by **CARL J. FRANKLIN**, Department of Herpetology, Dallas Zoo, 650 South R. L. Thornton Freeway, Dallas, Texas 75203, USA.

MELANOPHRYNISCUS STELZNERI DORSALIS (Redbelly Toad). ARGENTINA. MISIONES: Dept. Apostoles (27°51'S, 55°46'W). 15 February 1986. J. Soroka. Colección Herpetológica Museo Argentino de Ciencias Naturales "Bernardino Rivadavia" (MACN 43129-130). Verified by G. Carrizo. First record for the country. The subspecies was previously known from a few localities in Rio Grande do Sul, Brasil [Braun and Braun 1980, *IHERINGIA*. Ser. Zool. Porto Alegre (56):121-146]. Extend subspecies range 600 km NW from type locality (Torres, Rio Grande do Sul, Brazil), and is the northwesternmost record for the taxon.

Submitted by **JORGE ABEL CESPEDEZ**, Anatomia Comparada, Departamento de Biología, Facultad de Ciencias Exactas y Naturales y Agrimensura, Universidad Nacional del Nordeste, 9 de julio 1449, C.P. 3400, Corrientes, Argentina.

PHYSALAEMUS CENTRALIS (Central Dwarf Frog): BRAZIL: DISTRITO FEDERAL: LAGOA BONITA: Estação Ecológica de Águas Emendadas, Brasília-DF (ca. 15°35'S, 47°42'W). 7 October 1991. R. A. Brandão and G. M. R. Moreira. Museu Nacional (MNRJ 17424). Verified by J. P. Pombal, Jr. First record for the states of Goiás and Distrito Federal. Original distribution was in the states of Mato Grosso and São Paulo, Brazil, and in northeastern Paraguay (Frost 1995, *Amphibian Species of the World*. Version 2/95. Electronic Manuscript. Herpetologists' League). This

new record suggests that this species occurs continuously from the state of Mato Grosso, across the state of Goiás, to the state of São Paulo. Probably occurs at some localities in Minas Gerais, in cerrado vegetation.

Submitted by **REUBER A. BRANDÃO, BRUNO A. DUAR, ADRIANA C. BRITO** and **ANTONIO SEBEN**, Laboratório de Fisiologia Animal - CFS-IB, Universidad de Brasília, 70.910-900, Brasília-DF, Brasil.

PSEUDACRIS TRISERIATA (Western Chorus Frog). USA: COLORADO: CHAFFEE CO: Davis Meadow (NE 1/4 Sec. 15, T13S, R78W; UTM Zone 13, UTME 405496, UTMN 4308990). 16 May 1996. Craig Fetkavich. Herpetological Ancillary Collection UCM 121 (audio tape recording). First record for county (Livo et al. 1996, *Herpetological Microbiogeography of Colorado II: Documented and Potential County Records*. Publ. Colorado Herpetol. Soc. 22 pp.). Verified by David Chiszar. This record was obtained during ongoing amphibian surveys conducted by the Pike/San Isabel National Forest and Colorado Division of Wildlife.

Submitted by **CRAIG FETKAVICH**, U. S. Forest Service, Pike/San Isabel National Forest, 1920 Valley Drive, Pueblo, Colorado 81008, USA; **LAUREN J. LIVO** and **HOBART M. SMITH**, Department of EPO Biology, University of Colorado, Boulder, Colorado 80309-0334, USA.

RANA CLAMITANS CLAMITANS (Bronze Frog). USA: TEXAS: FORT BEND CO: Brazos Bend State Park; 26.1 air km ESE Rosenberg. 8 March 1997. John H. Malone. Verified by James R. Dixon. TCWC 75129-30. County record; fills gap between Austin, Brazoria, and Harris counties (Dixon 1987, *Amphibians and Reptiles of Texas*. Texas A&M Univ. Press, College Station. 434 pp.). A juvenile specimen (TCWC 75129; 34 mm SVL) was collected at Site 30; located SW of Creekwood Lake; 27 m W on Big Creek washout trail. An adult female specimen (TCWC 75130; 78 mm SVL) was collected at Pilant Lake. Both animals were found during an amphibian breeding site survey conducted for the Texas Department of Parks and Wildlife in order to construct a long term amphibian monitoring program at Brazos Bend State Park. Numerous (>25) other individuals of this frog, both adult and juvenile, were observed from various sites at the park.

Submitted by **JOHN H. MALONE**, Department of Wildlife and Fisheries Science, Texas A&M University, College Station, Texas 77843, USA.

SCINAX SQUALIROSTRIS (Striped Snouted Treefrog). BRAZIL: DISTRITO FEDERAL: BRASÍLIA: ÁREA DE PROTEÇÃO AMBIENTAL DO CAFURINGA: Fazenda Santa Elisa (ca. 15°35'S, 48°02'W). 1 February 1995. R. A. Brandão, B. A. Duar, M. G. Zatz and M. A. Bagno. Museu Nacional (MNRJ 17420). Verified by J. P. Pombal, Jr. Original distribution was southwestern Brazil, southern Paraguay and Uruguay, and northeastern Argentina (Frost 1995, *Amphibian Species of the World*. Version 2/95. Electronic manuscript, Herpetologists' League). First record for central Brazil; extends distribution to the north.

Submitted by **REUBER A. BRANDÃO, BRUNO A. DUAR**, and **ANTONIO SEBEN**, Laboratório de Fisiologia Animal - CFS-IB, Universidad de Brasília, 70.910-900, Brasília-DF, Brazil.

SPEA BOMBIFRONS (Plains Spadefoot). USA: TEXAS: HALL CO: Caprock Canyons State Park, Caprock Canyon Trailway, 1 mi S and 9 mi W Estelline. 18 July 1996. F. D. Yancey, II. The Museum of Texas Tech University (TTU 11629). Verified by Clyde Jones. New county record; fills gap between Donley and Motley

counties, and helps define eastern margin of range in Texas Panhandle (Dixon 1987, Amphibians and Reptiles of Texas. Texas A&M Univ. Press, College Station. 434 pp.).

Submitted by **FRANKLIN D. YANCEY, II**, Department of Biological Sciences and The Museum, Texas Tech University, Lubbock, Texas 79409-3191, USA.

SPEA INTERMONTANA (Great Basin Spadefoot). USA: IDAHO: NEZ PERCE CO: Salmon River, UTM Zone 11, 521918E, 5092777N (m)(NAD 27). 17 June 1995. Robin L. Llewellyn. Idaho Museum of Natural History (IMNH 1481). Verified by Charles R. Peterson. One adult was found dead along the Salmon River Road on Craig Mountain. New county record (Nussbaum et al. 1983, Amphibians and Reptiles of the Pacific Northwest. Univ. Idaho Press, Moscow. 332 pp.).

Submitted by **ROBIN L. LLEWELLYN**, Department of Biological Sciences, Idaho State University, Campus Box 8007, Pocatello, Idaho 83209, USA.

SYRROPHUS CYSTIGNATHOIDES (Rio Grande Chirping Frog). USA: TEXAS: NUECES CO: 28°19'05"N, 98°33'40"W, within Corpus Christi city limits, Waldron Naval Air Landing Field. 1 September 1995. Travis W. Taggart and Richard Anderson. TCWC 75128 (alcoholic); Southeastern Louisiana University Tissue Collection (SLU cat. no. pending, frozen tissues). Verified by Brian I. Crother. Three adults found by day under discarded plywood at a dump. Fourteen adults collected at night while chorusing from laurel oaks, cattails, and from the tops of 1 m tall grass clumps. Represents third disjunct Texas population associated with a large city (Dixon 1987, Amphibians and Reptiles of Texas. Texas A&M Univ. Press, College Station. 434 pp.). The other Texas populations established outside of the Rio Grande valley are in Bexar (San Antonio) and Harris (Houston) counties.

Submitted by **TRAVIS W. TAGGART**, Department of Biological Sciences-SLU 736, Southeastern Louisiana University, Hammond, Louisiana 70402, USA.

TESTUDINES

CHELYDRA SERPENTINA SERPENTINA (Common Snapping Turtle). USA: GEORGIA: WHITE CO: Chattahoochee National Forest, Georgia Rt. 255 Spur (301), 0.16 km S Sautee Trail/Georgia Rt. 255 Spur (301) jct. (entrance to Skylake private residential community). 27 October 1996. Michael G. Frick and Anne M. Lindsay. Savannah Science Museum (SSM 96.13763). Verified by John B. Jensen. New county record (Williamson and Moulis 1994, Savannah Sci. Mus. Spec. Publ. 3:1-712). Specimen was caught crossing road at ca. 1530 h.

Submitted by **MICHAEL G. FRICK** and **ANNE M. LINDSAY**, Savannah Science Museum, 4405 Paulsen Street, Savannah, Georgia 31405, USA.

GRAPTEMYS GEOGRAPHICA (Common Map Turtle). USA: WISCONSIN: KENOSHA CO: Powers Lake on NE shore, NE part of Sec. 18, T1N, R19E. 18 August 1994. M. G. Bolek. Milwaukee Public Museum (MPM 29588). Verified by G. S. Casper. New county record Casper 1996, Geographic Distributions of the Amphibians and Reptiles of Wisconsin. Publ. Milwaukee Pub. Mus. 87 pp.). Six turtles were observed on the Kenosha County side of the lake and the specimen was captured for identification and voucher.

Submitted by **MATTHEW G. BOLEK**, Department of Biological Sciences, University of Wisconsin Milwaukee, Milwaukee, Wisconsin 53201, USA.

KINOSTERNON FLAVESCENS FLAVESCENS (Yellow Mud Turtle). USA: MISSOURI: CLAY CO: Kansas City North, near jct of 50th and Bristol Streets. 19 September 1993. Keith Gammon. KU Color Slide 11248. Verified by Joseph T. Collins. Specimen is alive at Lakeside Nature Center, Kansas City, Missouri, and will be deposited in the Bobby Witcher Memorial Collection at Avila College, Kansas City, Missouri, upon its death. Specimen is a female with a carapace length of 108 mm. County record; represents another locality as described by Smith and Blake from adjacent Ray Co. (1990, Herpetol. Rev. 21:40) near the Missouri River, and probably is due to an individual turtle being carried by flood waters. In fact, this record is temporally associated with the extreme flood conditions present in the Midwest during the summer of 1993.

Submitted by **KEVIN D. HOGAN**, Lakeside Nature Center, 5600 East Gregory Boulevard, Kansas City, Missouri 64132, USA, and **DONALD D. SMITH**, Division of Allergy and Rheumatology, University of Kansas Medical Center, 3901 Rainbow Boulevard, Kansas City, Kansas 66160, USA.

PSEUDEMYS CONCINNA SUWANNIENSIS (Suwannee River Cooter). USA: FLORIDA: TAYLOR CO: Econfina River, from U.S. Rt. 98 to ca. 2 km N of Gulf of Mexico. 29 October 1996. Dale R. Jackson. UF 105386 (specimen and 3 color slides). Verified by Paul Moler. On 21 April 1996, I observed from canoe ca. 2 dozen basking individuals, mostly immature animals between 90 and 200 cm estimated carapace length; a subadult female (plastron length 234 mm, CL 274 mm) was collected by basking trap on 29 October in the strongly tidally influenced lower river 4 km above the Gulf (NW 1/4 SW 1/4 Sec. 11, T5S, R4E). Probable presence in the river was first reported to me by M. A. Ewert based on 1960s sight records at U.S. Rt. 98. New drainage record (Jackson 1992, in P. Moler (ed.), Rare and Endangered Biota of Florida. Vol. 3. Amphibians and Reptiles, pp. 166-170. Univ. Press Florida, Gainesville; 1995, Chelonian Cons. Biol. 1:329-333) and first confirmed occurrence in any of the "small rivers" between the Aucilla and Suwannee. As such, this further reduces the conjectured disjunction between peninsular and panhandle populations of this species, which had been used by some to hypothesize separate specific identities for those populations (reviewed by Jackson 1995, *op. cit.*).

Submitted by **DALE R. JACKSON**, Florida Natural Areas Inventory, 1018 Thomasville Road, Suite 200-C, Tallahassee, Florida 32303, USA.

STERNOTHERUS MINOR MINOR (Loggerhead Musk Turtle). USA: FLORIDA: TAYLOR CO: Econfina River, County Road 14A bridge at Shady Grove (NE 1/4, NE 1/4, Sec. 29, T2S, R7E). 27 October 1996. Dale R. Jackson. UF 105384-385 (9 specimens and color slides). Verified by Paul Moler. An adult male (carapace length 92 mm, plastron length 67 mm) and adult female (CL 90 mm, PL 71 mm) were collected in a sardine-baited hoop trap set on 26 October in the upper reaches of this small Gulf-draining blackwater river. Both specimens were much darker than conspecific turtles from Florida spring runs. Previously, on 21 April 1996, I observed a large adult basking on a branch ca. 6 km downstream of U.S. Rt. 98, ca. 34 straight-line km SW of the collection site and near the tidally influenced lower segment of the river; Fenholloway River at U.S. Rt. 27 (NE 1/4, NE 1/4, Sec 36, T4S, R8E). 7 October 1983. George M. Burgess et al. UF 104420. Immature (CL 63 mm, PL 44 mm). Verified by David Auth. These specimens not only represent new drainage records, but constitute the species' first confirmed occurrence in any of the small rivers between the Aucilla and Suwannee in Florida's "Big Bend" re-

gion; they thus help to close the geographic gap that previously appeared to separate panhandle from peninsular populations (Iverson 1977, Copeia 1977:502-517; Iverson and Etchberger 1989, Florida Sci. 52:119-144; Iverson 1992, A Revised Checklist with Distribution Maps of the Turtles of the World. Richmond, Indiana. 363 pp.).

Submitted by **DALE R. JACKSON**, Florida Natural Area Inventory, 1018 Thomasville Road, Suite 200-C, Tallahassee, Florida 32303, USA.

TERRAPENE ORNATA ORNATA (Ornate Box Turtle). USA: TEXAS: FLOYD CO: UTM coordinates 14 307241E 3797536N. 18 July 1996. F. D. Yancey, II. The Museum of Texas Tech University (TTU 11632). Verified by Clyde Jones. New county record; fills gap between Hale and Motley counties (Dixon, 1987, Amphibians and Reptiles of Texas. Texas A&M Univ. Press, College Station. 434 pp.).

Submitted by **FRANKLIN D. YANCEY, II**, Department of Biological Sciences and The Museum, Texas Tech University, Lubbock, Texas 79409-3191, USA.

TRACHEMYS SCRIPTA ELEGANS (Red-Eared Slider) USA: OHIO: MAHONING CO: Lily Pond, Mill Creek Park. 23 February 1995. Raymond J. Novotny. Cleveland Museum of Natural History 6761. Verified by Timothy O. Matson. First county record. Conant [1951, Reptiles of Ohio. 2nd ed. (with revisionary addenda) Amer. Midl. Nat., Univ. Notre Dame, Indiana. 284 pp.]. This species has been observed at this site for at least 25 years (H. L. Vickers, 15 April 1970, "A Nature Diary," The Youngstown Vindicator). Female was observed laying eggs in lawn at Lily Pond during summer 1988; eggs were removed and hatched summer 1988, and most hatchlings were released at site. Female lived in captivity at nature center until death on above date. This species has been found at many localities outside of its range, Conant and Collins (1991, Peterson Field Guide to Reptiles and Amphibians of Eastern and Central North America. Third ed. Houghton Mifflin Co. Boston, Massachusetts. 450 pp.) Because of this breeding evidence in the Lily Pond and possibly at other lakes in Mill Creek Park, this should be considered an established colony.

Submitted by **RAYMOND J. NOVOTNY**, Ford Nature Center, Mill Creek Metropolitan Park District, 840 Old Furnace Road, Youngstown, Ohio 44511, USA.

SAURIA

ANOLIS CAROLINENSIS (Green Anole). USA: ALABAMA: WINSTON CO: William B. Bankhead National Forest, ca 1.5 km NE Adkins Cemetery. N 1/2 Sec. 16, T9S, R8W. 5 October 1996. AUM 34302. Verified by Craig Guyer. New county record (Mount 1975, The Reptiles and Amphibians of Alabama. Publ. Alabama Agric. Exp. Sta., Auburn. 347 pp.).

Submitted by **BRIAN P. BUTTERFIELD, DANIEL R. FRENCH, SCOTT R. FEARS, MICHELLE D. HARGREAVES, ANGELA J. LEWIS, CHRISTINE D. ROBY, LEAH M. HOOD, and JENNIFER R. ROBINSON**, Department of Biology, Freed-Hardeman University, Henderson, Tennessee 38340-2399, USA.

ANOLIS TRACHYDERMA (Roughskin Anole). PERU: CUSCO: Canisea River, 250 m elev., 11°49'S, 72°47'W. 14 August 1996. Museo de Historia Natural Universidad Nacional Mayor de San Marcos, Lima (MUSM 16713, male; MUSM 16714, female). The male dewlap is larger than the female dewlap, and is orange with

yellow on the anterior and posterior borders. The dewlap of the female is orange. This coloration is similar to that described for the species by Vanzolini [1972, Papéis Avulsos Zool. S. Paulo 26(8):95]. Both specimens were found sleeping on leaves 0.70-1.05 m above the ground. The previous northernmost locality in Peru for this anole was in the Utoquinia Region, Department Ucayali, on the border between Peru and Brazil (Avila-Pires 1995, Zool. Verh. Leiden 299:111).

Submitted by **VICTOR R. MORALES**, Department of Wildlife and Fisheries Sciences, and Texas Cooperative Wildlife Collection, Texas A&M University, College Station, Texas 77843-2258, USA.

COLOBODACTYLUS DALCYANUS (NCN). BRAZIL: SÃO PAULO: Parque Estadual Campos do Jordão, in montane forest in the Serra de Mantiqueira Range (22°45'S, 45°33'W), ca. 1500 m. 14 February 1996. Ivan Sazima, Otavio C. Oliveira, and Marlies Sazima. Universidade Estadual de Campinas (ZUEC 01919). Verified by Marcio Martins. One unsexed specimen, 48 mm SVL, tail broken, 1.5 g body mass. First record from the state of São Paulo. Caught along roadside at 0930 h under a small rock. Extends the range of this species westward from previously known distribution (type locality in the Brejo da Lapa) on the NW flank of the Itatiaia massif on the border of the states of Rio de Janeiro and Minas Gerais [Vanzolini and Ramos 1977, Papéis Avulsos Zool., São Paulo 31(3):19-47].

Submitted by **PAULO ROBERTO MANZANI and IVAN SAZIMA**, Departamento de Zoologia, Instituto de Biologia, Universidade Estadual de Campinas, Campinas 13083-970, São Paulo, Brazil.

COPHOSAURUS TEXANUS TEXANUS (Texas Earless Lizard). USA: TEXAS: FLOYD CO: Caprock Canyons State Park, Caprock Canyon Trailway, UTM coordinates 14 304470E 3790854N. 18 July 1996. F. D. Yancey, II. The Museum of Texas Tech University (TTU 11631). Verified by Clyde Jones. New county record; fills the gap between Briscoe and Crosby counties (Dixon 1987, Amphibians and Reptiles of Texas. Texas A&M Univ. Press, College Station. 434 pp.).

Submitted by **FRANKLIN D. YANCEY, II**, Department of Biological Sciences and The Museum, Texas Tech University, Lubbock, Texas 79409-3191, USA.

GEHYRA MUTILATA (Stump-Toed Gecko). FRENCH GUYANA: town of Kourou. J. C. Massary and I. Ineich. March-April 1996. Muséum National d'Histoire Naturelle, Paris (MNHN 1996.4342-4355 and 1996.4371). Verified by G. Pasteur. First report for South America; previously known from Indian and Pacific Oceans (Indoaustralian Archipelago). Extralimital from India and Sri Lanka through Indochina to Japan, the Philippines, and Indonesia. The species is often commensal with humans and has recently expanded its range throughout much of the world. It was introduced and established in México and San Diego, USA, and also into New Zealand where it did not become established (see Bauer and Henle 1994, Das Tierreich: Teilbd. 109:88-94). Occurs in sympatry with *Hemidactylus mabouia* in scattered localities in the town of Kourou where populations have been established for several years. The species will certainly spread rapidly to other towns on the heavily inhabited littoral part of French Guyana.

Submitted by **IVAN INEICH and JEAN-CHRISTOPHE DE MASSARY**, Muséum National d'Histoire Naturelle, Laboratoire de Zoologie (Reptiles & Amphibiens), 25 Rue Cuvier, F-75005 Paris, France.

HEMIDACTYLUS TURCICUS (Mediterranean Gecko). USA: LOUISIANA: CALCASIEU PARISH: Lake Charles, McNeese State University campus. June 1968. James D. Lane. Seale Museum of Louisiana, McNeese State University (SML 1454); McNeese State University campus. 22 September 1996. Nick Slay. SML 9304-09; The city of Lake Charles. Spring 1979. B. Ezell. SML 7447. All verified by Mark A. Paulissen. First parish records; expands the distribution of this species westward from Lafayette Parish as mapped by Dundee and Rossman (1989, *The Amphibians and Reptiles of Louisiana*. Louisiana St. Univ. Press, Baton Rouge. 300 pp.) and from St. Landry Parish as recorded by Vidrine and Hatler (1995, *Herpetol. Rev.* 26:155). It is unclear when this population was introduced into the University area. Regardless, it has since become very common throughout the city of Lake Charles and the surrounding communities (Williams, pers. obs.). AVOYELLES PARISH: Eola area. March 1963. W. Simpson and J. G. Walls. SML 271. Verified by Mark A. Paulissen. First parish record as mapped by Dundee and Rossman (*op. cit.*); expands the distribution of this species northeastward from Evangeline Parish as recorded by Boundy (1994, *Herpetol. Rev.* 25:128-129).

Submitted by **AVERY A. WILLIAMS**, Division of Sciences, Louisiana State University at Eunice, Eunice, Louisiana 70535, USA.

HEMIDACTYLUS TURCICUS (Mediterranean Gecko). USA: TEXAS: BOSQUE CO: Valley Mills, ca 10 mi W of Clifton. 7 July 1996. C. J. Franklin and S. M. Franklin. University of Texas at Arlington Collection of Vertebrates (UTA-R 40734). Verified by C. L. Stewart. New county record. (Dixon 1987, *Amphibians and Reptiles of Texas*. Texas A&M Univ. Press, College Station. 434 pp.).

Submitted by **CARL J. FRANKLIN**, Department of Herpetology, Dallas Zoo, 650 South R. L. Thornton Freeway, Dallas, Texas 75203, USA.

HOMONOTAANDICOLA (NCN). ARGENTINA: LA RIOJA: Las Chacritas, 33 km W Alto Jagüé, Department General Lamadrid. 10 February 1997. Sebastián E. Torres. Fundación Miguel Lillo, Tucumán, Argentina (FML 6101). Verified by Fernando Lobo. First record for La Rioja Province; extends range north 400 km (airline). Species was previously known only from the Uspallata region in Mendoza Province (Cei 1978, *Publ. oc. Inst. Biol. an. Univ. nac.* Cuyo 1:1-2).

Submitted by **SEBASTIAN E. TORRES**, **VIRGINIA ABDALA**, and **SONIA KRETZSCHMAR**, Instituto de Herpetología, Fundación Miguel Lillo, Miguel Lillo 251, 4000, Tucumán, República Argentina.

LACERTA VIRIDIS (Green Lacerta). USA: KANSAS: SHAWNEE CO: Topeka, 4420 SW 23rd Street. 2 August 1996. Jerry Jones. KU Color Slide 11235. Verified by Joseph T. Collins. Species was originally documented as introduced via a commercial animal dealer in Topeka by Collins (1974, *Amphibians and Reptiles in Kansas*. First Ed. Univ. Kansas Nat. Hist. Mus. Pub. Ed. Ser. 1:1-283) and again by Collins (1983, *Amphibians and Reptiles in Kansas*. Second Ed. Univ. Kansas Nat. Hist. Mus. Pub. Ed. Ser. 8:1-356), based on specimens taken in 1973 and 1977, respectively. Because no documented vouchers were discovered after 1977, Conant and Collins (1991, *Peterson Field Guide to Reptiles and Amphibians Eastern and Central North America*. Third Ed. Houghton Mifflin Co., Boston. 450 pp.) did not consider this lizard established in the United States.

The specimen reported herein is the first collected in 19 years, and documents the continued presence of *L. viridis* in the Topeka area. The lizard was caught ca. 500 m from the source of the original introduced population, and is currently being maintained alive by Jim Gubanyi. Upon its death, the lizard will be deposited in the University of Kansas Natural History Museum, Lawrence.

Submitted by **JAMES GUBANYI**, 2501 Burnett Road, Topeka, Kansas 66614, USA, and **JOSEPH GUBANYI**, Concordia College, 800 North Columbia, Seward, Nebraska 68434, USA.

LIOLAEMUS FITZGERALDI (Lagartija del Aconcagua). CHILE: IV REGION—Coquimbo: Las Gualtatas, near copper mine Los Pelambres, 55 km west Illapel (31°38'S, 71°10'W). 6 January 1997. L. J. Avila and E. Soto. Herpetological collection, Orientación Zoológica de Vertebrados, Departamento de Ciencias Naturales, Universidad Nacional de Río Cuarto, Argentina (ZV-UNRC 4066-68). Verified by R. A. Martori. First record for IV Región—Coquimbo (Velo and Navarro 1988, *Boll. Mus. Reg. Sci. Nat. Torino* 6[2]:481-539; Nuñez and Jaksic, 1992, *Bol. Mus. Nac. Hist. Nat. Chile*, 43:63-91). The locality reported here is at ca. 3300 m elevation; extends range nearly 150 km N from type locality at Puente del Inca, Dpto. Las Heras, Mendoza (Argentina).

Submitted by **LUCIANO JAVIER AVILA**, Departamento de Ciencias Naturales, Universidad Nacional de Río Cuarto, Agencia Postal Nro. 3, C.P. 5800, Río Cuarto (Córdoba), Argentina (e-mail: lavila@exa.unrc.edu.ar), and **EDUARDO SOTO**, Zoolología de Vertebrados, Facultad de Ciencias, Universidad de Chile.

LIOLAEMUS SAXATILIS (NCN). ARGENTINA: SAN LUIS: Dept. Coronel Pringles: 10 km W La Toma (33°04'S, 65°38'W), Ruta Provincial 10, near Sierras del Rosario. 5 October 1996. Herpetological collection of Orientación Zoológica de Vertebrados, Departamento de Ciencias Naturales, Universidad Nacional de Río Cuarto, Argentina (ZV-UNRC 3968); same locality. 8 December 1996. ZV-UNRC 4022; 28 km SW La Toma (near Ruta Provincial 20). 8 December 1996. ZV-UNRC 4023-24. All collected by L. J. Avila, J. W. Priotto and M. Morando, and verified by Ricardo A. Martori. First province records; a westward extension of the known range ca. 75 km from type locality (Avila et al. 1992, *Bol. Mus. Reg. Sci. Nat.* 10[1]:101-111).

Submitted by **LUCIANO JAVIER AVILA**, **JOSE W. PRIOTTO**, and **MARIANA MORANDO**, Departamento de Ciencias Naturales, Universidad Nacional de Río Cuarto, Estafeta Postal 9, C.P. 5800, Río Cuarto, Córdoba, Argentina. E-mail (LJA): lavila@exa.unrc.edu.ar

NOROPS PACHYPUS (Thick Anole). COSTA RICA: GUANACASTE PROVINCE: Guanacaste Conservation Area, Las Pailas Sector, E side of Laguna Jilgueros at the crest of Rincón de la Vieja Volcano, 1526-1537 m elev., 10°50'N, 85°22'W. 17 June 1995 and 11 August 1996. David T. Nicolson, Jason D. Johnson, and Kirsten E. Nicholson. University of Miami Costa Rican Expeditions (CRE 7612-7618, 10392). Verified by Jay M. Savage. Extends known range ca. 157 km airline NW of Alto del Roble and ca. 10 km N of Barba, Heredia Province (CRE 7094 collected by J. M. Savage and N. Scott; Savage and Villa 1986, *Herpetofauna of Costa Rica, Contributions to Herpetology No. 3*). We also have examined specimens of this taxon (previously identified as *Norops tropidolepis*; verified by Jay M. Savage) collected from Volcan Cacao, 1590-1600 m elev., 10°56'N, 85°27'W, on 3 and 24 August 1987 (MVZ 207349-51). These additional specimens extend the previous known range 176 km airline NW from Alto del Roble.

Submitted by **KIRSTEN E. NICHOLSON** and **DAVID T. NICOLSON**, Department of Biology, University of Miami, Coral Gables, Florida 33124, USA.

OPHISAURUS ATTENUATUS LONGICAUDUS (Eastern Slender Glass Lizard). USA: GEORGIA: BULLOCH Co: SR 1838, 6.4 km N SR 1838/Georgia Rt. 321 jct. (1.6 km N Bulloch-Bryan county line). 7 May 1994. Collector not recorded. Savannah Science Museum (SSM 96.13765). Verified by Robert A. Moulis. New county record (Williamson and Moulis 1994, Savannah Sci. Mus. Spec. Publ. 3:1-712). Specimen was caught crossing SR 1838 at ca. 1630 h.

Submitted by **MICHAEL G. FRICK**, Savannah Science Museum, 4405 Paulsen Street, Savannah, Georgia 31405, USA.

PHYLLODACTYLUS XANTI (Cape Leaf-toed Gecko). MÉXICO: BAJA CALIFORNIA SUR: Isla Pardo, one of five islands in a group collectively known as Islas Los Candeleros, located SW of Isla Danzante in the vicinity of Loreto (Crumpton 1991, Baja Explorer: Topographic Atlas Directory. ALTI Publishing, La Jolla, California; Williams 1988, Baja Boater's Guide: Volume II—Sea of Cortéz. H. J. Williams Publications, Sausalito, California. p. 151). 22 March 1996. L. Lee Grismer, Bradford D. Hollingsworth, Humberto Wong, and Michael R. Cryder. La Sierra University Photographic Collection (LSUPC L3026). Verified by Lester E. Harris. First record for Isla literature (Murphy and Ottley 1984, Ann. Carnegie Mus. Nat. Hist. 53:207-230). Specimen was found during the day beneath a pile of rocks on the cobblestone beach.

Submitted by **MICHAEL R. CRYDER**, Department of Natural Sciences, Loma Linda University, Loma Linda, California 92350, USA, and Department of Biology, La Sierra University, Riverside, California 92515-8247, USA, **L. LEE GRISMER**, Department of Biology, La Sierra University, Riverside, California 92515-8247, USA, **BRADFORD D. HOLLINGSWORTH**, Department of Natural Sciences, Loma Linda University, Loma Linda, California 92350, USA, and Department of Biology, La Sierra University, Riverside, California 92515-8247, USA, **HUMBERTO WONG**, Department of Biology, La Sierra University, Riverside, California 92515-8247, USA.

PODARCIS ERHARDII LIVADIACA (Erhard's Wall Lizard). GREECE: STEREA ELLADA: AETOLOACARNANIA PREFECTURE: NAFFACTIA Co: 2.3 km NE Styliá, 700 m elev. (38°30'19"N, 21°48'38"E). 28 November 1996. George Chiras and Basil P. Chondropoulos. Zoological Museum of University of Patra (ZMUP A-R 1375). Verified by E. Valakos. An adult male; 4-5 more individuals were observed basking on the banks of a road crossing a dense Hungarian oak (*Quercus conferta*) forest. *Podarcis erhardii* is a southern Balkan endemic species; in Greece it occurs in parts of the mainland and in the western and south Aegean islands. Prior to this discovery, there has been a complete lack of data concerning the species distribution in the central and western Sterea Ellada region. The nearest previous record was ca. 120 km NW in the Epirus region (Gruber 1986, *In* W. Böhme, ed., *Handbuch der Reptilien und Amphibien Europus*, pp. 25-49. Aula-Verlag, Wiesbaden). At the subspecies level, the known range of *P. e. livadiaca* covers only the eastern part of Sterea Ellada (Attiki and Evia Prefectures) and the eastern part of Peloponnisos region (Wettstein 1953, Sitz.-ber. Österr. Akad. Wiss. Wien 162:651-833; Chondropoulos 1986, *Amphibia-Reptilia* 7:217-235). This record extends considerably both the species and subspecies ranges, filling a very large distributional gap for this lizard in the western Greek mainland.

Submitted by **BASIL P. CHONDROPOULOS**, Section of Animal Biology, Department of Biology, University of Patra, 260 01 Patra, Greece, and **GEORGE CHRIRAS**, Sarantaporou 38, 262 23 Patra, Greece.

SCINCELLA LATERALIS (Ground Skink). USA: ALABAMA: WINSTON Co: William B. Bankhead National Forest, ca 1.5 km NE Adkins Cemetery. N 1/2 Sec. 16, T9S, R8W. 5 October 1996. AUM 34303. Verified by Craig Guyer. New county record (Mount 1975, *The Reptiles and Amphibians of Alabama*. Publ. Alabama Agric. Exp. Sta., Auburn. 347 pp.).

Submitted by **BRIAN P. BUTTERFIELD**, **DANIEL R. FRENCH**, **SCOTT R. FEARS**, **MICHELLE D. HARGREAVES**, **ANGELA J. LEWIS**, **CHRISTINE D. ROBY**, **LEAH M. HOOD**, and **JENNIFER R. ROBINSON**, Department of Biology, Freed-Hardeman University, Henderson, Tennessee 38340-2399, USA.

SERPENTES

CROTALUS WILLARDI OBSCURUS (New Mexico Ridgenose Rattlesnake). USA: ARIZONA: COCHISE Co: Sec. 14, T22S, R32E. 24 October 1996. Sam W. Smith. AMNH 142597. Verified by Michael Douglas. State record for this federally threatened subspecies. Found on leaf litter in canyon bottom dominated by oaks, alligator bark juniper, and Mexican pinyon. Collected under permit to Andrew T. Holycross (U.S. Fish and Wildlife Service PRT676811 and Arizona Game and Fish Department SP648632) and euthanized under permit to the Arizona Game and Fish Department (U.S. Fish and Wildlife Permit PRT676811).

Submitted by **ANDREW T. HOLYCROSS**, Department of Zoology, Arizona State University, Tempe, Arizona 85287-1501, USA, and **SAM W. SMITH**, 4338 East Elmwood Street, Tucson, Arizona 85711, USA.

ELAPHE OBSOLETA OBSOLETA (Black Rat Snake) USA: OHIO: MAHONING Co: Canfield Township: DOR on Turner Road, 1 mi N Palmyra Road. 4 July 1995. Raymond J. Novotny. Cleveland Museum of Natural History 6760. Verified by Timothy O. Matson. First county record; fills range gap between Trumbull County to N, Columbiana County to S, Portage County to W, and Lawrence County, Pennsylvania to E as depicted in Conant (1951, *Reptiles of Ohio*. 2nd ed. [with revisionary addenda], Amer. Midl. Nat., Univ. Notre Dame, Indiana. 284 pp.) and McCoy (1982, *Amphibians and Reptiles in Pennsylvania*. Carnegie Mus. Nat. Hist., Pittsburgh, Pennsylvania. 91 pp.).

Submitted by **RAYMOND J. NOVOTNY**, Ford Nature Center, Mill Creek Metropolitan Park District, 840 Old Furnace Road, Youngstown, Ohio 44511, USA.

ELAPHE OBSOLETA SPILOIDES (Gray Rat Snake). USA: GEORGIA: TIFT Co: S2516, 2.08 km S S2516/Georgia Rt. 35 (US Rt. 319) jct. (11.2 km NNE Tifton). 28 September 1996. J. Andrew Jackson. Savannah Science Museum (SSM 96.13764). Verified by Michael G. Frick. New county record (Williamson and Moulis 1994, Savannah Sci. Mus. Spec. Pub. 3:1-712). Specimen was caught crossing highway at ca. 1430 h.

Submitted by **J. ANDREW JACKSON**, Savannah Science Museum, 4405 Paulsen Street, Savannah, Georgia 31405, USA.

HAEMORRHOIS (= COLUBER) DORRI (Boie's Racer). SENEGAL: SENEGAL ORIENTAL REGION: Bandafassi (12°32'N, 12°18'W). 28 December 1989. Jean-François Trape. Museum National d'Histoire Naturelle at Paris (MNHN-

1995.9693). Verified by Ivan Ineich. First regional record and second for Senegal. Extends range 260 km southward from the closest known locality at Bakel, Upper Senegal, where the type originated (Lataste 1888, *Le Naturaliste*, 10:227–228). This species is also known from Mali, Burkina-Faso, Ghana, and Togo (Villiers 1975, *Les Serpents de l'Ouest Africain*, Institut Fondamental d'Afrique Noire, Initiations et Etudes Africaines n°2, 3ème édition, Dakar, 195 pp.).

Submitted by **JEAN-FRANCOIS TRAPE**, Laboratoire de Paludologie, ORSTOM, P.O. Box 1386, Dakar, Sénégal.

LEPTOPHIS AHAETULLA MARGINATUS (Parrot Snake). URUGUAY: DEPARTAMENTO DE ARTIGAS: Arrocería San Pedro, 25 km W of Colonia Palma. Between October 1983 and January 1984. ZVC-R 4401, 4529–30, and MNHN 3740. First vouchers for Uruguay, substantiating an earlier literature record of *Leptophis liocercus* (Wied, 1824) (= *Leptophis ahaetulla marginatus*) by Koslowsky (1898, *Rev. Mus. La Plata* 8:164, 191) (*contra* statement by Peters and Orejas-Miranda 1970, *Bull. U.S. Natl. Mus.* 299:viii + 347).

Submitted by **MELITTA D. MENEGHEL** and **FEDERICO ACHAVAL**, Sección Zoología de Vertebrados, Instituto de Biología, Facultad de Ciencias, Tristan Narvaja 1674, Casilla de Correos 10.773, 11.200 Montevideo, Uruguay.

PORTHIDIUM HESPERE (Western Hognose Viper). MÉXICO: MICHOACÁN: Municipality of Aquila: Playa Colola (18°18'00"N, 103°21'00"W, sea level) 4 November 1995. R. Nuñez-Pérez and C. Delgado-Trejo. Facultad de Biología, Universidad Michoacana de San Nicolás de Hidalgo (FBH 0239). Verified by Gustavo Casas-Andreu. Adult female (245 mm SVL; 70 mm TL) collected at 2345 h on an *Acacia* tree. This species was known definitely only from the type locality, 19.2 airline km NE Tecoman, Municipality of Ixtlahuacán, Colima, and description was based on a single specimen (Campbell 1976, *J. Herpetol.* 10:151–160). Huacuz (1995, *Serpientes del Estado de Michoacán*, Master's Thesis, Univ. Nac. Autón. de México), recently reviewed the ophidiofauna of Michoacán, and predicted the presence of this snake in the state. First documented record for the state of Michoacán and extends its known range ca. 95 km SE of type locality.

Submitted by **JAVIER ALVARADO-DIAZ**, **DOLORES DEL C. HUACUZ-ELIAS** and **IRERI SUAZO-ORTUÑO**, Facultad de Biología, Universidad Michoacana, Apartado 35-A, Morelia 58000, Michoacán, México.

PSEUDOTOMODON TRIGONATUS (False Tomodon Snake, Culebra Enhebrada). ARGENTINA: CORDOBA: DEPARTAMENTO CALAMUCHITA: bridge over Guacha Corral Creek, 15 km W Río de los Sauces (town) (32°32'S, 64°36'W). 11 April 1993. L. J. Avila. Colección de Vertebrados Universidad Nacional de Río Cuarto (ZV-UNRC 2342); DEPARTAMENTO RÍO CUARTO: 2 km E El Chacay village (32°53'S, 64°50'W). 19 October 1991. R. Martori and L. Aun. ZV-UNRC 1607; Achiras (33°10'S, 64°59'W). 4 November 1990. L. J. Avila and P. Pettinicchi. ZV-UNRC 1213–15; Alpa Corral (32°52'S, 64°57'W). 14 March 1995. M. Arana. ZV-UNRC 3611. All verified by Ricardo A. Martori. First vouchered records from the province of Córdoba. Previous citations (Ceí 1986, *Mon. IV. Mus. Reg. Sci. Nat. Torino*. 527 pp.; Ceí 1993, *Mon. XIV. Mus. Reg. Sci. Nat. Torino*. 949 pp.; Williams and Francini 1991, *Boll. Mus. Reg. Sci. Nat.* 9[1]:55–90) were unvouchered (Reati 1996, *In: Biodiversidad de la Provincia de Córdoba*. Di Tada and Bucher, eds. pp. 239–254).

Submitted by **LUCIANO JAVIER AVILA**, Departamento de Ciencias Naturales, Universidad Nacional de Río Cuarto, Agencia Postal 3, C. P. 5800, Río Cuarto (Córdoba), Argentina. E-mail: lavila@exa.unrc.edu.ar.

RAMPHOTYPHLOPS BRAMINUS (Braminy Blind Snake). FEDERATED STATES OF MICRONESIA: CAROLINE ISLANDS: POHNPEI STATE: Pohnpei Islands, Uh Municipality, Mwahn Peidi Island, Station 56, 3–30 m elev. (Mwahn Peidi Island is ca. 158°17'E, 6°40'N of the main island of Pohnpei.) 22 July 1995. Don Buden. First island record. MCZ 180888. Verified by Van Wallach. Closest locality is "Ponape, Caroline Islands" (McDowell 1974, *J. Herpetol.* 8[1]:1–57). McDowell's locality is unclear because "Ponape" (= Pohnpei) could refer to either the State or the island.

Submitted by **LESLIE A. THOMAS**, Center for Vertebrate Studies, Department of Biology, Northeastern University, Boston, Massachusetts 02115, USA.

REGINA GRAHAMII (Graham's Crayfish Snake). USA: LOUISIANA: CALCASIEU PARISH: 6.3 mi S and 3.6 mi E Lake Charles on Lincoln Road. 15 March 1972. R. LeBoeuf. Seale Museum of Louisiana, McNeese State University (SML 4953); 2 mi W jct. Louisiana Rt. 108 and Louisiana Rt. 27. 4 February 1973. M. Dugas. SML 5556; 10 mi E and 6 mi S Lake Charles. 27 February 1974. J. Dolan. SML 6196; 12 mi W and 6 mi S Lake Charles, Choupique Bayou area. 2 March 1974. P. Rider. SML 6285; 2 mi S of I-210 on Louisiana Rt. 14. 13 April 1985. T. Broussard. SML 8288; 0.5 mi N Sulphur. 28 March 1985. Smith and Nichols. SML 8354; 11 mi NW Vinton. 23 March 1991. H. Abner and R. Heiner. SML 9191; 1 mi W jct. of Louisiana Rt. 379 (Houston River Road) and Clairborne Street, Houston River Canal area. 17 March 1993. Avery A. Williams. SML 9303 (Specimen was collected while it was copulating in a flooded right-of-way clearing. Its mate escaped collection.); JEFFERSON DAVIS PARISH: 1 mi N and 1.7 mi E Hayes, Lorraine Park area. 24 March 1971. D. Fruge. SML 5144. All verified by Douglas A. Rossman. First parish records; extends distribution north from Cameron Parish as mapped by Dundee and Rossman (1989, *The Amphibians and Reptiles of Louisiana*. Louisiana St. Univ. Press, Baton Rouge. 300 pp.).

Submitted by **AVERY A. WILLIAMS**, Division of Sciences, Louisiana State University at Eunice, Eunice, Louisiana 70535, USA.

REGINA RIGIDA (Glossy Crayfish Snake). USA: LOUISIANA: CALCASIEU PARISH: 1 mi N and 0.9 mi E Bell City. 24 March 1972. D. Fruge. Seale Museum of Louisiana, McNeese State University (SML 4965); 0.8 mi N and 0.4 mi E Bell City. 22 June 1971. D. Fruge. SML 5154; 2 mi N Bell City. 31 March 1973. C. Hudson. SML 5522; 2 mi N Bell City. 31 March 1973. G. Bauer. SML 5581; 1 mi S jct. Lincoln Road and Nelson Road, Hippolyte Coulee area. 14 February 1974. D. Guillory. SML 6330; 2 mi N and 2 mi W Moss Bluff, Bunker Hill Canal area. 30 January 1986. Doyle, Ester, and Thompson. SML 8503; 1 mi N jct. Louisiana Rt. 378 and North Perkins Ferry Road, Moss Bluff area. 3 November 1987. Walther, Tietje, and Russo. SML 8688; NW of Westlake, 1 mi N jct. of John Stine Road and Myrtle Springs Road on May Street (two specimens collected from roadside ditches by neighborhood children using pellet guns). 30 March 1996. Avery A. Williams. SML 9301–02. All verified by Douglas A. Rossman; expands the distribution of this species in Calcasieu Parish from the single record mapped by Dundee and Rossman (1989, *The Amphibians and Reptiles of Louisiana*, Louisiana St. Univ. Press, Baton Rouge. 300 pp.).

Submitted by **AVERY A. WILLIAMS**, Division of Sciences, Louisiana State University at Eunice, Eunice, Louisiana 70535, USA.

VIRGINIA VALERIAE (Smooth Earth Snake). USA: KANSAS: MIAMI CO: 0.5 km S & 4 km E of Fontana, border of SE 1/4 of SE 1/4 Sec. 6, and SW 1/4 of SW 1/4 Sec. 5, T19S, R24E. 28 April 1996. Eric M. Kessler. KU 223467. Verified by Joseph T. Collins. New county record (Collins 1993, *Amphibians and Reptiles in Kansas*, Univ. Press Kansas, Lawrence. xx + 397 pp.).

Submitted by **ERIC M. KESSLER**, 5624 Cherry, Kansas City, Missouri 64110, USA.

New Records for Texas Amphibians and Reptiles

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The following nine specimens represent new distributional records for amphibians and reptiles in Texas, and increase our knowledge of the biology of the herpetofauna of that state. WTAMU = herpetological collection at West Texas A&M University, Canyon, Texas.

Ambystoma tigrinum tigrinum (Eastern Tiger Salamander). USA: TEXAS: ANGELINA CO: 4.8 km N Lufkin, Rt. 81. 18 September 1993. Kyla A. Murdick. WTAMU 14934. Verified by Anthony I. Mazeroll. First county record (Dixon 1987).

Hyla chrysoscelis (Cope's Gray Treefrog). USA: TEXAS: ARANSAS CO: Fulton. 16 April 1992. J. Culwell. WTAMU 14473. Verified by Anthony I. Mazeroll. First county record (Dixon 1987). An adult 38 mm SVL, with spotted throat, irregular marks on dorsum, rear surface of thigh unmarked.

Rana blairi (Plains Leopard Frog). USA: TEXAS: MOORE CO: Plum Creek behind camp. 22 October 1994. J. J. Rinne. WTAMU 14951. Verified by Anthony I. Mazeroll. First county record (Dixon 1987).

Xenopus laevis (African Clawed Frog). USA: TEXAS: LLANO CO: Lake Buchanan. 10 April 1981. Stacey Foster. WTAMU 6266. Verified by Anthony I. Mazeroll. Not previously reported from the state (Dixon 1987). Taken by a student on a class trip for a field course, cataloged in that student's field notes, and there identified as *Gastrophryne*, an expected species, hence given no special attention at the time. No other details of discovery known.

Hemidactylus turcicus (Mediterranean Gecko). USA: TEXAS: COMAL CO: Canyon Lake at Kelly Air Force Base Recreation Area. 11 November 1995. J. A. Jesko. WTAMU 15025. Verified by Anthony I. Mazeroll. First county record (Dixon 1987).

Coluber constrictor flaviventris (Eastern Yellowbelly Racer). USA: TEXAS: HARDEMAN CO: Rt. 1167, Medicine Mound Ranch. 16 May 1995. Kathleen B. Blair. WTAMU 15036. Verified by Anthony I. Mazeroll. First county record (Dixon 1987).

Elaphe guttata emoryi (Great Plains Rat Snake). USA: TEXAS: WHEELER CO: 6.5 km NE Shamrock. No date. Derl Brooks and H. H. Bailey. WTAMU 15006. Verified by Anthony I. Mazeroll. First county record (Dixon 1987).

Elaphe obsoleta lindheimerii (Texas Rat Snake). USA: TEXAS: HARDEMAN CO: Rt. 1167, Medicine Mound Ranch. 16 May 1995. Kathleen B. Blair. WTAMU 15035. Verified by Anthony I. Mazeroll. First county record (Dixon 1987).

Heterodon platirhinos (Eastern Hognose Snake). USA: TEXAS: OLDHAM CO: Boys Ranch Hog Farm, Boys Ranch. 9 July 1991. Eddie Taylor. WTAMU 14404. Verified by Anthony I. Mazeroll. First county record, at the western edge of the species' range (Dixon 1987).

LITERATURE CITED

DIXON, J. R. 1987. *Amphibians and Reptiles of Texas*. Texas A&M Univ. Press, College Station. 434 pp.

New Records for Amphibians and Reptiles from Texas

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A review of amphibians and reptiles from Texas in the University of Kansas Museum of Natural History has revealed the following county records, as indicated by our updated copy of Dixon's (1987) summary, of six taxa, and a presumably erroneous record that may be of historical interest for one other taxon. Joseph Mendelson III kindly verified all except the material of *Scaphiopus*, which is unverifiable.

Bufo americanus charlesmithi (Dwarf American Toad). USA: TEXAS: PANOLA CO: Sabine River, N Carthage. 5 April 1961. Frank B. Cross. KU 70013.

Syrrophus marnockii (Cliff Chirping Frog). USA: TEXAS: BANDERA CO: km W Medina. 4 May 1957. James R. Dixon. KU 60243. 21 km W Medina 4 May 1957. James R. Dixon. KU 60242. 9.7 km NM Medina, Keese Cave. 11 July 1974. No collector. KU 159614.

Scaphiopus holbrookii hurterii (Hurter's Spadefoot). USA: TEXAS: DEWITT CO: 8 km S Yoakum. 23 April 1963. C. M. Fleming. KU 186982. Serial sections of skull only (no body).

Sceloporus serrifer cyanogenys (Blue Spiny Lizard). USA: TEXAS: HIDALGO CO: Lower Rio Grande Valley National Wildlife Refuge, Sam Fordyce Tract. June 1992. Richard Courtemanche. KU 222526.

Salvadora grahamiae lineata (Texas Patchnose Snake). USA: TEXAS: WILLACY CO: 6.3 km E Porfirio. 28 August 1992. Kelly J. Irwin. KU 222583.

Crotalus viridis viridis (Prairie Rattlesnake). USA: TEXAS: COKE CO: 9.7 km N Water Valley. 2 January 1959. Paul Anderson. KU 84554.

Gopherus berlandieri (Texas Tortoise). USA: TEXAS: CALLAHAN Co: Putnam. 9 June 1926, 9 July 1926, 10 September 1927, 18 September 1927. No collector. KU 2674-5, 3003-9, 3011-2, 5037-9, and 6871. These specimens, from some 300 airline km to the north of the range limits of the species as now known, were obtained from A. J. Kirn, who lived near Somerset, Atascosa County, Texas, where the species is known to occur. Kirn collected many reptiles and amphibians in the county for several museums, through various specialists including E. H. Taylor and Howard K. Gloyd, and would not likely falsify data. Possibly these specimens were given to him with erroneous locality data, inasmuch as he did not record himself as collector.

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The Northern Alligator Lizard (*Elgaria coerulea*) from Nevada

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Banta (1964) summarized the early herpetological works on reptiles of the Great Basin in the western United States. Although some of these works were fairly comprehensive (Linsdale 1940), no anguid species were reported from the state of Nevada. Banta (1965) anticipated the occurrence of *Elgaria coerulea* in the Lake Tahoe region of Nevada and *E. panamintina* in the Palmetto Mountains, Esmeralda County, Grapevine Mountains, Nye County, and Spring Mountains, Clark County. *Elgaria multicarinata* was introduced to the Las Vegas area (Stebbins 1985) and a voucher specimen exists for this region (Nevada: Clark Co: Las Vegas. 13 June 1959. G. Ferske. Marjorie Barrick Museum, University of Nevada, Las Vegas [MBM] 43). A second known specimen of *E. multicarinata* was recently seen in southern Nevada (Nevada: Clark Co: Lake Mead National Recreation Area, Boulder Beach Campground. 4 April 1993. W. Pratt [pers. comm. A. Heindl 1996]) but was not collected.

Herein we report on three unpublished records of naturally occurring *Elgaria coerulea* from northern Nevada. The identifications were verified by Christopher J. Bell (Museum of Paleontology, University of California, Berkeley).

NEVADA: Carson City Co: at the point where Clear Creek crosses US Rt. 50 (T15N, R19E Sec. 32). 1 July 1993. B. Cobb. MBM 7444. This specimen extends the range of *E. coerulea* to the eastern side of the Lake Tahoe basin.

NEVADA: Washoe Co: Sheldon Antelope Refuge, Badger Mountain, Badger Cabin. Summer 1960. O. V. Deming. MBM 447.

NEVADA: Washoe Co: Upper High Rock Canyon, 41°29'25.4"N, 119°29'53.8"W, SE 1/4 of SE 1/4 Sec. 4, T41N, R22E, 1754 m. 11 June 1996. E. N. Arnold and J. V. Vindum. CAS 201283. Upper High Rock Canyon is about 2 km in length with steep walls reaching heights of ca 100 m above the canyon floor. In most areas the base of the canyon is less than 50 m wide. The area surrounding

the canyon and extending to the base of the canyon consists of sagebrush steppe. Aspen riparian forest is the dominant plant community along the length of the canyon floor. The specimen was found ca. 5 m from the creek bed in a small grassy glade between the riparian and sagebrush plant communities.

Based on Lais (1976), Stebbins (1985), and Brown et al. (1995), these two Washoe County specimens represent the third and fourth isolated populations of *Elgaria coerulea* found in the western Great Basin. The other two isolated populations are: 1) in the Warner Mountains (California: Modoc Co: Ft. Bidwell-Adel Hwy, Twelve Mile Creek at Oregon state line. 3 July 1934. H. S. Fitch. MVZ 17218-21; Fitch [1938] cited the locality as "Twelve-mile Creek, Modoc Co., Calif. at Nevada line"), and 2) in the Hart Mountains (Oregon: Lake Co: Desert Lake, Water Canyon, 22.5 km SE of Hart Mountain Wildlife Refuge Headquarters. 25 August 1954. C. Nelson. OS 2934. Oregon: Lake Co: about 91.4 m above the mouth of Water Canyon, W of Desert Lake, Hart Mountain National Wildlife Refuge. 8 July 1960. J. L. Richardson and T. Urbanek. OS 7673).

Although no late Pleistocene and Holocene fossil anguids have been found thus far in the Great Basin (Mead and Bell 1994), the four isolated populations suggest that *E. coerulea* was once more widely distributed in the western Great Basin. The current distribution seems now to be restricted to isolated populations in more mesic habitats.

Acknowledgments.—We thank T. A. Atkinson, C. J. Bell, D. B. Hardenbrook, A. L. Heindl, P. A. Medica, J. A. Rodriguez-Robles, and R. M. Storm for their assistance.

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The Cuban Green Anole, *Anolis porcatius*: A New Anole Established in Florida

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Florida is colonized by nine anoline lizards: *Anolis carolinensis* (Cope 1900), *A. chlorocyanus* (Bartlett 1988; Butterfield et al. 1994), *A. cristatellus* (Schwartz and Thomas 1975), *A. cybotes* (Ober 1973), *A. distichus dominicensis* (King and Krakauer 1966), *A. d. floridanus* (Smith and McCauley 1948), *A. equestris* (Neill 1957), *A. garmani* (Wilson and Porras 1983), and *A. sagrei* ssp. (Garman 1887). Only *A. carolinensis* and, arguably, *A. d. floridanus* are native. Among the exotic species, two, *A. equestris* and *A. sagrei*, are native to Cuba (Schwartz and Henderson 1991). *Anolis equestris* exploits the canopy and large branches of trees (Collette 1961) and fits the crown giant ecomorph (Williams 1969), whereas *A. sagrei* lives closer to the ground (Collette 1961) and fits the trunk-ground ecomorph (Williams 1969).

The Cuban green anole (*Anolis porcatius*), widespread in Cuba and sympatric with the former two species (Schwartz and Henderson 1991), is associated with the trunk and canopy (Collette 1961) and fits the trunk-crown ecomorph (Williams 1969). Only one record exists of a colony of *A. porcatius* outside of Cuba. *Anolis porcatius* was introduced to a site in the Dominican Republic probably in the 1950s where it has since expanded its geographic range by approximately 2.2 km² per year (Powell et al. 1990). This species was not introduced to Hawaii (McKeown 1996) as previously reported (McKeown 1978). Here, we record the presence of *A. porcatius* in Florida and relate data on diet and habitat to its structural niche in the introduced site.

A series of 12 males, 5 females, and 1 juvenile (Everglades Series: EVER 302589–302594, 302938–302940, 302947–302955) of *Anolis porcatius* was collected from buildings and vegetation in North Miami, Dade County, Florida on the afternoon of 13 and 16 June and 12 July 1996. All specimens were stored in the Everglades Regional Collections Center, Everglades National Park, Homestead, Florida. A male (EVER 302955) and female (EVER 302593) from that series were identified as *A. porcatius* by R. W. Henderson. This colony is approximately five years old and younger than a nine-year old colony in South Miami (Ron and Stella St. Pierre, pers. comm.) for which we have observations (reports) but no records. Derivations of both colonies are unknown.

The mean snout length (SVL) of male *Anolis porcatius* (66.2 ± 6.47 mm SVL; range = 55–76) was significantly larger ($Z = 19.94$, $P < 0.000$) than that of females (55.6 ± 6.83 mm SVL; range = 48–65). Number of prey from which length could be measured was too small to compare between sexes; however, prey were generally small (4.04 ± 4.59 mm; range = 1–23; $N = 21$) and the largest two items, an *A. sagrei* (23 mm SVL) and scarab beetle (10 mm) were found in two large males (68 and 73 mm SVL, respectively).

Including even potentially adventitiously ingested items such as stones and fruit, a wide range of prey categories ($N = 24$) were found in the diet of *Anolis porcatius* (Table 1). However, for all lizards, Levins' measure of niche breadth (Levins 1968) was narrow as measured by frequency of prey (0.28) and number of stomachs common to each taxon (0.34). Prey, typically found in vegetation (e.g., ladybird beetles, weevils, caterpillars, stinkbugs, parasitic wasps) or not restricted to the ground (e.g., ants), reflected the location of the lizards, which were captured and observed from 1.0–6.0 m above the ground. In light of its sympatry in North Miami with *A. equestris* and *A. sagrei*, the structural position of *A. porcatius* at this site was in keeping with that of Cuban populations.

TABLE 1. Diet of *Anolis porcatius* from North Miami Beach, Broward County, Florida, USA. Number of prey are followed in parentheses by number of stomachs with each prey category.

Taxa	Males (N = 12)	Females (N = 5)	Juveniles (N = 1)	Total
Araneida	1(1)	0	0	1(1)
Coleoptera	0	1(1)	0	1(1)
Coccinellidae	1(1)	0	0	1(1)
Curculionidae	1(1)	4(1)	0	5(2)
Scarabeidae	1(1)	0	0	1(1)
Dermoptera				
Forficulidae	0	1(1)	0	1(1)
Diptera	9(4)	2(2)	6(1)	17(7)
Tephritidae	1(1)	0	0	1(1)
Homoptera	2(2)	1(1)	0	3(3)
Hymenoptera	2(2)	0	0	2(2)
Cynipidae	0	0	2(1)	2(1)
Chalcoidea	0	0	1(1)	1(1)
Formicidae	7(5)	8(3)	0	15(8)
Lepidoptera				
Larvae	1(1)	0	0	1(1)
Neuroptera				
Chrysopidae	0	1(1)	0	1(1)
Trichoptera	4(1)	0	0	4(1)
Hemiptera	1(1)	0	0	1(1)
Pentatomidae	1(1)	0	0	1(1)
Gastropoda	0	0	1(1)	1(1)
Squamata				
Iguanidae	1(1)	0	0	1(1)
Skin	1(1)	0	0	1(1)
Fruits	2(1)	0	0	2(1)
Stones	1(1)	0	0	1(1)
Empty	2(2)	1(1)	0	3(3)

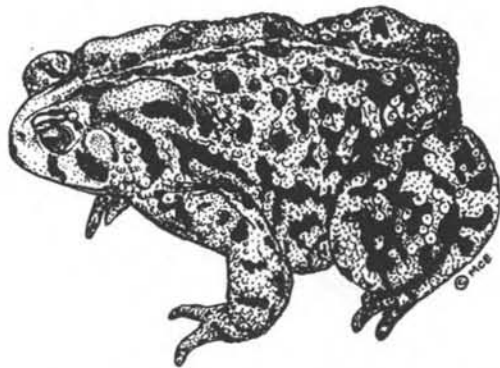
This record of *Anolis porcatius* increased to seven the number of species of reptiles (*Anolis equestris*, *A. sagrei*, *Gonatodes albobularis*, *Sphaerodactylus argus*, *S. elegans*) and amphibians (*Eleutherodactylus planirostris*, *Osteopilus septentrionalis*) native to Cuba that are now established as probable exotics in Florida. Five of these species (*A. equestris*, *A. porcatius*, *A. sagrei*, *E. planirostris*, *O. septentrionalis*) are sympatric at the North Miami site—a noteworthy dimension to the colonization process whereby many elements of a single community have successfully translocated to a new site. Broad diet, familiarity with sympatric species, and persistent colonies, increase the likelihood that *A. porcatius* will succeed in other parts of extreme southern Florida. However, the ubiquity of its predator, *A. equestris*, far more numerous in Miami than in Cuba (Orlando Garrido, pers. comm.), could hinder the success of *A. porcatius* in southern Florida. We are especially concerned about the future of *A. porcatius* in Florida. Ability to

persist and the potential for future range expansion by this species in Florida could have a substantial and negative impact on its native ecological analog (*A. carolinensis*) much as it has had on *A. chlorocyanus* in a comparable situation in Santo Domingo, Dominican Republic (Powell et al. 1990).

Acknowledgments.—Ron and Stella St. Pierre kindly shared with us their knowledge of *A. porcatus* in Florida. Ron St. Pierre, Paul Bledsole, and the Auburn 1996 Summer Natural History of Vertebrates class assisted in the field. We thank Robert Powell for commenting on an earlier version of this paper.

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Bufo americanus (American Toad). Illustration by Mark C. Erelli.

BOOK REVIEWS

A Complete Guide to Scientific and Common Names of Reptiles and Amphibians of the World, by Norman Frank and Erica Ramus, 1995. NG Publishing, Inc., Pottsville, Pennsylvania, 377 pp. ISBN 0-9641032-3-0. US \$19.95 (softcover).

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This book and two others (Sokolov 1988; Zhao et al. 1993) provide mute testimony to the burgeoning popularity of reptiles and amphibians around the world, not to mention the public's anxiety about scientific names. All three represent noble attempts at accomplishing a task that can only be described as thankless. Herpetologists and herpetoculturists are a rowdy and nonconsensual lot at best, and the some 10,000 species of herps, albeit sporting an impressive array of vernacular names, lack the stolid tradition with which the International Ornithologists' Union has managed to slap monikers on birds of the world. My brief foray into this contentious realm left me with the firm notion that only one kind of organism is suited to undertake naming the world's herps: the lemming.

The Frank and Ramus guide, which includes "12,000 species [and subspecies] organized taxonomically (by Order, Family, genus, species, plus subspecies for U.S. groups)," an index to genera, and an alphabetical index to common names, is by far the best book offered on the subject. That having been said, let me add that it is rife with errors of commission and omission, not to mention typographical blunders too numerous to cite. It is apparent that the authors were hampered not only by the formidable task but also by their lack of taxonomic training. Thus *Pliocercus elapoides* appears as the "Common False Coral Snake" or as the "Twin Coral Snake" under the genus *Urotheca*; species (...of *Anolis*, *Oxybelis*, and others) were omitted...one could continue.

An additional criticism, inescapable in books of this nature, is the abundance of cumbersome epithets. I have been accused of using flash cards at family reunions, so my credentials as a practitioner of common names are admittedly shaky. However comfortable I may be in the world of scientific nomenclature, I must confess to stark fear when contemplating the likes of the "Pulo Condore Bow-fingered Gecko." I struggle to contain my hysterics when I confront names like "Tumbo-Insel Screeching Frog," "Zong's Odd-scaled Snake," or "Pomugu Wrinkled Ground Frog." I get confused trying to visualize the "Thick Graceful Brown Snake" or the "Bearded Snake," and I feel intimations of British nobility when mouthing names like "Tilbury's Fringe Fingered Lizard" or "Palfreyman's Window-eyed Skink."

Levity aside, there are trenchant misnomers to be found: calling *Gymnophthalmus underwoodi* "Underwood's Spectacled Tegu" is a bit like calling *Draco volans* a pterodactyl. Of course, we routinely call them dragons, so perhaps I am being uncharitable. Let me repeat that this is a thankless task. Only fatigue and desperation could produce "Silverstone's Mushroomtongue Salamander," or the "Airstrip Caecilian" (its type locality), although I doubt I could invent names any better than the authors'. A more intimate knowledge of tropical geography might have presented a few more palatable names.

Frank and Ramus made every attempt to contact the scientific community and they used existing lists of common names wherever possible. But one must possess intimate knowledge of the field in order to weigh appropriately the systematic controversies that abound, and even established common name lists such as the one for the U.S. (Collins 1990) suffer from politics and ethnocentrism. Judging by the reference list, herpetocultural publications replete with names invented in the commercial animal trade were also consulted, a potentially dangerous practice.

The sad thing beneath the entire issue of common names is our collective fear of science and its nomenclature. It's an assailable stigma, but science lacks a publicist. Society routinely ingests Latin words like subpoena, oddities like xerox and kleenex, and even genera such as *Tyrannosaurus* and *Velociraptor*. Confronted with such an enormous list, it seems like it would be easier to stay with the existing scientific names. Should government or conservation agencies embrace this guide (perish the thought), scientists will have to purchase copies so they can look up the scientific names! If there is ever to be a workable and consensual common names list for herps, it will require the ongoing effort of a panel because the task remains...thankless.

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A Complete Guide to Scientific and Common Names of Reptiles and Amphibians of the World, by Norman Frank and Erica Ramus. 1995. N.G. Publishing, Inc. RD 3 Box 3709-A, Pottsville, Pennsylvania, 17901-9219, USA. 377 pp. US \$19.95 + \$3.00 p/h (outside USA \$6.00). ISBN 0-9641032-3-0.

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This 5 1/2 x 8 1/2 inch book is divided into three parts, an Index to Genera (11-19), a Taxonomic Section (23-261), and an Index to Common Names (265-369) of the reptiles and amphibians of the world. Species-level names are used except for U.S. taxa, which includes subspecies, thus comprising some 12,000 herps. The book is cross-referenced so that if the family, genus, species, or common name is known a given taxon can be located. The common name index is based on the assumption that the name you use is the one used in the book. This is a broad assumption inasmuch as common names exhibit little consistency. What is used in one area may not be used in another for the same animal. The authors have created common names for a large number of forms that have no English names.

As with any book of this type, it is outdated upon publication. Composition of genera and recognition of species change with increased information. Descriptions of new taxa occur frequently. This is what makes taxonomy such an exciting and evolving science. The U.S. and Canadian common names checklist (Collins

1990) and the recently-published Mexican checklist (Liner 1994) were utilized for North American taxa.

The inclusion of the generic index arranged alphabetically simplifies the location of where these taxa are in relation to their respective groups. The contents listing is helpful if you happen to know the family name for which you are looking, but I like the generic list better. The list would have been more useful if the describer and date of description of each genus was given. Although the authors do not indicate their cut-off date for inclusion of references, I found listings up through 1994.

For this review no effort was made to check out the accuracy of the taxonomic arrangements followed. I assume that this task was accomplished by the scientific reviewers listed in the acknowledgments. No statement is made about the criteria used to include or exclude a given taxon from the list, or to account for generic allocation of problematic species.

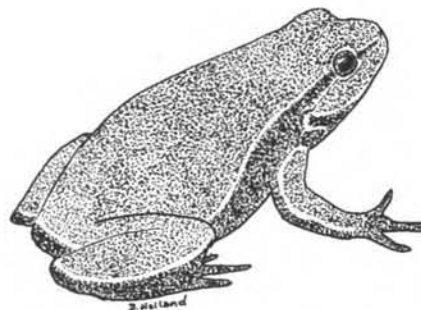
The authors state that they take credit or blame for this book. Typographic or spelling errors seem to be few for a work of such detail. A brief scanning of the pages revealed a missing date left on page 136. Among Mexican taxa, I noticed some duplicate listings: *Urotheca elapoides* Cope, 1860 and *Pliocercus elapoides* Cope, 1860; and *Barisia imbricata* Wiegmann, 1828 and *Gerrhonotus imbricatus* Wiegmann (no date). A careful check may turn up more errors of this type.

This book is not intended for the general layperson but for people interested in some form of herpetology, whether professional or amateur. The decision to put a common name on each and every species is an agonizing one. Many have no common name (at least not in English), while others have a multitude of names. The task of creating a meaningful common name is difficult. You are damned if you do and damned if you don't. Picking a single name for a taxon with a plethora of names is equally rough. You will not please everyone regardless of which name you choose and you cannot list all of them. As this book becomes more accepted, it can be periodically updated, as currently it is the most complete worldwide checklist of the herps. An impressive list of references (pp. 371-377) is given and I am sure others were consulted but not listed.

Although this book is not intended to be a coffee table item it is one that should be in every herpetologist's library. It is one that I will refer to often. The price is within the reach of most interested persons.

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Hyla femoralis (Pine Woods Treefrog). Illustration by Dan Holland.

The Herpetological Contributions of Wilhelm C. H. Peters (1815–1883). Introduction, biography, annotated bibliography, and synopsis of species by Aaron M. Bauer, Rainer Günther, and Meghan Klipfel. 1995. Society for the Study of Amphibians and Reptiles, 714 pages, 114 plates, 9 photos, maps, index. Clothbound US \$75.00. ISBN 0-916984-35-4. Available from Robert D. Aldridge, SSAR Publications Secretary, Department of Biology, Saint Louis University, 3507 Laclede Avenue, St. Louis, Missouri 63103, USA.

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This book places in the hands of the working herpetologist the complete output of one of the most competent and prolific systematists ever, Wilhelm Peters of Berlin (1815–1883).

The Middle 19th Century witnessed an explosion of faunistic, and, by consequence, systematic knowledge. It was a time of intense geographic exploration, both maritime and of the interior of the tropical continents, and the museums of the colonial powers grew commensurately. Their holdings were initially classified according to the canons of Linnaeus and early followers, but soon became the raw materials for the progress of systematic zoology. Wilhelm Peters was associated with the Berlin museum, one of the largest in Europe, from 1842 to his death in 1883. He occupied successively the positions of scientific assistant, curator, and director, but remained throughout essentially the curator of vertebrates.

The position of museum curator was in those days singularly active and diversified. There was very little, if any, specialization to zoological group or geographical area. It was the duty of the curator to structure, maintain, enlarge, and principally arrange the collections under his care, striving for completeness. This naturally involved research, but of an entirely unplanned character—the curator had simply to solve the problems posed by materials haphazardly received. This was the school of impromptu curatorship to which belonged, with greatness, Gabriel Bibron in Paris, George Albert Boulenger in London, and Wilhelm Peters in Berlin.

This type of curatorial activity unavoidably resulted in a mass of papers of circumstance: mostly accounts of collections donated, small and large, with the descriptions of new taxa, but also incidental items of anatomy, critiques of current literature, etc. In the beginning of his career, before a one-man, long expedition to East Africa (1842–1848), Peters, as a properly trained German zoologist, published nine papers: seven anatomical, one on a mite, and only one systematical. After his return from Africa, of 205 papers published eight referred to results of the expedition (including an important book), two dealt with reptilian systematics at the family level (Uropeltidae and Scincidae), and one with a South American lizard genus, *Cercosaura*. All the remainder are of the type I have called “of circumstance,” determined by hazard, not by intent.

This involves no slight to the scientific quality of the papers. Men of talent, with a solid scientific foundation (Peters studied under the elder Reinhardt in Copenhagen and under Johannes Müller in Berlin), having at their command extensive collections and the full bibliographic resources of the time, had to produce good quality. In fact, much of the progress of systematic zoology followed from papers of such a type; the works of ensemble (e.g. the *Erpétologie Générale*, the *British Museum Catalogues*) were essentially compilations of work published piecemeal. Practically

two thirds of the ca. 650 new forms (species, subspecies, and varieties) proposed as new by Peters are currently considered valid.

The only criticism I see that can be raised against Peters's professionalism is a flagrant disregard for geography. Many species, for instance, are described as “angeblich” (allegedly) from such or such a country. In one paper (1871b) Peters professes to be describing a collection made in the “Hochlande” (highlands) of Perú; the five localities actually cited are all Amazonian.

Circumstantial papers demand prompt publication. Peters had recourse mostly to the *Monatsberichte* of the Berlin (Prussian) Academy of Sciences, which could take at times as little as one week to publish a (suitably laconic) paper. This journal is not frequent in modern libraries. Additionally, it contains numerous occasions for doubts and uncertainties, especially when available solely in the form of a xerographic copy of a single article. It is thus a tremendous contribution to the practice of herpetology to publish in an organized facsimile form the voluminous corpus of Wilhelm Peters's herpetology, which covers literally all the field and all the world.

The apparatus of the book consists of 1) an Introduction, dealing mostly with the Berlin museum; 2) a biography of Peters; 3) an introduction to Peters's bibliography; and 4) a definitive, annotated list of Peters's herpetological papers, settling all doubts. This first part of the book is authored by Aaron M. Bauer, Rainer Günther, and Meghan Klipfel, who must be complimented for a careful and meticulous piece of work, never descending into preciosity.

The large number and diversified size of the papers to be reproduced caused the page size to be large, 28.0 x 21.5 cm, with narrow margins; even so, many of the papers had to be reduced for reproduction. Nothing, however, has interfered with readability. The plates, reproduced from gray lithographs, are of course not vivid, but quite usable.

This is all in all a superb piece of work, of immeasurable practical value and extremely high intellectual standards. One recognizes the tradition of the SSAR and the editorial hand of Kraig Adler.

Amphibians and Reptiles of New Mexico, by William G. Degenhardt, Charles W. Painter, and Andrew H. Price. 1996. Illustrations by Clay M. Garrett. Foreword by Roger Conant. University of New Mexico Press, Albuquerque. xix + 431 pp. cloth, US \$35.00 plus shipping. ISBN 0-8263-1695-6.

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Both amateur and professional herpetologists should buy this book. The book is concise, well written, and covers the subject matter of New Mexico Herpetology. Besides the usual foreword, written by Roger Conant, preface, and acknowledgments, the book has a number of major headings: A physiographic sketch of New Mexico; A brief history of herpetology of New Mexico; A checklist of amphibians and reptiles; A key to the tadpoles and salamander larvae; A key to the salamanders; A key to the frogs and toads; A key to the turtles; A key to the lizards; and A key to the snakes. Following each key, there is a discussion of the various families to which the organisms belong. Each family description is followed by species accounts. The first line of the species account contains the scientific name, followed by authorship, date, and common name. The next line directs the reader to a color plate for that

species. There are 123 color plates that are grouped in the center of the book. Within the species accounts, there are a series of topics that thoroughly explain the authors viewpoints on each species. First, there is a discussion of the type series, including the holotype; followed by a statement of the general distribution of the taxon along with its state distribution. Next is a description of the taxon, followed by sections of similar species, systematics, habitat, behavior, reproduction, food habits, and remarks. The end of each species account contains a detailed dot map showing the distribution of each taxon for the state. The description of the taxon's state distribution is somewhat redundant. The distribution dot maps are self explanatory.

Towards the end of the book are sections presenting amphibians and reptiles of questionable occurrence in the state; list of scientific and common plant names used in the text; list of museum symbolic codes; a glossary; literature cited, and an index. The very last page contains a conversion table for Metric/English units of measure.

As with all new publications, there are a few glitches. Fortunately, the authors discovered most of these and sent (at least to some of us) a list of the errors. Those herpetologists familiar with the New Mexico herpetofauna were quick to recognize a few of the major errors. However, before we could alert the authors, they were already on top of these mistakes, and were rapidly advising the book owners of the errors (Price et al. 1996). I commend the authors for their rapid review of their own work. For the purposes of this review, I will rephrase the errors by category. Citations: errors on pp. 65, 114, 116, 308, 315, 380, 387, 409, and according to the authors, one citation is missing from p. 382 ([Cope, E.D. 1875; Bull. USNM (1):1-104]). One spelling error on p. 370; oviducal = oviductal; transcription errors: pl. 99, 100, pp. 253, 254. The authors note that they did not define the acronyms "GAB and GBPS" on p. 203, the figure in Fig. 18a is incorrect. The ventral surface of the tail should contain transverse black bars. The scale in figure 2 should read "900-2200", not "2000-12500" and the contour intervals are 100m, not 500m. The order of color rectangles are incorrect in Fig. 3. They should be blue-green yellow and brown. The animal pictured on plate 82 is from Socorro County, and the one pictured on plate 84 is from Eddy County.

It is difficult to evaluate how current a book is with respect to its information content without knowing the time-line the authors used for non-inclusion of the literature. In this case, 1994 appears to be the latest entry used in the literature cited section. The authors cite Wright's (1993) synopsis of *Cnemidophorus* systematics, but failed to follow his synonym list for the southwestern United States taxa of *Cnemidophorus* in their New Mexico herpetofauna checklist; e.g., placement of *C. t. reticulariens* (*sic*, Wright = *reticuliens*) as a synonym of *C. t. marmoratus*. The discussion of its systematics wasn't necessary (pp. 228-229). The use of various generic names, e.g., *Spea* vs. *Scaphiopus*; *Trionyx* vs. *Apalone*; *Opheodrys* vs. *Liochlorophis*; *Elaphe* vs. *Senticolis*; *Elaphe* vs. *Bogertophis*; *Nerodia* vs. *Thamnophis* (for *rufipunctata*), are choices authors are forced to make based upon the most current knowledge available, but may not be the correct ones. Depending upon one's point of view, some readers will be happy with the choices of names, others will not, but that is the nature of the "beast."

This book is not a field guide. It is of large size, 8" x 10", and a reference guide for the amphibians and reptiles of the state of New Mexico. A field guide is surely contemplated by the University of New Mexico Press as a follow-up to this reference.

All in all, this is an excellent book. All students of herpetology should own a copy. This book will be the standard reference for

the New Mexico herpetofauna for many years. At \$35.00 a copy, almost anyone can afford to purchase a copy.

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- PRICE, A. H., C. W. PAINTER, AND W. G. DEGENHARDT. 1996. Corrigenda to *Amphibians and Reptiles of New Mexico*, by W. G. Degenhardt, C. W. Painter, and A. H. Price, published by the University of New Mexico Press, July, 1996. *Herpetol. Rev.* 27:173.

Geckoes, Biology, Husbandry, and Reproduction, by F. W. Henkel and W. Schmidt. 1995. Krieger Publishing Company, Malabar, Florida. xiv + 237 pp. Hardcover. US \$49.50. ISBN 0-89464-919-1.

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This guide to geckos and their care is a translation of the original German language edition published in 1991. It is divided into two primary sections, the first outlining the basic biology of geckos, their captive husbandry, and the materials and techniques of vivarium maintenance. The second section presents accounts of representative species divided by subfamily. Although some of the general biological information is out of date (e.g., the age and origin of geckos as a whole), most is accurate. The description of how gecko setae function, for example, is the only correct explanation I have ever seen in a popular work. Nonetheless, a few statements, such as those relating to the gliding ability of *Uroplatus* and the ability of *Teratoscincus* to breathe through the skin, are not, as far as I know, supported by any published observations.

In Germany, vivarium keeping is both an art and a science. As might be expected, the sections dealing with captive care, behavior, and reproduction are especially authoritative. These are based largely, but by no means exclusively, on observations of *Phelsuma* spp. Details on vivarium construction and specifications are useful and the authors themselves are experts in this field. They present details for five general types of vivaria that, alone or in combination, will be appropriate for virtually all gecko species. Information is also provided about outdoor vivaria and free-ranging house geckos. There are short sections on raising feeder insects, breeding, and incubation. These are generally state-of-the-art. The section on diseases outlines common ailments, but the recent publication of a spate of reptile disease and parasite books renders the authors' citations outdated.

Although the book is not comprehensive, 43 genera and 76 species and subspecies are highlighted, as representatives of commonly kept (and some not so common) forms. Although most genera are represented by only one or two species, 13 forms of *Phelsuma* are detailed, reflecting the popularity of these colorful lizards in the pet trade. For each species highlighted the following categories are reviewed: distribution, habitat, size, characteristics, vivarium type, husbandry and reproduction, food, and similar species. Vivarium type and habitat are also summarized by genus in convenient tables for each subfamily.

There are several minor errors in this section. For example, *Lygodactylus picturatus* is ascribed to Peters 1896 (in fact the correct date is 1869), and the habitat description for *Pachydactylus ocellatus* is not typical for that species. However, these issues do

not detract from the real value of the book: providing information pertinent to the keeping of geckos in the vivarium, with a primary concern for the captives' well-being.

The book is illustrated by 97 color photos and numerous line drawings. Although the photos are not outstanding, most are adequate portraits of terrarium specimens. Some could use cropping and one (on p. 149) appears to be printed upside down. If anything, the photos in the English version are somewhat clearer and brighter than in the German original. A corrected map, included as a separate insert in the original is incorporated in the translation, but with the original German labels.

The translation itself is generally accurate but in some places there are somewhat awkward literal translations of terms that have more appropriate English equivalents. Oddly, for a book published in the U.S., the translation is into British English. Metric measurements have not been converted and this may be problematic for many of the intended readers who will not be familiar with working in these units.

The literature cited section includes 148 entries. Apparently this section was not translated as terms such as "in Vorbereitung" (in preparation) are still present. Some errors in the original references have been carried over, such as Pregili for Pregill in the reference to Grismer (1988) and "C'ladistic" in Kluge (1987). New errors have been introduced, however, such as the all italics rendering of Bustard (1970), the missing "L" in Loveridge (1947), and the spelling *Stenodactylusz* in Remy and Remy (1990). Among other new errors, the genus *Eurydactyloides*, spelled correctly throughout in the German original, is uniformly misspelled as *Eurodactyloides* in the English version and Eocene is consistently misspelled as Eoscene. Most of the remaining spelling errors are minor and were carried over from the original German. These include some mistranslations in a table of Latin generic derivations, and some often misused specific epithets (e.g., *bibroni* instead of *bibronii*, *sauvagei* instead of *sauvagaii*, *garnotti* instead of *garnotii*).

There are now many vivarium guides for lizards, and even a number directed specifically at geckos. One by Seufer (1991) also began life in Germany but was modified and expanded significantly before being published in the U.S. Although it covers much of the same ground as Henkel and Schmidt, only 29 taxa are highlighted, and there is uneven phylogenetic coverage, with only two species of diplodactylines covered. A recent book by Bartlett and Bartlett (1995) has an extensive section on U.S. native and introduced geckos and is geared more specifically towards an American audience. All of these books would be useful for the beginning gecko-keeper or enthusiast. However, Henkel and Schmidt's contribution is a must for anyone who is serious about keeping exotic geckos, including the more expensive and harder to obtain species. This book also does the best job of providing the non-technical reader with an overview of the diversity among geckos. Although not cheap, this book would be a good investment for those who spend, or plan to spend, a large portion of their time and income on observing, breeding, and raising these fascinating lizards in captivity.

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Chamäleons, Bunte Juwelen der Natur: Handbuch der Modernen Chamäleonologie, by Petr Necas. 1995. Bücher-Kreth, Frankfurt-am-Main. 259 pp. Hardcover. DM 68.— (approx. US \$49.00). ISBN 3-930612-0-2-X.

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Chameleons are undeniably attractive animals, a fact that has not been lost on authors and publishers in recent years (e.g., Bartlett and Bartlett 1995; Le Berre 1995; Martin 1992; Schmidt et al. 1994). Petr Necas' contribution, *Chamäleons, Bunte Juwelen der Natur*, is the latest addition to the genre. Although it covers much of the same ground as its competitors, this book has some features to recommend it. Far more information is provided than in the competing works. In the general section on chameleon biology, especially detailed treatments are provided on topics such as the mechanism of tongue protrusion, hemipenial structure, and chameleons and human culture. Higher order systematics are reviewed and a list of recognized species is provided. The author follows the generic divisions of Klaver and Böhme (1986), recognizing six genera in the group.

Most of the remaining topics treated are related to husbandry and are similar to, though more detailed than, those in other chameleon books: behavior, reproduction, chameleons in captivity (an extensive section), terrarium set-up and requirements, and diseases. The second portion of the text presents accounts for 50 selected species. In comparison with other recent books, this provides the greatest breadth and balance of species coverage. Le Berre (1995) covers 30 species and the other authors fewer. Bartlett and Bartlett (1995) provide little information on species of *Brookesia*, *Rhampholeon* or *Bradypodion*, and Martin (1992) focuses on just four species in total.

Each species account provides Latin, German, and English names, a description (usually including a section on the significant sexual dimorphism characteristic of many species), "systematics and zoogeography" (essentially a review of any recognized subspecies and a statement of distribution), climate and biotope, biology and reproduction in captivity, and a numerically coded list of relevant literature. Although much information is presented, some of it is difficult to retrieve. Some text sections (e.g., that on terraria) are very long and do not have subheadings, and the presence of a detailed table of contents does not fully compensate for the lack of an index.

A short (eight page) glossary with more than 250 entries is included as an appendix and, in a significant departure from other books, 928 references are listed in the bibliography, facilitating further exploration of topics by the reader. Although not fully comprehensive, the bibliography has excellent coverage of works in English, German, French, Czech, and other languages and covers systematic and biological papers as well as those dealing with chameleons in captivity. This feature alone should make the book attractive to those with a serious interest in chameleons, even if they are unable to read the German text.

Illustrative material is variable in quality. The single computer-generated map is not well done and the line drawings are adequate at best. The 64 plates are grouped centrally, with 2-6 photos each. In total there are 250 color photos and five black and whites. The differing layouts of the plates break the monotony, but the wide borders around each photo result in a greater than necessary reduction of the smaller figures, and in some plates adjacent photo-

graphs are oriented at right angles to one another. Most photos feature head or body shots of chameleons, but others show x-rays, parasites, anatomical close-ups, terraria, eggs, postage stamps, *Dispholidus typus* (a chameleon predator), and a feeding sequence demonstrating the ballistic tongue of *Chamaeleo calyptratus*. The photo quality varies, but many do not have sufficient depth-of-field or are washed-out, and virtually all were taken in terraria with the back wall of the enclosure showing. In general, photo quality in competing books is superior. Bartlett and Bartlett (1995) provide mostly well-balanced and in-focus shots (along with a short section on photographing chameleons), Schmidt et al. (1994) present large, glossy photos of moderate quality, and Martin (1992) has some especially attractive close-ups.

Bunte Juwelen far exceeds its competition in price (all but Martin [1992] are relatively thin paperbacks selling for under \$10.00). The fact that the book is written in German is an obvious drawback to most native English speakers. Nonetheless, it provides more information than the other titles combined, and its long list of references make it a generally valuable resource to those with a serious interest in chameleons. I recommend this publication to professional herpetologists on this account in particular. Its utility for amateurs and terrarium enthusiasts will depend largely on their facility in German and their level of sophistication. Those keeping only the more common and robust species may find the book overkill, but those who have or plan to obtain more specialized taxa may find the book of great use.

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Reptile Medicine and Surgery, by Douglas R. Mader, M.S., D.V.M. 1996. W.B. Saunders Co., Philadelphia, Pennsylvania. 536 pp., 653 black and white photographs and illustrations, 4 color plates. Hardcover. US \$89.00. ISBN 0-7216-5208-5.

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The popularity of amphibian and reptile keeping has been increasing in a geometrical fashion for the last decade with no end in sight. With tremendous numbers of animals being kept as pets, research subjects, and commercial breeding stock has come an equally large number of medical issues.

Twenty years ago, medical treatment of reptiles was basically done by trial and error, with an emphasis on errors. The thought of applying veterinary medicine to a frog or salamander was unheard of. Then came the pioneering atlas by Dr. Fredric Frye and a generation of exotic pet keepers began to have hope after many a

health crisis was successfully resolved. This tradition has been carried on by Dr. Mader and the thirty contributing authors who have made *Reptile Medicine and Surgery* a reality.

Dr. Mader knows that his field is vast and expanding daily, and therefore, was wise to enlist his colleagues' experience in compiling the seven sections of this work. Although Mader wrote the largest portion of this book he also was responsible for editing each contributed chapter. The latter was a chore that, he confides, was wrought with a personal struggle to let stand statements or opinions that were in conflict with his own views. As a reviewer and experienced keeper of herptiles, I am pleased that these controversial topics and opinions were published. For instance, among veterinarians there is one camp that uses classical therapy based on empirical scientific findings and another that considers the principles of metabolic scaling to be the preferred approach. Dr. Mader has delivered both points of view and it is left to the clinician to choose.

The introduction (Section I) contains a recipe that one could follow to develop a herpetology-based clientele, as well as lists of regional herp societies. The husbandry review and zoonoses chapters provide useful background information and form a firm basis for the following sections.

The biology of chelonians, snakes, lizards and crocodylians (Section II) is well presented and throughout the book the use of illustrations and photos help to engage the reader and further clarify the text. In fact, I am sure that this book will be utilized in a number of teaching situations because of the long list of subjects that are competently covered.

Section III, entitled Special Topics, deals with the major categories of animal physiology, such as the heart, eyes, nerves, skin, diseases, microbiology and parasitology, nutrition, reproduction, and abnormalities. As a test of the book's organization, I randomly chose the topic of hemipenis prolapse as a point of inquiry. After inspecting the index, I found that this subject is listed and covered in detail by multiple chapter authors. It was somewhat bothersome to flip between pages 223 and 395 to find all of the information on my subject and to deal with duplicated information written by two different authors. Although this form of duplication occurs several times among the various chapters, I would rather be faced with this type of fault than with a lack of information.

Sections IV and V, Special Techniques and Procedures, and Differential Diagnosis by Symptoms, respectively, are geared for the vet, vet technician, or even the advanced hobbyist who has experiences treating his or her own animals. I have personally dealt with thousands of reptile medical cases during my career and can therefore attest to the fact that the group of subjects presented by Mader and his colleagues is relevant and accurate.

I can't say enough about the high quality of the photographs that clearly illustrate the most common manifestations of the condition discussed and aid the reader in diagnosing problems. I could not find a single photo caption that is incorrect. In addition, the use of mostly black and white photographs has made the book affordable. With full color, which was not necessary for this publication, the price of the book would have been \$150-175, out of the price range for many private individuals and beginning veterinarians.

I found Section VI, Specific Diseases and Conditions, to be the most useful for not only the medical community but also for the tens of thousands of private herpetoculturists, who inevitably will encounter a health emergency. These chapters are well-written and comprehensive. Dr. Mader hoped that this book would become a ready reference for any dilemma and it is these "meaty" chapters that assist in forming a diagnosis, establishing a treatment plan,

and delivering drug doses with ease and confidence, that realize this goal.

The final section (VII) of *Reptile Medicine and Surgery* presents overviews of some of the newest areas of herp medicine and research. Despite the book's title, amphibians are afforded some 23 pages of valuable information, and discussions of blood chemistry, artificial lighting, and sea turtle medical care are provided. The all-important drug tables, which many of us will consult frequently to determine the right amount of medicine to give to our ailing captives, also falls in this section.

Reptile Medicine and Surgery teaches, guides, reviews, and most importantly, resolves the medical issues presented by these animals. No volume of this type can ever be complete, but in the fine tradition of Dr. Frye, the work of Doug Mader and his colleagues will long stand as an important contribution to the field.

The Garter Snakes: Evolution and Ecology. By Douglas A. Rossman, Neil B. Ford and Richard A. Seigel. 1996. University of Oklahoma Press, Norman, Oklahoma. 332 pp. 15 color plates. Hardcover. US \$69.95. ISBN 0-8061-2820-8.

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The authors of this book have set themselves a very tall order: an all-encompassing book on the genus *Thamnophis* written to appeal to professionals, students, and hobbyists. All of these audiences are certainly ripe for such a book, garter snakes being as ubiquitous as they are in both backyards and research laboratories. As a comprehensive overview of garter snake biology this book does an admirable job, especially in the face of the convoluted mess that garter snake taxonomy has been for so long. Unfortunately, few books aimed at such a diverse audience fully succeed, and I'm afraid that this book also falls short of its ambitious mission. Ironically, the problem primarily is in its very scholarly treatment of the aforementioned taxonomy of these snakes.

The book is organized in three sections: "Taxonomy and Evolution," "Ecology, Behavior and Captive Care," and "Species Accounts." Section I contains three chapters written by Rossman. Chapter 1, "Taxonomy and Relationships of Garter Snakes," is a thorough (but bland) discussion of the taxonomic history of the genus *Thamnophis*. This chapter also includes careful descriptions of morphological features of use in taxonomy that becomes a bit repetitive, especially regarding distinguishing between "superficially similar sympatric and parapatric species." Although this material is certainly important—we have been in dire need of an authoritative revision of the taxonomy of thamnophiine snakes for many years—I question it being the opening of the book. This is simply because it will be difficult reading for the less "taxonomically-sophisticated" (including the majority of the hobbyist audience) and may discourage such readers from continuing.

Chapter 2 is actually just tables of proposed garter snake names, in chronological order by their original name. It is an odd thing to have a chapter entirely sans narrative, and would seem to have been more appropriate as an appendix. Chapter 3 is a dichotomous key to the species and subspecies of *Thamnophis*. Again, somewhat odd content for a "chapter." The most glaring problem with this key is the gross error occurring at point 3 (the first option has no value listed). This is by far the most important typo among many still found throughout the book. My students tested the key using preserved specimens of several species of *Thamnophis* and

found it difficult to use. The organization of the key includes some very precise features early on—e.g., numbers of maxillary teeth and ratios of facial scale measurements. It seems unlikely that anyone could be reasonably expected to follow this key without good calipers, a dissecting microscope, and preserved (occasionally skeletal) materials. Placing such fine details early on makes this especially problematic. It may have been more user-friendly to use the standard general-to-specific order for features where possible. We repeatedly found ourselves skipping ahead with known species and working backward through the key to follow the logic. All of these difficulties would be even worse with living specimens—let alone for users less familiar with keying out snakes. This seems to be the most salient example of the book serving its "technical" audience at the expense of other potential readers.

Section II includes chapters on ecology, behavior, and captive care, and is much more accessibly written for a "lay" audience. It begins with Chapter 4, "Ecology & Conservation of Garter Snakes: Masters of Plasticity", written by Seigel, in which garter snakes are roundly praised. It is pointed out that the majority of data on the genus is based on work involving a few species and populations, and that the review is therefore necessarily incomplete. Despite this caveat, it is a very thorough and comprehensive survey of the current state of information on the ecology of genus *Thamnophis*. Topics covered include Reproductive Ecology, Foraging Ecology, Population Ecology, Thermal Ecology, and Conservation.

Chapter 5 concerns the "Behavior of Garter Snakes." This chapter, written by Ford, opens with a nice treatise on the usefulness of Garter Snakes as Models for Studies of Behavior, followed by a section on Behavioral Capabilities focusing primarily on chemoreception. The sections on Foraging Behavior, Thermoregulatory Behavior, Antipredator Behavior, Orientation and Navigation, and Reproductive Behavior appear to be relatively comprehensive surveys. The sections on Habitat Selection, Hibernation, and Genetics & Evolution of Behavior are comparatively concise (but still good) reviews. The section on Learning indicates a special interest of the author, and is earmarked as an area in need of further attention. Given the quality and completeness of this chapter, it was quite a surprise to find the section on Aggregation to be lacking. The only type of aggregation mentioned is that of gravid females, despite the occurrence (and study of) several other manifestations of this phenomenon (e.g., Burghardt, 1983; Gillingham, 1987; Lyman-Henley & Burghardt, 1994—each of which also offers some review of the missing literature). This lacuna is especially disappointing given the opening lines of the chapter (quoted from Brattstrom, 1974) "Snakes may be the most asocial of reptiles (p. 90)." Studies into aggregation behavior are clearly the most direct window on snake sociality. Other than this oversight, the chapter is well written and concludes with a section on Future Studies, pointing out some lines of research that seem (to the author) in need of exploration.

Chapter 6 deals with Captive Maintenance of garter snakes. Also written by Ford, it is likely to be the most-read section of the book by hobbyists. It is on balance both well-done and thorough in scope, describing benefits and draw-backs to several different maintenance procedures. It is, however, certainly aimed at an audience assumed to be maintaining only a few snakes at a time, since some suggestions are rather time intensive—although it is noted that procedures for large lab populations are well documented for some species and suggested references are given. Personally, I found the short section on the treatment of snake mites surprisingly blasé considering the devastation these organisms can wreak if infestations are allowed to become chronic. Oddly, the closing

section, The Future, doesn't really make any comments regarding the future.

The final section, III, consists of Species Accounts, jointly written. All species accepted by the authors (as detailed in Chapter 1) are covered in separate accounts that are in general quite good. Each account includes a unit on the taxonomy of the species, a range map, a unit on Life History and Ecology, and further units that vary somewhat depending on the information available for that species. All thirty species have a reference to at least one color plate, and a common name ascribed to them. For the most part, the species that are lacking in more detailed information are Mexican in origin. Of these, the only surprise is *T. melanogaster*, as there is now a rather extensive laboratory population maintained by several active researchers that seemingly would have allowed for more comments than are included here.

One assumes that for the most part some units are simply omitted given a lack of information. The account on *T. eques* specifically notes that "No literature on care of this species in captivity is available (p. 177)," and similar explicit comments in other accounts could have served as implicit research directions. Another point was the lack of any reference to the impact of the pet trade collection on populations of several species. It was noted that *T. radix* is a common pet store species, although my experience is that *T. sauritus*, *T. marcianus*, and brightly colored populations of *T. sirtalis* (e.g., the "Florida blue") are now regularly appearing on the reptile market. I have even occasionally seen specimens of *T. brachystoma*, *T. eques*, *T. cyrtopsis*, and *T. ordinoides* as well. Relatedly, one point in which I beg to differ is the opinion of the authors that *T. marcianus* is a particularly easy captive. Perhaps it is a population difference, but among my students, *T. marcianus* have been dreaded as charges due to their highly aggressive nature. Even *T. melanogaster* are preferred, being far less likely to actually bite.

The closing pages of the book contain a perfectly fine glossary, an index to scientific names, and the literature cited. There is no subject index, which could have been a useful inclusion for the student audience.

In all, Section I is written for professionals, and will likely be rather inaccessible to much of the potential audience of this book, as even the key requires materials beyond the scope of most people dealing with garter snakes. Sections II and III are written in a much more accessible style for a wider audience, and although it would be impossible to discuss every piece of research done on this wide-ranging and diverse genus, this book comes admirably close. Perhaps that captures my bottom line—"admirably close." It was with great enthusiasm that I accepted this review. As an active garter snake researcher for well over a decade now the very idea of this encyclopedic book was exciting to me. As such, perhaps I was overly disappointed by the various omissions (e.g., aggregation) of current literature. Despite its flawed key, occasional sins of omission, and uninviting price tag, I still highly recommend this book for coming so admirably close to the Herculean task of exhaustively documenting the genus *Thamnophis* for a broad audience.

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A Monograph of the Colubrid Snakes of the Genus *Elaphe* Fitzinger, by Klaus-Dieter Schulz. 1996. Koeltz Scientific Books, Koenigstein. 439 pp., 121 figs., 18 tables, 48 maps, 420 col. photos on 58 pls. Hardcover. ISBN 80-901699-8-8. Price DM 220 (ca. US \$150).

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This monograph treats eight New World and 32 Old World species of the genus *Elaphe sensu lato*. Written, illustrated, and photographed mainly by Schulz, there are four species accounts authored and one coauthored by A. Entzeroth. Illustrations were also provided by A. Gumprecht and T. Smith, with 1/4 the photographs contributed by more than 50 individuals. The book is beautifully executed on acid-free paper with a large type face. The first 75 pages deal with materials and methods, terminology, nomenclature, an expanded generic description, fossil records (with 80 references), geographic and elevational summaries, systematic species groups, distribution, natural history, reproduction, color variation, and husbandry. The species accounts cover 249 pages. A voluminous bibliography with 2810 references occupies 81 pages. Appendix I contains vernacular names of rat snakes in 40 languages. Appendix II lists the 613 preserved specimens examined from 16 institutions; 38 of the 40 species are mentioned (all but *rosaliae* and *vulpina*). The index is arranged by genus with species listed under the genera and subspecies listed under species, all in alphabetical order. As each binomial and trinomial combination is listed only once (under genus or species, respectively), it is inconvenient and time-consuming to find a name if only the original specific or subspecific epithet is known (as the species or subspecies names are not indexed). An index based on the species and subspecies names (with individual genera listed separately) would have been more useful as it is necessary to know all the generic synonyms of *Elaphe* (and their combinations) to locate a name in the index.

Each species account begins with scientific and vernacular names and contains a synonymy and sections on the type locality, holotype, description (color pattern), scutellation, distribution, natural history, husbandry and breeding, and literature. To economize space, references are numbered in the bibliography and listed only by number at the end of each account. When subspecies are recognized, the preliminary portion of the account contains all of the above sections except synonymy, type locality, and holotype; each subspecies account then follows with sections on synonymy, type locality, holotype, description, and distribution. Species accounts are 2-14 pages in length, with most species treated in 3-7 pages. Each account has a beautifully illustrated dorsal and lateral head view plus at least one dot range map. There are supplemental illustrations of head, head and anterior body, midbody pattern, or ventral pattern in 27 accounts. Each account concludes with a synopsis of the husbandry conditions necessary to maintain the species in captivity and available data on breeding behavior and habits.

The color plates are generally superb and contain 420 photos (usually arranged 8 on a plate). Thirty-seven of the 40 species are illustrated from life (*cantoris*, *leonardi*, and *perlacea* from paintings and preserved specimens only). In addition, there are 14 habitat photos, 24 of preserved specimens, and 27 of miscellaneous subjects. The photography is excellent and only about ten of the photos (from contributors) are not perfectly focused or are poorly composed.

The distribution maps are clear, legible, full-page dot maps (only a few well-known species have solidly shaded ranges as in field guides). National boundaries are outlined (sometimes even provinces or states), countries are labelled, type localities are indicated, and large cities and major rivers are also included. Multiple species or subspecies on a single map are depicted using different symbols. The first nine summary tables are most informative and useful, including data for each species on scale counts, dentition, elevation, distribution by country, prey preferences, and reproduction.

The typescript and proofreading are impeccable. I found only two misspelled words (p. 84: presubocular; p. 215: seperated), two misspelled surnames (p. 27: Bachmeyer; p. 190: Lanzell), two misspelled place names (p. 284: Upsala; p. 297: Isla), and two misprinted years (1064, p. 111; 1833, legend pl. 1). Considering that the English version is a translation from the original German, the syntax and grammar are excellent. The main grammatical complaint is with the incorrect placement of commas (or absence of them when needed), and this error must be attributable to the South African group that performed the translation (Herprint International). When referring to body coloration, "in" is consistently substituted for "on," there is frequent use of the adjectival form of a color (grayish, yellowish, greenish) in place of a noun, and occasionally an "s" is omitted on plural words or added on a singular noun. Temperment is often referred to with the terms "shy" or "shyness" when a reclusive or secretive nature is implied and "vicious" when irritable is more appropriate. The consistent capitalization of vernacular snake names and/or their consolidation into one word (as Ratsnake) is a minor irritation. The minor criticisms above are probably attributable to the original language of the book being German.

The major failing of this work is in the area of nomenclature and systematics. It is acknowledged that the author is an amateur and while he has undoubtedly compiled the most detailed, comprehensive, and profusely illustrated treatise ever on rat snakes, it is surprising that the scientific consultants (W. Böhme, N. Helfenberger, and M. Ruf) did not more carefully review the systematic sections. Presentation of the type concept and its ramifications is poor and definitions of holotype, syntype, paratype, lectotype, neotype, and *nomen substitutum* are inaccurate and misleading. The designation of a holotype (or any type for that matter) was not practiced until about 50 years ago. If no type has been designated (as in the older literature), all specimens upon which the description is based are syntypes and none may ever become a holotype, although a lectotype can be selected from the original syntypic series and holds the same status as the holotype. Also, a number of type locality restrictions are incorrectly cited or misconstrued, and sometimes a syntype or lectotype is referred to as the holotype. It was a common practice in earlier times to exchange one of a series of syntypes with other museums and the BMNH and MCZ did so for many specimens.

The standardized employment of a single "i" termination for patronyms, in my opinion, contravenes the spirit of the Code and original intent of the author. When the original orthography includes a "ii" ending, it should be preserved as such, and vice versa. This is unambiguously stated in the Code: Articles 31(a), 31(a)(iii), 32(b), 33(d), and 34(b). Thus, three species of rat snakes (*hodgsonii*, *jansenii*, and *schrenckii*) should have the "ii" endings.

In my opinion the most substantive error is the decision to regress a century in taxonomic enlightenment back to a Boulengerian concept by synonymizing the genera *Bogertophis*, *Gonyosoma*, and *Senticolis* with *Elaphe*. Not only is *Gonyosoma* a valid genus as diagnosed by Dowling (1958), but it also differs from *Elaphe*

sensu stricto in having a chambered avascular tracheal lung. Besides *G. oxycephalum*, this lung structure is present in at least *G. cantoris* and *G. hodgsonii*. I am in agreement with the author that a genus should not be split until a comprehensive study has been accomplished. However, in the case of the New World rat snakes, it is just a matter of time before they are separated (as they represent a monophyletic clade) under the name *Pantherophis*, and I believe that both *Bogertophis* and *Senticolis* are justifiably distinct. *Bogertophis* possesses two derived features that separate it from all other New World species: absence of the left lung complex and a $2n = 40$ karyotype. All four genera could have been recognized and the title of the book changed to "*Elaphe* and kin" or "*Elaphe* and related rat snakes" without compromising the integrity of the work. This surely would have been an asset rather than a liability. The nomenclature in an important work such as this, which will be the standard for rat snakes for many years to come, will be followed blindly by those who are not specialists in colubrine systematics or who are ignorant of classification in general, resulting in confusion in the literature and hinderance of our understanding of colubrine systematic relationships. Ironically, Schätti's separation of *Hierophis* from *Coluber* is recognized even though a thorough revision of *Coluber* has yet to be completed.

Treatment of subspecies is based upon solid data or consensus of opinion, and with controversial names the author professionally discusses his reasons for the recognition or synonymy of taxa. Questionable systematic procedure involves relegating *Coluber enganensis* Vinciguerra to a subspecies of *E. subradiata*, and considering *E. laeta intermontanus* Woodbury and Woodbury (1942) as a more distinctive form of *E. guttata* than *E. g. meahllmorum* Smith et al. (1994). Omissions include the genus *Tyria* Cope (1862), a substitute name for *Zamenis* Wagler, and one fossil species, *Elaphe longivertebrata* Szyndlar (1984). Also, *Elaphis rhombifer* Jan, 1863 is omitted from the synonymy of *E. moellendorffi*. Erroneous subsequent spellings (or typos) of *Elaphe* that were overlooked in the list of misspellings include *Elapho* Bleakney (1958), *Elaphus* Shrestha (1981), *Elahe* Mahendra (1984), and *Elapne* Murthy (1986).

The type locality star is omitted from Map 44 for the type of *E. o. spiloides*, perhaps intentionally because of the apparent taxonomic problem involved. However, designation of "La Nouvelle-Orleans" as the provenance in 1854 probably meant "within the vicinity of New Orleans," and neighboring Mississippi is well within the vicinity. Stanford University is not in San Francisco or related to the California Academy of Sciences, but former SU specimens are now in CAS (CAS-SU). The type of *Elaphe philippina* Griffin is in CAS. *Elaphis q. atra* and *E. q. interrupta* are dated Jan, 1867. Whereas *Coluber quater-radiatus* Gmelin is correctly allocated to the synonymy of *E. quatuorlineata*, *Coluber elaphis* Shaw antedates *E. scalaris* Schinz; since the *nomen oblitum* rule is no longer in effect, suppression of Shaw's name is necessary. The original illustration of *Coluber quatuorlineatus* Lacépède is on pl. 7.

A few errors are attributable to carelessness: the collector of the type of *B. rosaliae* is L. Diguët; the type locality of *E. enganensis* is Boea-Boea and Malakoni; *Coluber alleghaniensis* and *C. quadrivittatus* Holbrook were described in 1836; the description of *Elaphis* Bonaparte is dated 1834; *Callopetis* was described by Fitzinger in Bonaparte (1834 in 1832-1841) and *Simus* was described by Fitzinger in Bonaparte (1838 in 1832-1841); *Composoma* and *Plagiodon* were described by Duméril (1853); the type of *Elaphe moellendorffi* is SMF 18476 (8056, 1a is the old Boettger no.). ZIL 3706 is the lectotype of *E. schrenckii*, as designated by Stejneger (1907). The type of *E. situla* is deposited in Stockholm (NHRM).

It is a pity that no identification key is included in this monumental work. With the details of scutellation, color patterns, and distribution presented by Schulz, it would not be very difficult to construct a workable key. For instance, an American key, an Indonesian key, and an Asian (perhaps southern and eastern) key could be compiled. In fact, Staszko and Walls (1994) constructed workable keys to the American and European species. Another omission is neglecting to mention dicephalic ratsnakes. Although the author discusses in detail various color anomalies (melanism, albinism, leucicism) of *Elaphe* and cases of twin specimens hatching from single eggs, he fails to mention that two-headed specimens are known in ten species (*climacophora*, *dione*, *guttata*, *longissima*, *obsoleta*, *quadrivirgata*, *quatuorlineata*, *rufodorsata*, *schrencki*, and *vulpina*). There are at least 30 references to dicephalic *Elaphe* (from 1926–1995), of which only five are listed in the bibliography.

The extensive bibliography is impressive and remarkable for its completeness of coverage of both the professional scientific literature and the amateur husbandry and herp journals. Although I do not have access to many of the journals cited (*Bl. Aquar-Terrar.*, *Elaphe*, *Herpetofauna*, *Herptile*, *Sauria*, *Snake Keeper*), in which mostly husbandry articles are present, I can comment on the high quality of the other works included. The coverage of taxonomic, systematic, ecological, and distributional publications is thorough and comprehensive. However, a casual search of my library revealed more than 50 omitted *Elaphe* references, dating from 1861–1995. Most surprising is the omission of the rat snake book by Staszko and Walls (1994), which was previously the most complete work on the group (including all species recognized by Schulz except *persica*).

My main criticism of the bibliography is inattention to details, especially of actual dates of publication (rather than title page dates), but also to author's initials, series and volume numbers, and publishers. From scanning the literature available to me, the errors are certainly minimal and some examples follow, the most critical relating to publication dates. The following numbered citations are correctly dated as follows: #101 (1968), #238 (1900), #329 (1902), #692 (1974), #1003 (1891), #1336 (1979), #1351 (1890), #1371 (1939), #1386 (1894), #1469 (1876), #1672 (1880), #1677 (1893), #1749 (1912), #1747 (1905), #1797 (1910), #2198 (1932), #2652 (1989), and #2764 (1994). Corrected series (s.), volume (v.), and numbers (n.) are as follows: #101 (v. 1966–67), #329 (v. 54), #1206 (v. 11), #1277 (n. 3), #1627 (s. 3, v. 2), #1630 (v. 11, n. 2), #1631 (s. 9, v. 7, n. 5), #1683 (v. 31, n. 25), #2046 (s. 7, v. 8), #2045 (s. 7, v. 1), and #2499 (v. 60). Corrected names and initials of authors include: #261 (E. G. Boulenger), #792 (W. Freedman), #1077–78 (R. Honegger), #1085 (B.-Q. Hu, M.-H. Huang, Z.-T. Xie, E.-M. Zhao, Y.-M. Jiang, Q.-Y. Huang, Y. Zong, and J.-F. Ma), #1170 (J. de Jongh), and #2172 (C. E. Shaw). Corrected publishers include: #1317 (SSAR), #2052 (Amphibia-Reptilia), and #2152 (Unpubl. Ph.D., Univ. So. California). A typo on #1134 is pp. 382–383. One author is cited under two surname variants, #407–408 (Carevskij) and #552 (Czarewsky), #943 is not a 2nd ed, merely a reprint, and #1757 is published by Ernest Bourdin and has 756 pp. The citation for Massalongo (1854) is omitted.

Notwithstanding all the nit-picking criticisms, I am duly impressed with the quality and thoroughness of this book. While the errors mentioned above may seem substantial, in reality they are minuscule compared to the massive volume of summarized information. An excellent resource for both the professional herpetologist and the amateur hobbyist, it is the *opus magnum* of rat snakes. This monograph belongs to the class of the best herpetological books, such as Campbell and Lamar's "Venomous Reptiles of Latin

America" (1989), Ernst and Barbour's "Snakes of Eastern North America" (1989), Gloyd and Conant's "Snakes of the *Agkistrodon* Complex" (1990), Mitchell's "Reptiles of Virginia" (1994), and Palmer and Braswell's "Reptiles of North Carolina" (1995). It contains essentially the sum of our knowledge of these snakes, taken from the international academic and hobbyist literature, and including the author's unpublished records. Presented in an understandable and enjoyable reading style, it lacks the dryness of most technical writing. This book is clearly a labor of love; words cannot adequately describe the meticulous and superb effort that went into producing this beautiful and informative work. While it will not be (and is not intended to be) the last word on *Elaphe* and kin, it will remain the standard classical reference on the group, and hopefully will stimulate further research and collection of the poorly known species. As an indispensable guide to the world's rat snakes, no herpetological library will be complete without it. Although it is not inexpensive, the quality of the artwork and information content justify its high price. Unfortunately, due partly to inflation and the cost of color reproduction, superior monographic treatments today cost \$100 or more.

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- STASZKO, R., AND J. G. WALLS. 1994. *Rat Snakes: A Hobbyist's Guide to Elaphe and Kin*. T.F.H. Publications, Neptune City, New Jersey. 208 pp.

PUBLICATIONS RECEIVED

Venomous and Poisonous Marine Animals: A Medical and Biological Handbook, edited by John A. Williamson, Peter J. Fenner, Joseph W. Burnett, and Jacquie F. Rifkin. University of New South Wales Press, Sydney. 1996. Hardcover. 504 pp. + 80 pages of color plates, US \$130.00 (available from International Specialized Book Services, Inc., 5804 N.E. Hassalo Street, Portland, Oregon 97213-3644, USA). ISBN 0 86840 279 6.

This large book provides an extensive overview of venomous marine organisms and their toxins as well as the human injuries (and associated treatments) produced by contact, injection, or ingestion of these toxins. Although the emphasis is on Australian marine organisms, the coverage is worldwide in scope. The herpetological content is restricted to sea snakes and *Crocodylus porosus*. The latter is illustrated by a single photograph and mentioned in comparison of Australian shark and crocodile attacks/fatalities. Sea snakes are treated in a short (seven page) chapter and in passages in sections dealing with marine antivenoms, and venomous and poisonous marine animals of the Gulf of Oman and Japan. Nine photos in the color plate section are devoted to sea snakes, with bite victims' wounds figuring prominently.

1996 Herpetological Index, compiled by Breck Bartholomew. Breck Bartholomew, 195 West 200 North, Logan, Utah 84321-3905, USA. 1997. Softcover. 151 pp., US \$20.00 (also available

on disk as a text file or EndNote database file for Macintosh or PC for \$15.00 each).

This fourth annual compilation includes complete citations for 3743 herpetological publications taken from a wide variety of sources, including national, international, and regional herpetological journals and newsletters as well as herpetocultural magazines. The citations are indexed by author and subject (including taxonomic, geographic, and topical listings). Although most of the publications cited were published in 1996, older references that have been newly added to the compiler's database are also listed. Although the bibliography is not complete (herpetological citations from many general zoological journals are lacking, for example), it is an economical alternative to *Zoological Record*, the 1995/96 amphibian and reptile volumes of which referenced 4935 publications at a subscription cost of more than US \$300.

Schildkröten — Krokodile — Brückenechsen [Turtles — Crocodylians — Tuataras], by Heinz Wermuth and Robert Mertens. Gustav Fischer Verlag, Villengang 2, D-07745 Jena, Germany. 1996. Hardcover. xxvii + 506 pp. ISBN 3-437-35048-X. DM 178.—(approx. US \$120.00).

A reprint of the classic 1961 systematic review of the living non-squamate reptiles. The body of the book includes keys, complete synonymies, statements of distribution, and black and white illustrations (many taken from the original descriptions) of all of the turtles, crocodylians, and tuataras then recognized. All Latin names are fully indexed. The reprint itself is accompanied by a short postscript by Wermuth and by a more extensive commentary (with dual German-English text) by Fritz Jürgen Obst. The commentary incorporates a chronological list of the 117 turtles and four crocodylians described since 1961, a summary of major changes in the systematics of turtles, crocodylians, and tuataras, and extensive tables listing the names employed by Wermuth and Mertens and nine subsequent checklists and reviews. The tables serve as guide to the changes in turtle and crocodylian taxonomy over the last 35 years.

Handbook of Ethological Methods, Second Edition, by Philip N. Lehner. Cambridge University Press, 40 West 20th Street, New York, New York 10011-4211, USA. 1996. Hardcover. xix + 672 pp. ISBN 0-521-55405-5. US \$ 69.95.

An expanded and updated version of the 1979 edition of this standard reference. The book begins with a conceptual model of animal behavior and includes major sections dealing with research design, data collection (methods and equipment), and data analysis. The section on statistical methods, in particular, has been expanded relative to the first edition and the data collection equipment chapter has been updated to reflect current technologies. The *Handbook* concludes with appendices on microcomputers in ethology, ethics in ethology, and guidelines for the use of animals in research. There is a 1000-entry reference list and the work is subject-indexed. Although a limited subset of the examples provided in the *Handbook* are herpetological, many of the methods are generally applicable to any group of study organisms.

Listado Preliminar de la Fauna Silvestre del Estado de Nuevo León, México, by Salvador Contreras-B., Fernando Gonzales-S., David Lazcano-V., and Alberto Contreras-A., editors. 1995. Consejo Consultivo Estatal para las Preservación y Fomento de la Flora y Fauna Silvestre de Nuevo León. Gobierno del Estado de Nuevo León, México. 152 pp., softcover. Price not given. ISBN 968-7644-001. Monterrey, Nuevo León.

This small book is, as the title suggests, a preliminary checklist of the mammals, birds, reptiles, amphibians, fishes, insects, arachnids, crustaceans, and mollusks of a remarkably diverse region of northeastern México. Although consisting largely of species lists, descriptive summaries of each faunal group are presented in both Spanish and English. Arturo Contreras and David Lazcano prepared the herp checklists (two chapters), and these occupy about 14 pages. Common names (in Spanish) accompany the scientific names for each species.

ERRATUM

In the paper by Hollingsworth et al. (1997: 28:26–28), we inadvertently omitted Table 1, shown below.

TABLE 1. Variation in eight meristic characters for *Sauromalus varius* from islas Roca Lobos and San Esteban. Upper figures = limits. Middle figure = mean. Lower figure = \pm one standard deviation. n = sample size. See text for character acronyms and definitions and for a discussion on the male-female separation of dorsals.

Population	VENTRL	CAUDAL	BRACHL	DORSAL (Male)	DORSAL (Female)	FEMPOR	SUPRAL	INFRAL	ROSTRAL
Isla Roca Lobos $n = 7$	147–160 152.57 4.32	32–39 34.43 2.37	50–57 53.29 2.75	36–40 38.75 1.89 ($n = 4$)	32–34 33.00 1.00 ($n = 3$)	31–36 34.00 1.53	27–33 30.43 2.15	30–35 32.86 1.95	4–5 4.86 0.38
Isla San Esteban $n = 19$	145–166 153.16 6.44	30–36 32.68 1.83	53–61 56.05 2.04	32–41 37.00 2.79 ($n = 10$)	28–41 35.00 4.30 ($n = 9$)	30–38 34.26 2.10	24–32 28.87 2.13 ($n = 16$)	30–37 33.59 1.94 ($n = 17$)	4–6 4.71 0.59 ($n = 17$)

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