

## GEOGRAPHIC DISTRIBUTION

*Herpetological Review* publishes brief notices of new geographic distribution records in order to make them available to the herpetological community in published form. Geographic distribution records are important to biologists in that they allow for a more precise determination of a species' range, and thereby permit a more significant interpretation of its biology.

These geographic distribution records will be accepted in a **standard format** only, and all authors *must* adhere to that format, as follows: SCIENTIFIC NAME, STANDARD ENGLISH NAME if available (for the United States and Canada as it appears in Crother [ed.] 2012. *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding*. 7<sup>th</sup> ed. Herpetol. Circ. 39:1–92 [available from [ssarbooks.com](http://ssarbooks.com)], for Mexico as it appears in Liner and Casas-Andreu 2008. *Standard Spanish, English and Scientific Names of the Amphibians and Reptiles of Mexico*. Herpetol. Circ. 38:1–162), LOCALITY (use metric for distances and give precise locality data, including lat/long coordinates in **decimal degrees** and cite the map datum used), DATE (day-month-year), COLLECTOR, VERIFIED BY (*cannot* be verified by an author; curator at an institutional collection is preferred), PLACE OF DEPOSITION (where applicable, use standardized collection designations as they appear in Sabaj Pérez [ed.]. 2013. *Standard Symbolic Codes for Institutional Resource Collections in Herpetology and Ichthyology: an Online Reference*, ver. 4.0, available at <http://www.asih.org/>) and CATALOG NUMBER (required), COMMENTS (brief), CITATIONS (brief and must adhere to format used in this section; these should provide a geographic context for the new record). Close with author name(s) in bold, capital letters (give name and address in full—spell out state or province names—no abbreviations, e-mail address after each author name/address for those wishing to provide it—e-mail required for corresponding author). Please include distance from nearest previously known record (provide a citation or refer to existing vouchered material to substantiate your report). If publishing specific locality information for a rare or endangered species has the potential to jeopardize that population, please consult with the Section Editor at time of record submission. If field work and/or specimen collection occurred where permits were required, please include permit number(s) and authorizing agency in the text of the note. Generally, this means that permit information should be included for any specimens COLLECTED. This is unnecessary for photo vouchers.

Some further comments. The role of the “Standard Names” lists (noted above) is to standardize English names and comment on the current scientific names. Scientific names are hypotheses (or at least represent them) and as such their usage should not be dictated by a list, society, or journal.

Additionally, this geographic distribution section does not publish “observation-only” records. Records submitted should be based on preserved specimens that have been placed in a university or museum collection (private collection depository records are discouraged; institutional collection records will receive precedence in case of conflict). A good quality photograph (print, slide, or digital file) may substitute for a preserved specimen. Photographic vouchers *must* be deposited in a university or museum collection along with complete locality data, and the photographic catalog number(s) must be included in the same manner as a preserved record. Before you submit a manuscript to us, check Censky (1988, *Index to Geographic Distribution Records in Herpetological Review: 1967–1986*; available from the SSAR Publications Secretary), subsequent issues of *Herpetological Review*, and other sources to make sure you are not duplicating a previously published record. The responsibility for checking literature for previously documented range extensions lies with authors. **Do not submit range extensions unless a thorough literature review has been completed.**

For reports concerning **introduced species**, it is important to note whether a population has become established or if the report represents an isolated occurrence, such as a released captive. Additionally, it will be helpful to include any information that establishes a timeline for the introduction, such as date of first observation.

Please submit any geographic distribution records in the **standard format only** to one of the Section Co-editors: **David C. Blackburn** (Africa and Europe), **Indraneil Das** (Asia, Australasia, South Pacific), **Jerry D. Johnson** (Mexico and Central America, including the Caribbean Basin), **Alan M. Richmond** (USA & Canada), or **Gustavo J. Scrocchi** (South America). Short manuscripts are discouraged, and are only acceptable when data cannot be presented adequately in the standard format. **Electronic submission of manuscripts is required** (as Microsoft Word or Rich Text format [rtf] files, as e-mail attachments). Refer to inside front cover for e-mail addresses of section editors. A template for preparation of geographic distribution notes is available online at: [http://ssarherps.org/wp-content/uploads/2014/07/GeoDistNotes\\_FormattingGuidelines.pdf](http://ssarherps.org/wp-content/uploads/2014/07/GeoDistNotes_FormattingGuidelines.pdf).

Recommended citation for new distribution records appearing in this section is: Cabral, H., and A. Caballero. 2012. Geographic distribution: Paraguay, Departamento Central: *Pseudoeryx plicatilis*. Herpetol. Rev. 43:622.

### CAUDATA — SALAMANDERS

**AMBYSTOMA JEFFERSONIANUM** (Jefferson Salamander). USA: INDIANA: JOHNSON Co.: Hensley (39.35806°N, 86.159167°W; WGS 84). 16 May 2015. Jessica Nagel. Verified by Alan Resetar.

Saint Joseph's College Zoological Collection (SJCZC A401). New county record (Minton 2001. *Amphibians and Reptiles of Indiana*. Indiana Academy of Science, Indianapolis, Indiana. 404 pp.) filling a gap in the distribution of this species in central Indiana. This species is known from two of the five adjacent counties.

Specimen was collected under an Indiana Scientific Purposes License (16-066).

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**AMBYSTOMA LATERALE** (Blue-spotted Salamander). USA: MICHIGAN: MECOSTA Co.: Haymarsh Lake State Game Area on 21 Mile Rd, ca. 0.9 rd km W jct 120<sup>th</sup> Ave (43.77340°N, 85.33569°W; WGS 84). 19 September 2016. Jillian K. Farkas. Verified by Travis J. LaDuc. Biodiversity Collections, University of Texas at Austin (TNHC 100576 [DRD 3783]). Adult female (59 mm SVL, 44 mm tail length, 4.5 g) collected in a decomposing log under shaded canopy. New county record filling a gap in the known distribution in west-central Michigan (Holman 2012. *Amphibians and Reptiles of Michigan: a Quaternary and Recent Faunal Adventure*. Wayne State University Press, Detroit, Michigan. 291 pp.; Phillips 2016. *J. North Am. Herpetol.* 1:45–69). This species is predicted to occur throughout the state (Harding and Holman 1992. *Michigan Frogs, Toads, and Salamanders: A Field Guide and Pocket Reference*. Cooperative Extension Service, Michigan State University, East Lansing, Michigan. 144 pp.; Harding 1997. *Amphibians and Reptiles of the Great Lakes Region*. The University of Michigan Press, Ann Arbor, Michigan. 378 pp.), but there were no known voucher specimens from the county. *Ambystoma laterale* is known to occur in all surrounding counties (Holman 2012, *op. cit.*; Phillips 2016, *op. cit.*) and the nearest collected specimen is from ca. 22.3 km to the northwest from near Reed City, Osceola County, Michigan (University of Michigan Museum of Zoology [UMMZ] 96116). This specimen was collected under a fishing license from the Michigan Department of Natural Resources (#21406).

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**AMBYSTOMA MACULATUM** (Spotted Salamander). USA: INDIANA: JOHNSON Co.: Hensley (39.3620°N, 86.1560°W; WGS 84). 17 May 2015. Allyson Roller. Verified by Alan Resetar. Saint Joseph's College Zoological Collection (SJCZC A402). New county record (Minton 2001. *Amphibians and Reptiles of Indiana*. Indiana Academy of Science, Indianapolis, Indiana. 404 pp.) filling a gap in distribution of this species in central Indiana. This species is known from all five adjacent counties. Specimen was collected under an Indiana Scientific Purposes License (16-066).

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**AMBYSTOMA TIGRINUM** (Eastern Tiger Salamander). USA: TENNESSEE: LINCOLN Co.: residential property off of McElroy Hollow Rd (35.094429°N, 86.635420°W; WGS 84). 16 October 2016. Matt A. McFerrin. Verified by Floyd Scott. David H. Snyder Museum of Zoology, Austin Peay State University (APSU19761; photo voucher). One adult found near the house. New county record that is 59.5 km W of the nearest vouchered specimens for

this species (Redmond and Scott 1996. *Atlas of Amphibians in Tennessee*. Austin Peay State University, Clarksville, Tennessee. Misc. Publ. No. 12. The Center for Field Biology, Austin Peay State University, Clarksville, Tennessee. 94 pp.; <http://www.apsubiology.org/tnamphibiansatlas/>; 16 Oct 2016).

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**HEMIDACTYLUM SCUTATUM** (Four-toed Salamander). USA: GEORGIA: LAMAR Co.: property adjacent to intersection of Gordon Road and M.L.K. Jr. Parkway in Barnesville (33.0444°N, 84.1350°W; WGS 84). 10 May 2016. Michael J. Bender and Kori A. Ogletree. Verified by Gregory D. Hartman. Gordon State College Collection of Vertebrates (GSC 073). Specimen (26 mm SVL, 31 mm TL, tail regrowing from previous loss) found under a rotting log in a small wooded area that contains an intermittent spring. New county record (Jensen et al. 2008. *Amphibians and Reptiles of Georgia*. University of Georgia Press, Athens, Georgia. 575 pp.). This species has been documented in adjacent Butts (Jensen et al. 2008, *op. cit.*) and Upson counties (Strickland and Hartman 2015. *Herpetol. Rev.* 46:601–602). Specimen collected under a Georgia Department of Natural Resources Scientific Collections Permit (29-WJH-16-194).

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**NOTOPHTHALMUS VIRIDESCENS** (Eastern Newt). CANADA: ONTARIO: KENORA DISTRICT: International Institute for Sustainable Development – Experimental Lakes Area (IISD-ELA), Lake 114 (49.67110°N, 93.75710°W; WGS 84). 15 September 2016. Lauren D. Hayhurst, Chandra M.C. Rodgers, and Stefano C. Strapazzon. Verified by Stephen J. Hecnar and Amy Lathrop. Royal Ontario Museum (ROM dm 00852–00857; photo vouchers). Five larvae (one a developing male 85 mm TL, 2.3 g; 58 mm, 0.8 g; 60 mm, 1.1 g; 64 mm, 0.9 g; 41 mm, 0.4 g). Lake 626 (49.75332°N, 93.79749°W; WGS 84). 5 October 2016. Lee E. Hrenchuk, Stefano C. Strapazzon, Lauren D. Hayhurst. Verified by Stephen J. Hecnar and Amy Lathrop. ROM dm 00858; photo voucher. One female adult (116 mm TL, 5.3 g). All six specimens were by-catch in trap nets used during fisheries surveys in shallows near shorelines. Individuals had totals of 12, 9, 4, 14, 0, and 0 faint lateral red spots, respectively. Coloration, patterns, and general morphology indicated that all were Central Newts (*N. v. louisianensis*). Both lakes represent new locality records within a major gap for observations in a remote area of boreal forest in Northwestern Ontario near the northwest corner of the species' range. Nearest neighboring records are 28 km W from East Emerson Lake in 2013 (49.7693°N, 94.1876°W; NAD 83, Ontario Reptile and Amphibian Atlas ID 330660), 36 km SW from Reedy Bay, Lake of the Woods in 1986 (49.4236°N, 94.0880°W; NAD 83, FWS 16576), 54 km S from Schistose Lake in 1980 (49.1913°N, 93.6423°W; NAD 83, ROM H11869), and 136 km SE from South Crook Lake in 1994 (49.0477°N, 92.1365°W; WGS 84, Ontario Reptile and Amphibian Atlas ID 328609).

We also trapped and recorded 610 other individual newts among 15 lakes within the IISD-ELA, and seven individual newts from two lakes in the vicinity (\*). Ten individuals in Lake 110 (49.74403°N, 93.82221°W), 182 in Lake 114 (49.67110°N, 93.75710°W), 2 in Lake 151\* (49.67691°N, 93.94572°W), 1 in Lake 164 (49.62158°N, 93.81978°W), 4 in Lake 165 (49.62452°N,

93.81135°W), 5 in Lake 189\* (49.59126°N, 93.78875°W), 20 in Lake 191 (49.57938°N, 93.77968°W), 19 in Lake 222 (49.69618°N, 93.72263°W), 10 in Lake 223 (49.69827°N, 93.70839°W), 25 in Lake 226 (49.68938°N, 93.74502°W), 209 in Lake 260 (49.69640°N, 93.76010°W), 99 in Lake 302 (49.67632°N, 93.80020°W), 7 in Lake 373 (49.74381°N, 93.80020°W), 10 in Lake 375 (49.74506°N, 93.78787°W), 9 in Lake 442 (49.77502°N, 93.81783°W), 3 in Lake 626 (49.75332°N, 93.79749°W), and 2 in Lake 658 (49.73383°N, 93.73664°W), from 1983 to 2016 (unpubl. data). These historical observations were recorded and maintained by Sandra M. Chalanchuk from 1983 to 2013, by Chandra M. C. Rodgers from 2014 to present, and were compiled by Lauren D. Hayhurst.

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**PLETHODON CHLOROBRYONIS** (*Atlantic Coast Slimy Salamander*). USA: SOUTH CAROLINA: PICKENS CO.: along Issaqueena Lake Rd, near a rock pile (34.744452°N, 82.848333°N; WGS 84). 7 October 2016. M. Antonov, S. Godfrey, and J. Newman. Verified by Kyle Barrett. Campbell Museum of Natural History, Clemson University (CUSC 1206; photo voucher). New county record ([www.vertnet.org](http://www.vertnet.org), 7 Oct 2016; [www.carolinaherpatlas.org](http://www.carolinaherpatlas.org), 7 Oct 2016). This record fills a distributional gap in the northwestern corner of South Carolina. *Plethodon chlorobryonis* is known to occur in several surrounding counties, and the nearest collected specimen is from ca. 42 km to the northwest from near Tamassee, Oconee County, South Carolina (North Carolina Museum of Natural Sciences [NCSM] 85645).

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**PSEUDOTRITON RUBER** (*Red Salamander*). USA: PENNSYLVANIA: MONTGOMERY CO.: Myron Hopewell Memorial Park, 2.5 km E of Danville, unnamed spring flowing into Sechler Run (40.95777°N, 76.57711°W; WGS 84). 9 October 2016. S. Hartzell. Verified by Kenneth L. Krysko. Florida Museum of Natural History (UF 178947; photo voucher). New county record, filling a distributional gap between surrounding Columbia, Lycoming, and Northumberland counties (Hulse et al. 2001. *Amphibians and Reptiles of Pennsylvania and the Northeast*. Cornell University Press, Ithaca, New York. 419 pp).

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#### ANURA — FROGS

**ANOTHECA SPINOSA** (*Coronated Treefrog*). MÉXICO: TABASCO: MUNICIPALITY OF TEAPA: Cerro del Madrigal, ca. 56.7 km SSE of Villahermosa, Tabasco (17.48404°N, 92.83796°W; WGS 84), 622 m elev. 2 August 2014. Marco Antonio Torrez-Pérez. Verified by Jerry D. Johnson. Colección de Anfíbios y Reptiles de Tabasco, Universidad Juárez Autónoma de Tabasco, Villahermosa, Tabasco (CART 00733). First record for Tabasco, extending the known

range ca. 56 km NNE from the closest known locality at El Pozo, located 12 km NW of Berriozabal, Chiapas (Johnson et al. 1976. *Trans. Kansas Acad. Sci.* 3, 4:131–139; Wake and Johnson 1989. *Contr. Sci. Nat. Hist. Mus. Los Angeles Co.* 411:1–10; Luría-Manzano et al. 2014. *Rev. Mex. Biodiv.* 85:1285–1288. The adult frog was captured on a bush ca. 1.7 m above ground in rain forest. Field work was supported by Universidad Juárez Autónoma de Tabasco, through the project Programa de Fomento a la Investigación UJAT-2013-IB-30.

**MARCO ANTONIO TORREZ-PÉREZ** (e-mail: marcotorrezp@yahoo.com) and **MARIA DEL ROSARIO BARRAGÁN-VÁZQUEZ**, División Académica de Ciencias Biológicas, Universidad Juárez Autónoma de Tabasco, km 0.5 carretera Villahermosa-Cárdenas, entronque con Bosque de Saloya, C. P. 86039, Tabasco, México (e-mail: barragan@ujat.mx).

**BUFO HOUSTONENSIS** (= *ANAXYRUS HOUSTONENSIS*) (*Houston Toad*). USA: TEXAS: BRAZOS CO.: ca. 19 km ESE of College Station (30.567364°N, 96.163837°W; WGS 84), 58.8 m elev. 10 March 1962. E. M. Schuille. Verified by Robert A. Thomas. Michigan State University Museum (MSUM HE.8877). New county record (Dixon 2013. *Amphibians and Reptiles of Texas: with Keys, Taxonomic Synopses, Bibliography, and Distribution Maps*. Texas A&M University Press, College Station, Texas. 447 pp.). This record extends the known historical distribution of the endangered Houston Toad ca. 46 km southeast of known breeding localities in Robertson County, and 50.5 km E of Lake Woodrow, the type locality for Houston Toad in Burleson County. The adult specimen (46.0 mm SUL, 15.6 mm HW) was collected along a dirt road in the Navasota River bottom. Measurements reflect those of the preserved wet specimen, which has been partially dissected.

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**CARDIOGLOSSA LEUCOMYSTAX** (*Silver Long-fingered Frog*). GABON: NGOUNIÉ PROVINCE: TSAMBA-MAGOTSI DEPARTMENT: Waka National Park, Oghoubi Camp (1.124°S, 11.13°E; WGS 84), 400 m elev. 15–22 June 2007. W. Maddison, D. De Bakker, and M. Bodner. Verified by Marion Binde. Royal Belgian Institute for Natural Sciences, Brussels (IRSNB 16741). Individual (21.2 mm SVL) caught in pitfall trap in secondary forest. First record for Tsamba-Magotsi Department and for the park (Vande weghe et al. 2016. *Biodiversité des parcs nationaux et réserves du Gabon. 2. Espèces, écosystèmes et populations*. Agence nationale des parcs nationaux, Libreville. 384 pp.). The closest record is from Lopé National Park (Pauwels and Rödel 2007. *Herpetozoa* 19:135–148), ca. 100 km NE of the new locality. Specimen collected under a permit issued by CENAREST, Libreville (AR0012/07/MESR/CENAREST/CSAR).

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**ELACHISTOCLEIS PEARSEI** (*Colombian Plump Frog*). REPUBLIC OF PANAMA: VERAGUAS: MARIATO DISTRICT: Cerro Hoya National Park, Restingue (7.24311°N, 80.90406°W; WGS 84), near sea

level. 18 May 2016. E. E. Flores. Verified by Marcos Ponce. Museo de Vertebrados, Universidad de Panamá, Panama City, Panama (MVUP 2677, 2678). First records of the species from Cerro Hoya National Park (ANAM/ECO/GTZ 2004. Plan de Manejo del Parque Nacional Cerro Hoya. 102 pp.), extending the range in Panama ca. 54 km SW from previous records in Tonosi, Los Santos Province (Biodiversity Institute, University of Kansas [KU] 104269, 108915–108917). The male was actively vocalizing at 2000 h from inside a small bunch of grass while the female was approaching from the outside. The site was in a swampy pasture where a vast chorus of males could be heard; Cerro Hoya National Park is situated primarily within an isolated patch of primary wet forest. This work was conducted under the scientific permit (SE/A-118-15) provided by the Ministry of the Environment of Panama (MiAmbiente).

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**HYLA CHRYSOSCELIS (Cope's Gray Treefrog)**. USA: INDIANA: JOHNSON Co.: Hensley (39.3620°N, 86.1560°W; WGS 84). 17 May 2015. Payton Kellenburger. Verified by Alan Resetar. Saint Joseph's College Zoological Collection (SJCZC A403 [includes a digital recording of calls]). New county record (Minton 2001. Amphibians and Reptiles of Indiana. Indiana Academy of Science, Indianapolis, Indiana. 404 pp.) that fills a gap in distribution of this species in central Indiana. This species is known from four of the five adjacent counties. Specimen collected under an Indiana Scientific Purposes License (16-066).

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**HYLA CHRYSOSCELIS / VERSICOLOR COMPLEX (Cope's Gray Treefrog / Gray Treefrog Complex)**. USA: TENNESSEE: SULLIVAN Co.: South Holston Weir Dam Wetland, across from Osceola Island Parking Area along Holston View Dam Road (36.5237°N, 82.1108°W; WGS 84). 26 September 2005. M. Kevin Hamed. Verified by A. Floyd Scott. David H. Snyder Museum of Zoology, Austin Peay State University (APSU 19776; photo voucher). New county record (Redmond and Scott 1996. Atlas of Amphibians in Tennessee. Austin Peay State University, Clarksville, Tennessee. Misc. Publ. No. 12. The Center for Field Biology, Austin Peay State University, Clarksville, Tennessee. 94 pp.; <http://www.apsubiology.org/tnamphibiansatlas/>; 11 Nov 2016). This record extends the eastern distribution 63 km from adjacent Hawkins County (Alsop 1975. Report of Terrestrial Vertebrates at the Phipps Bend Generating Site with Emphasis on Abundance and Status. Tennessee Valley Authority, Norris, Tennessee. 69 pp.).

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**HYLA CINEREA (Green Treefrog)**. USA: TENNESSEE: KNOX Co.: Seven Islands Wildlife Refuge, Kelly Bend (35.9500°N, 83.6947°W; WGS 84). 21 August 2006. Scott Dykes and Pete Wyatt. Verified by A. Floyd Scott. David H. Snyder Museum of Zoology, Austin Peay State University (APSU 18209; photo voucher). Adult male observed calling from ragweed plant along levee. Knoxville, Knoxville City Greenway just N of cul-de-sac at end of Sequoyah Gardens Way (35.9447°N, 83.9753°W; WGS 84). 11 July 2013. Jackson

Sibley. Verified by A. Floyd Scott. APSU 19421 (audio voucher). Male calling along greenway. Knoxville, 1615 Meadow Chase Lane (35.9483°N, 84.1086°W; WGS 84). 9 May 2015. Dean Edwards and Amber Edwards. Verified by A. Floyd Scott. APSU 19576 (photo voucher). Individual on side of house near floodlight in early morning. First records for Knox County (Redmond and Scott 1996. Atlas of Amphibians in Tennessee. Austin Peay State University, Clarksville, Tennessee. Misc. Publ. No. 12. The Center for Field Biology, Austin Peay State University, Clarksville, Tennessee. 94 pp.; <http://www.apsubiology.org/tnamphibiansatlas/>; 30 Nov 2015).

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**HYLA CINEREA (Green Treefrog)**. USA: ILLINOIS: GALLATIN Co.: Ohio River floodplain in ditch on west side of Round Pond Road just north of Old Shawneetown (37.70249°N, 88.13243°W; WGS 84). 27 July 2016. Noah M. Gordon and Michael J. Lodato. Verified by Dan Wylie. Illinois Natural History Survey (INHS 26942). New county record (Phillips et al. 1999. Field Guide to Amphibians and Reptiles of Illinois. Illinois Natural History Survey Manual 8. 300 pp.). Numerous individuals were calling from a flooded ditch following heavy rain. A chorus of *H. cinerea* was previously heard on 24 June 2016 from an unnamed cypress pond just across the road from the vouchered site. In addition, on 24 June 2016 we heard a substantial breeding chorus of *H. cinerea* at Horseshoe Pond, New Haven Township, near the confluence of the Little Wabash and Wabash rivers (37.88110°N, 88.09798°W; WGS 84). On 1 August 2016 another sizeable chorus of *H. cinerea* was heard at Clark Pond, also near the confluence of the Little Wabash and Wabash rivers (37.89700°N, 88.11252°W; WGS 84). These latter two colonies indicate that *H. cinerea* is now established in the Wabash Valley of Illinois.

HARDIN Co.: Herrin Rod & Gun Club, 2.04 km WSW of Cave-in-Rock (37.46373°N, 88.18727°W; WGS 84). 20 September 2015. Christopher A. Phillips. Verified by Dan Wylie. INHS 24201. New county record (Phillips et al. 1999, *op. cit.*). Specimen taken from side of cabin at a locality proximate to the Ohio River. Additional specimens found at this locality in 2016.

These two new county records, from contiguous counties, extend the range of this species in the state approximately 75 km to the northeast from the nearest known Illinois populations in Pope County to the southwest (Phillips et al. 1999, *op. cit.*). Its occurrence in the Wabash Valley of Illinois is not unexpected since it has been colonizing new areas on the Indiana side of the Wabash River and has been reported from adjacent Posey County, Indiana as early as 2005 (Lodato et al. 2014. Proc. Indiana Acad. Sci. 123:179–195).

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**INCILIUS NEBULIFER (Gulf Coast Toad).** USA: ALABAMA: MONTGOMERY Co.: dry creek bed of Little Catoma Creek (32.25976°N, 86.17583°W; WGS 84). 22 October 2016. Roger Birkhead. Verified by Craig Guyer and David Laurencio. Auburn University Museum of Natural History (AUM 42755). Adult male captured under cover object at 1220 h. New state record. *Incilius nebulifer* was suspected to occur in Alabama but previous surveys concentrated in the extreme SW part of the state had not yielded any specimens (Craig Guyer, pers. comm.). In addition to Mount (1996. The Reptiles and Amphibians of Alabama. University of Alabama Press. 347 pp.), VertNet and AUM holdings were searched 26 October 2016. This location is approximately 315 km NE of the current easternmost record for this species (Brown et al. 2016. Herpetol. Rev. 47:623). It is not clear whether this is a recent introduction, a relict population, or natural dispersal up river corridors. Given the size of the Catoma Creek Mitigation Bank and its relatively remote location it seems unlikely this is an escaped individual. We hope that additional surveys can determine if this is a breeding population and its origin. Specimen collected under permit #2016129313668680 issued to RDB. Thanks go to the ALDOT for allowing access to this property.

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**LEPTODACTYLUS MELANONOTUS (Fringe-toed Foam Frog).** REPUBLIC OF PANAMA: LOS SANTOS: TONOSI DISTRICT: Cerro Hoya National Park, La Bajia (7.33782°N, 80.65312°W; WGS 84), 837 m elev. 14 April 2016. E. E. Flores. Verified by Marcos Ponce. Museo de Vertebrados, Universidad de Panamá, Panama City, Panama (MVUP 2489). First record of the species from Cerro Hoya National Park (ANAM/ECO/GTZ 2004. Plan de Manejo del Parque Nacional Cerro Hoya. 102 pp.), extending its range in the Republic of Panama ca. 120 km to the south of the closest record at La Mesa, Veraguas Province (MVUP 2414; Flores et al. 2014. Herpetol. Rev. 45:277). The frog was found vocalizing at 2045 h near a stream in pastureland close to a cattle pen in an area originally covered by primary wet forest. Although we found many individuals, the area is severely affected by deforestation and forest fires, especially during the dry season, which may put this isolated population at risk. This work was conducted under the scientific permit (SE/A-118-15) provided by the Ministry of the Environment of Panama (MiAmbiente).

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**LITHOBATES CATESBELIANUS (American Bullfrog).** MÉXICO: AGUASCALIENTES: MUNICIPALITY OF JESUS MARIA: 3.3 km on dirt road S from General Ignacio Zaragoza (21.5144°N, 102.2752°W; WGS 84), 2034 m elev. 15 August 2015. Héctor Ávila-Villegas and Carlos Alberto Flores de Anda. Verified by Phil Rosen. University of Arizona Museum of Natural History (UAZ 57637; photo voucher). First municipality record, located 37 km SSW of the closest known locality at Pabellón de Hidalgo, Aguascalientes (Ávila-Villegas et al. 2007. Bol. Soc. Herpetol. Mex. 15:16–17).

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**LITHOBATES SYLVATICUS (Wood Frog).** USA: INDIANA: JOHN-SON Co.: Hensley (39.35806°N, 86.159167°W; WGS 84). 16 May 2015. Michael S. Finkler. Verified by Alan Resetar. Indiana State Museum (INSM 71.7.0526). New county record (Minton 2001. Amphibians and Reptiles of Indiana. Indiana Academy of Science, Indianapolis, Indiana. 404 pp.) that fills a gap in distribution of this species in central Indiana. This species is known from all five adjacent counties. Specimen collected under an Indiana Scientific Purposes License (16-066).

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**ODORRANA MAWPHLANGENSIS (Mawphlang Odorous Frog).** INDIA: MIZORAM: AIZAWL DISTRICT: Hmuifang Community Reserve Forest (23.27135°N, 92.45095°E; WGS 84), 1444 m elev. 12 June 2010. H. T. Lalremsanga. Verified by Annemarie Ohler. From seasonal intermittent stream below hilly grass-covered terrain, at 2224 h. Departmental Museum of Zoology (MZMU 130), Mizoram University. Male, SVL 76.9 mm. First record for Mizoram State, species previously recorded from Meghalaya (Pillai and Chanda 1977. J. Bombay Nat. Hist. Soc. 74:136–140), Manipur (Chanda 1994. Mem. Zool. Surv. India 18[2]:1–143), Nagaland (Ao et al. 2003. Zoos' Print J. 18[6]:1117–1125) and West Bengal state (Chanda 1986. J. Bengal Nat. Hist. Soc. 5:140–155; Sarkar et al. 1992. Fauna of West Bengal: Amphibia. State Fauna Series 3[2]:67–100; Dutta 1997. Amphibians of India and Sri Lanka [Checklist and Bibliography]. Odyssey Publishing House, Bhubaneswar, India. 342 pp.); record from West Bengal in need of reconfirmation (see Mahony 2008. Hamadryad 3:1–12). Small population documented to breed at site between late April and early June.

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**RHACOPHORUS SUFFRY (Suffry Red-webbed Tree Frog).** INDIA: MIZORAM: AIZAWL DISTRICT: Aizawl, College Veng (23.43215°N, 92.43310°E; WGS 84), 875 m elev. 28 July 2010. H. T. Lalremsanga. Verified by Annemarie Ohler. From *Mangifera indica* tree, in homestead garden, at 2043 h. Departmental Museum of Zoology (MZMU 616), Mizoram University. Digital image voucher, Lee Kong Chian Natural History Museum, National University of Singapore, ZRC (IMG) 1.99. Male, SVL 45.4 mm. First record for Mizoram State, species previously recorded from Assam (Bordoloi et al. 2007. Zootaxa 1653:1–20) and Arunachal Pradesh (Ray et al. 2013. Herpetol. Rev. 44:271). Endemic to northeast India.

Supported by permit number A.33011/2/99-CWLW/225 issued by Chief Wildlife Warden, Environment, Forest and Climate Change Department, Govt. of Mizoram, India.

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**UPERODON TAPROBANICUS (Sri Lankan Painted Frog)**. INDIA: TELENGANA: ADILABAD: Bejjur Reserved Forest (19.3463°N, 79.8647°E; WGS 84), 473 m elev. 16 September 2016. Digital image voucher, Lee Kong Chian Museum of Natural History at the National University of Singapore (ZRC [IMG] 1.100). Verified by Indraneil Das. Species known from Sri Lanka and Peninsular India (Parker 1934. A Monograph of the Frogs of the Family Microhylidae. British Museum [Natural History], London. vi + 208 pp.; Daniels 2005. Amphibians of Peninsular India: A Lifescape. Indian Academy of Sciences/Universities Press Private Limited, Hyderabad. xii + 4 plates + 268 pp. + 55 plates). First record for Telangana State, and extends range from northeastern part of eastern Ghats by 601 km (Rao et al. 2005. *Zoos' Print J.* 20:1737–1740) and 522 km (Venkateshwarlu et al. 2006. EPTRI-ENVIS Newsl. 12[4]:5–8), or east coast by 775 km (Sivakumar et al. 2003. *J. Bombay Nat. Hist. Soc.* 100:631), 852 km (Guptha et al. 2012a. *World J. Zool.* 7:131–134), and 822 km (Guptha et al. 2012b. *World J. Zool.* 7:306–311).

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### TESTUDINES — TURTLES

**APALONE MUTICA (Smooth Softshell)**. USA: OKLAHOMA: MURRAY CO.: Washita River, Hwy 7 crossing W of Davis (34.50506°N, 97.14097°W; WGS 84). 24 July 2016. Peter V. Lindeman. Verified by M. V. Plummer. Florida Museum of Natural History (UF 179581; photo voucher). Basking specimen photographed *in situ* with a 36× Nikon CoolPix camera.

TEXAS: ANGELINA AND HOUSTON COS.: Neches River, Hwy 7 crossing W of Lufkin (31.39659°N, 94.96546°W; WGS 84). 26 July 2016. Peter V. Lindeman. Verified by M. V. Plummer. UF 179608 (photo voucher). Specimen foul-hooked in the anterior carapace by an angler fishing from the bank next to the boat ramp and subsequently released.

TEXAS: CHEROKEE AND HOUSTON COS.: Neches River, Hwy 21 crossing SW of Alto (31.57925°N, 95.16542°W; WGS 84). 10 March 2016. Peter V. Lindeman. Verified by M. V. Plummer. UF 179567 (photo voucher). Basking specimen photographed *in situ* with a 36× Nikon CoolPix camera.

New county records and first records for the upper Neches drainage, partially filling in one of the “curious gaps” noted in the species’ distribution in east Texas (Webb 1970. *Reptiles of Oklahoma*. University of Oklahoma Press, Norman, Oklahoma. 370 pp.; Dixon 2013. *Amphibians and Reptiles of Texas: with Keys, Taxonomic Synopses, Bibliography, and Distribution Maps*. Texas A&M University Press, College Station, Texas. 447 pp.).

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**APALONE SPINIFERA (Spiny Softshell)**. USA: GEORGIA: TOWNS Co.: Brasstown Creek near city of Young Harris (34.93491°N, 83.85874°W; WGS 84). 4 July 2016. J. Lindley McKay and Phil Marantelli. Verified by Nikole Castleberry. Georgia Museum of Natural History (GMNH 51172; photo voucher). First county record (Jensen et al. 2008. *Amphibians and Reptiles of Georgia*. University of Georgia Press, Athens, Georgia. 575 pp.). Nearest record from Georgia is of subspecies *A. s. aspera*, ca. 44.6 km air-line from Yahoola Creek, Lumpkin Co. (Brown 2015. *Herpetol. Rev.* 46:563). In North Carolina the closest vouchered records are of *A. s. spinifera* from the French Broad river system in western Madison Co., approximately 120 km in a direct line (Palmer and Braswell 1995. *Reptiles of North Carolina*. University of North Carolina Press, Chapel Hill, North Carolina. 412 pp.). Adult female, first observed completely buried in mud except the snout, in clear water approximately 10–15 cm deep. Brasstown Creek at this place and time was around 4 m maximal width and 35 cm maximal depth. The turtle was facing the bank and its head was approximately 30 cm from the edge. This individual possessed a single dark submarginal line along rear of carapace, and pale postorbital and postlabial stripes were not connected, characteristics of subspecies *A. s. spinifera* (Ernst et al. 1994. *Turtles of the United States and Canada*. Smithsonian Institution Press, Washington D.C. 578 pp.), but due to broad phenotypic variation in the species we refrain from assigning subspecies at this time.

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**APALONE SPINIFERA (Spiny Softshell)**. USA: INDIANA: TIPPECANOE CO.: Wabash River, Grant Rd crossing in Americus (40.52936°N, 86.76047°W; WGS 84). 11 July 2016. Peter V. Lindeman. Verified by M. V. Plummer. Florida Museum of Natural History (UF 179609; photo voucher). Basking specimen photographed *in situ* with a 36× Nikon CoolPix camera.

OKLAHOMA: COAL CO.: Clear Boggy Creek, Hwy 31 crossing SE of Tupelo (34.50556°N, 96.35421°W; WGS 84). 24 July 2016. Peter V. Lindeman. Verified by M. V. Plummer. UF 179546 (photo voucher). Swimming specimen photographed *in situ* with a 36× Nikon CoolPix camera.

TENNESSEE: GILES CO.: Elk River, Hwy 31 crossing S of Elkton (35.04740°N, 86.88757°W; WGS 84). 18 May 2016. Peter V. Lindeman. Verified by M. V. Plummer. UF (179539 (photo voucher). Basking specimen photographed *in situ* with a 36× Nikon CoolPix camera.

New county records (Minton 2001. *Amphibians and Reptiles of Indiana*. Indiana Academy of Science, Indianapolis, Indiana. 404 pp.; Webb 1970. *Reptiles of Oklahoma*. University of Oklahoma Press, Norman, Oklahoma. 370 pp.; Scott and Redmond 2008. *Atlas of Reptiles in Tennessee*. <http://www.apsubiology.org/tntreptileatlas/>; 1 July 2016). The Indiana record occurs in the upstream portion of a large distributional gap between Carroll and Vigo counties in the Wabash drainage (Minton 2001, *op. cit.*). The Oklahoma record fills in a distributional gap in the Clear Boggy drainage between Atoka and Pontotoc counties (Webb 1970, *op. cit.*). The Tennessee record is the first for the Elk River (Guyer et al. 2015. *Turtles of Alabama*. The University of Alabama Press, Tuscaloosa, Alabama. 267 pp.; Scott and Redmond 2008, *op. cit.*).

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**APALONE SPINIFERA (Spiny Softshell)**. USA: SOUTH DAKOTA: YANKTON Co.: James River public access, US Hwy 81, ca. 2.0 rd km N jct 300<sup>th</sup> St (43.05711°N, 97.39966°W; WGS 84). 1 October 2014. Drew R. Davis. Verified by Travis J. LaDuc. Biodiversity Collections, University of Texas at Austin (TNHC 100901 [DRD 2072]). The skeleton of an adult female was found along the river shoreline near a public access point. New county record filling a gap in the known distribution of this species in southeastern South Dakota, where it has been documented from adjacent Clay County, South Dakota (Ballinger et al. 2000. *Trans. Nebraska Acad. Sci.* 26:29–46) and Cedar County, Nebraska (Ballinger et al. 2010. *Amphibians and Reptiles of Nebraska*. Rusty Lizard Press, Oro Valley, Arizona. 400 pp.; Fogell 2010. *A Field Guide to the Amphibians and Reptiles of Nebraska*. University of Nebraska–Lincoln, Lincoln, Nebraska. 158 pp.). *Apalone spinifera* is predicted to occur throughout the Missouri River and several of its larger tributaries, but there are no collected specimens from Yankton County (Bandas and Higgins 2004. *A Field Guide to South Dakota Turtles*. SDCES EC 919. South Dakota State University, Brookings, South Dakota. 36 pp.; Kiesow 2006. *Field Guide to Amphibians and Reptiles of South Dakota*. South Dakota Department of Game, Fish and Parks, Pierre, South Dakota. 178 pp.). The closest known specimen to this individual is from ca. 51.3 km to the southeast from near Vermillion, Clay County, South Dakota (University of Nebraska State Museum [UNSM] 18314). This specimen was collected under a South Dakota Game, Fish and Parks Scientific Collecting Permit (#2014\_#2).

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**CUORA MOUHOTII (Keeled Box Turtle)**. INDIA: NAGALAND: Dimapur: Kacharigaon (25.8986°N, 93.6917°E, WGS 84), 175 m elev. 28 September 2016. Digital image voucher, Zoological Reference Collection in the Lee Kong Chian Natural History Museum at the National University of Singapore (ZRC [IMG] 2.301). From base of hill. Previous Indian reports from Arunachal Pradesh, Assam, and Meghalaya state (Das 1995. *Turtles and Tortoises of India*. Oxford University Press–India and WWF India, Bombay. 179 + xii pp.), and Mizoram (Matthew 2007. *In* Director, Zoological Survey of India, Kolkata [ed.], *Fauna of Mizoram, State Fauna Series 14*, pp. 545–577. Zoological Survey of India, Kolkata). First record for Nagaland State, and extension of range 62 km to the northeast.

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**GRAPTEMYS FLAVIMACULATA (Yellow-blotched Sawback)**. USA: MISSISSIPPI: LAUDERDALE Co.: Okatibbee Creek, Bronson Road crossing SE of Savoy (32.25817°N, 88.75602°W; WGS 84). 26 May 2016. Peter V. Lindeman. Verified by W. Selman. Florida Museum of Natural History (UF 179314; photo voucher). Swimming specimen photographed in situ with a 36× Nikon CoolPix camera.

SMITH Co.: Leaf River, Hwy 18 crossing W of Sylvarena (32.01239°N, 89.43264°W; WGS 84). 21 June 2016. Peter V. Lindeman. Verified by W. Selman. UF 179315 (photo voucher). Swimming specimen photographed in situ with a 36× Nikon CoolPix camera.

The Lauderdale County record is a new county record and the Smith County record is the first vouchered record for the county (Selman and Qualls 2009. *Herpetol. Conserv. Biol.* 4:171–184; Lindeman 2013. *The Map Turtle and Sawback Atlas: Ecology, Evolution, Distribution, and Conservation*. University of Oklahoma Press, Norman, Oklahoma. 460 pp.). The Lauderdale County record is also the first record of the species in Okatibbee Creek, the eastern tributary that forms the Chickasawhay River; it extends the range of the species 19.4 river km NW above the previous most upstream record in the Chickasawhay River in Clarke County (an unvouchered sight record) and 24.7 river km upstream of the previous most upstream vouchered specimen in the Chickasawhay River in Clarke County (Selman and Qualls 2009, *op. cit.*). The Smith County record confirms a sighting of the species reported from 20.4 river km downstream of the site vouchered herein.

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**GRAPTEMYS GEOGRAPHICA (Common Map Turtle)**. USA: INDIANA: MIAMI Co.: Wabash River, River Street crossing in Wabash (40.74875°N, 86.07064°W; WGS 84). 11 July 2016. Peter V. Lindeman. Verified by T. Picchione. Florida Museum of Natural History (UF 179230; photo voucher). Basking specimen photographed in situ with a 36× Nikon CoolPix camera.

WABASH Co.: Wabash River, Peru River Walk (40.79030°N, 85.82795°W; WGS 84). 11 July 2016. Peter V. Lindeman. Verified by D. Galbraith. UF 179224 (photo voucher). Two basking specimens photographed in situ with a 36× Nikon CoolPix camera.

The Miami County record is a new county record, while the Wabash County record is the first vouchered record for the county, confirming unvouchered records for the Wabash River in Wabash County (Minton 2001. *Amphibians and Reptiles of Indiana*. Indiana Academy of Science, Indianapolis, Indiana. 404 pp.; Lindeman 2013. *The Map Turtle and Sawback Atlas: Ecology, Evolution, Distribution, and Conservation*. University of Oklahoma Press, Norman, Oklahoma. 460 pp.).

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**GRAPTEMYS GIBBONSI (Pascagoula Map Turtle)**. USA: MISSISSIPPI: JASPER Co.: Souinlovey Creek, Hwy 513 crossing NE of Rose Hill (32.17043°N, 88.93040°W; WGS 84). 6 June 2016. Peter V. Lindeman. Verified by W. Selman. Florida Museum of Natural History (UF 179355; photo voucher). Swimming specimen photographed in situ with a 36× Nikon CoolPix camera.

KEMPER Co.: Okatibbee Creek, Kittrell Swamp Road crossing W of Prismatic (32.60210°N, 88.83987°W; WGS 84). 29 June 2016. Peter V. Lindeman. Verified by W. Selman. UF 179392 (photo voucher). Basking specimen photographed in situ with a 36× Nikon CoolPix camera.

SMITH Co.: Leaf River, Hwy 18 crossing W of Sylvarena (32.01269°N, 89.43265°W; WGS 84). 21 June 2016. Peter V. Lindeman. Verified by W. Selman. UF 179395 (photo voucher). Leaf River, Co Rd 80 crossing N of Taylorsville (31.92032°N,

89.42448°W; WGS 84). 21 June 2016. Peter V. Lindeman. Verified by W. Selman. UF 179396 (photo voucher). Oakohay Creek, Co Rd 77 crossing N of Mize (31.87474°N, 89.55242°W; WGS 84). 28 June 2016. Peter V. Lindeman. Verified by W. Selman. UF 179397 (photo voucher). Oakohay Creek, Hwy 28 crossing E of Mize (31.86698°N, 89.54731°W; WGS 84). 5 August 2016. Peter V. Lindeman. Verified by W. Selman. UF 179398 (photo voucher). Four basking and one swimming specimens photographed in situ with a 36× Nikon CoolPix camera.

The Kemper County record is a new county record; the other two records are the first vouchered records for Jasper and Smith counties (Selman and Qualls 2009. *Herpetol. Conserv. Biol.* 4:171–184; Lindeman 2013. *The Map Turtle and Sawback Atlas: Ecology, Evolution, Distribution, and Conservation*. University of Oklahoma Press, Norman, Oklahoma. 460 pp.). The Kemper County record extends the range of the species 30.4 river km upstream of an unvouchered sight record and 41.6 river km upstream of the previous most upstream vouchered record in Okatibbee Creek, both in Lauderdale County.

The other records confirm unvouchered sightings previously reported for Jasper and Smith counties by Selman and Qualls (2009, *op. cit.*). Their Jasper County record was from a lower reach of Tallahoma Creek in the southwestern part of the county, which is part of the Leaf subdrainage of the western Pascagoula drainage, whereas the new record reported herein is part of the Chickasawhay subdrainage of the eastern Pascagoula drainage. Their Smith County records were from a lower reach of Oakohay Creek and three reaches of the upper Leaf River, i.e., the same streams vouchered herein. The Jasper County record extends known range of *G. gibbonsi* in Souinlovey Creek 37.2 river km upstream of the previous sight record in Lauderdale County and, together with voucher photographs of basking specimens that I collected at each of the three downstream bridges on Souinlovey Creek (all in Clarke County; UF 179356, 179357, and 179391), to 61.9 total river km in Souinlovey Creek. The Smith County records extend the known range of *G. gibbonsi* in Oakohay Creek to 17.6 river km above the previous sight record and, together with a voucher photograph of a basking specimen downstream in Oakohay Creek in Covington County (UF 179399), to 37.2 total river km in this tributary, as well as providing the first vouchered records for the Leaf River in Smith County, with the more upstream record being from the site of the previous most upstream sight record.

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**GRAPTEMYS OUACHITENSIS (Ouachita Map Turtle)**. USA: OKLAHOMA: COAL Co.: Clear Boggy Creek, Co. Rd. 3690 crossing SW of Tupelo (34.57352°N, 96.44210°W; WGS 84). 24 July 2016. Peter V. Lindeman. Verified by G. Geller. Florida Museum of Natural History (UF 179265; photo voucher). Clear Boggy Creek, Hwy 31 crossing SE of Tupelo (34.50556°N, 96.35413°W; WGS 84). 24 July 2016. Peter V. Lindeman. Verified by G. Geller. UF 179266 (photo voucher). Two basking specimens photographed in situ with a 36× Nikon CoolPix camera.

MURRAY Co.: Washita River, Hwy 7 crossing W of Davis (34.50511°N, 97.14095°W; WGS 84). 24 July 2016. Peter V. Lindeman. Verified by G. Geller. UF 179273 (photo voucher). Two basking specimens photographed in situ with a 36× Nikon CoolPix camera.

The Coal County specimens are a new county record and the first records for Clear Boggy Creek, while the Murray County

specimens confirm the presence of the species in the county, as reported from an unvouchered observation made by Kelly et al. (2005. *Publ. Oklahoma Biol. Survey* 6:30–51) to the southeast, in the Chickasaw National Recreation Area (Lindeman 2013. *The Map Turtle and Sawback Atlas: Ecology, Evolution, Distribution, and Conservation*. University of Oklahoma Press, Norman, Oklahoma. 460 pp.).

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**GRAPTEMYS PEARLENSIS (Pearl Map Turtle)**. USA: MISSISSIPPI: ATTALA Co.: Yockanookany River, Co Rd 5216 crossing of new channel NE of Kosciusko (33.06485°N, 89.53420°W; WGS 84). 24 May 2015. Peter V. Lindeman. Verified by W. Selman. Florida Museum of Natural History (UF 179333; photo voucher). Basking specimen photographed in situ with a 36× Nikon CoolPix camera.

SCOTT Co.: Pearl River, south bank ca. 450 m below Low Head Dam N of Ludlow (32.62130°N, 89.74797°W; WGS 84). 28 May 2015. Peter V. Lindeman. Verified by W. Selman. UF 179334 (photo voucher). Little Canal of Tuscolameta Creek, Bridge Rd crossing SW of Walnut Grove (32.57613°N, 89.47220°W; WGS 84). 23 May 2015. Peter V. Lindeman. Verified by W. Selman. UF 179335 (photo voucher). Little Canal of Tuscolameta Creek, Hwy 35 crossing SW of Walnut Grove (32.57391°N, 89.46892°W). 5 August 2016. Peter V. Lindeman. Verified by W. Selman. UF 179336 (photo voucher). Three basking specimens photographed in situ with a 36× Nikon CoolPix camera.

SMITH Co.: Strong River, Hwy 541 crossing SE of Daniel (32.12210°N, 89.71424°W; WGS 84). 2016. Peter V. Lindeman. Verified by W. Selman. UF 179083 (photo voucher). Swimming specimen photographed in situ with a 36× Nikon CoolPix camera.

New county records (Lindeman 2013. *The Map Turtle and Sawback Atlas: Ecology, Evolution, Distribution, and Conservation*. University of Oklahoma Press, Norman, Oklahoma. 460 pp.). The new records: 1) are the first records for Tuscolameta Creek, with the more upstream site being 24.9 river km from the creek's confluence with the Pearl, 2) fill in a small gap in the species' distribution in the upper Pearl River, 3) extend the known range of the species 57.1 river km NW upstream of the previous most upstream vouchered record in the Yockanookany River in Leake County (a previous sight record upstream of that site as well as two sites farther upstream in Leake County were also vouchered with photographs of basking specimens; UF 179352–179354), and 4) extend the known range of the species 13.0 river km NE upstream of the previous most upstream vouchered record in the Strong River in Simpson County (a previous sight record downstream in the Strong River in southeastern Rankin County, which had been the most upstream record, was also vouchered with a photograph of a basking specimen; UF 179084).

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**GRAPTEMYS PSEUDOGEOGRAPHICA (False Map Turtle)**. USA: OKLAHOMA: ATOKA Co.: Clear Boggy Creek, Hwy 7 crossing E of Wapanucka (34.36968°N, 96.32087°W; WGS 84). 24 July 2016. Peter V. Lindeman. Verified by G. Geller. Florida Museum of Natural History (UF 179041; photo voucher). Clear Boggy Creek, Boggy Depot Rd crossing W of Tushka (34.30924°N, 96.27999°W; WGS 84). 24 July 2016. Peter V. Lindeman. Verified by G. Geller. UF



179042 (photo voucher). A swimming specimen and a basking specimen, respectively, photographed in situ with a 36× Nikon CoolPix camera.

COAL CO.: Clear Boggy Creek, Co Rd 3690 crossing SW of Tupelo (34.57353°N, 96.44218°W; WGS 84). 24 July 2016. Peter V. Lindeman. Verified by G. Geller. UF 179125 (photo voucher). Clear Boggy Creek, Hwy 31 crossing SE of Tupelo (34.50542°N, 96.35414°W; WGS 84). 24 July 2016. Peter V. Lindeman. Verified by G. Geller. UF 179126 (photo voucher). Two basking specimens photographed in situ with a 36× Nikon CoolPix camera.

MURRAY CO.: Washita River, Kay Starr trail crossing W of Dougherty (34.39740°N, 97.06707°W; WGS 84). 24 July 2016. Peter V. Lindeman. Verified by G. Geller. UF 179162 (photo voucher). Basking specimen photographed in situ with a 36× Nikon CoolPix camera.

PONTOTOC CO.: Clear Boggy Creek, Co Rd 3618 crossing SW of Stonewall (34.61519°N, 96.57249°W; WGS 84). 24 July 2016. Peter V. Lindeman. Verified by G. Geller. UF 179231 (photo voucher). Clear Boggy Creek, Co Rd 3640 crossing S of Stonewall (34.61709°N, 96.52983°W; WGS 84). 24 July 2016. Peter V. Lindeman. Verified by G. Geller. UF 179119 (photo voucher). Two basking specimens photographed in situ with a 36× Nikon CoolPix camera.

New county records and first vouchered records for the species in Clear Boggy Creek and the Washita River (Lindeman 2013. The Map Turtle and Sawback Atlas: Ecology, Evolution, Distribution, and Conservation. University of Oklahoma Press, Norman, Oklahoma. 460 pp.); McKnight et al. (2015. Copeia 103:1043–1047) recently reported unvouchered captures of the species in a lake in the Clear Boggy watershed in Atoka County.

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**PSEUDEMYX CONCINNA (River Cooter)**. USA: TENNESSEE: GILES Co.: Elk River, Hwy 31 crossing S of Elkton (35.047280°N, 86.887589°W; WGS 84). 1 July 2016. Peter V. Lindeman. Verified by C. Lechowicz. Florida Museum of Natural History (UF 179143; photo voucher). Basking specimen photographed in situ with a 36× Nikon CoolPix camera.

TENNESSEE: LINCOLN Co.: Elk River, Cheatham Rd crossing SE of Dellrose (35.09851°N, 86.78098°W; WGS 84). 1 July 2016. Peter V. Lindeman. Verified by C. Lechowicz. UF 179144 (photo voucher). Swimming specimen photographed in situ with a 36× Nikon CoolPix camera.

TEXAS: ANGELINA AND HOUSTON COS.: Neches River, ca. 140 m upstream of Hwy 7 crossing W of Lufkin (31.39726°N, 94.96738°W; WGS 84). 27 July 2016. Peter V. Lindeman. Verified by C. Lechowicz. UF 179145 (photo voucher). Specimen captured in a basking trap.

TEXAS: ANGELINA AND NACOGDOCHES COS.: Angelina River, ca. 0.7 km upstream of Hwy 59 crossing N of Lufkin (31.46112°N, 94.72862°W; WGS 84). 29 July 2016. Peter V. Lindeman. Verified by C. Lechowicz. UF 179146 (photo voucher). Specimen captured in a basking trap.

First county records for Giles and Lincoln counties, Tennessee (Scott and Redmond 2008. Atlas of Reptiles in Tennessee. <http://www.apsbiology.org/tnreptileatlas/>; 1 July 2016) and for Angelina County, Texas (Dixon 2013. Amphibians and Reptiles of Texas: with Keys, Taxonomic Synopses, Bibliography, and Distribution Maps. Texas A&M University Press, College Station, Texas. 447 pp.). The two Tennessee records extend the range of

the species upstream from a single record in Lauderdale and Limestone counties, Alabama, just above the confluence of the Elk River with the Tennessee River (Guyer et al. 2015. Turtles of Alabama. The University of Alabama Press, Tuscaloosa, Alabama. 267 pp.; Scott and Redmond 2008, *op. cit.*). The two Texas records fill in the middle county of a five-county gap in the species' known distribution in east Texas (Dixon 2013, *op. cit.*).

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**PSEUDEMYX CONCINNA SUWANNIENSIS (Suwannee Cooter)**. USA: FLORIDA: CITRUS Co.: Chassahowitzka River (28.71471°N, 82.58449°W; WGS 84). 19 October 2016. George L. Heinrich and James F. Caldwell. Verified by Kenneth L. Krysko. Florida Museum of Natural History (UF 178962; photo voucher). New river record (Heinrich et al. 2015. J. N. Am. Herpetol. 1:53–59; Ballou et al. 2016. Herpetol. Rev. 47:253–254). This record closes the distributional gap between the Homosassa and Weeki Wachee rivers. This specimen (juvenile) was observed basking on a partially submerged Southern Redcedar (*Juniperus silicicola*) trunk.

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**PSEUDEMYX GORZUGI (Rio Grande Cooter)**. USA: TEXAS: STARR Co.: Rio Grande River at Salineño (26.51535°N, 99.11738°W; WGS 84). 28 March 2015. John Brush. Verified by Carl Franklin. Amphibian and Reptile Diversity Research Center, University of Texas at Arlington (UTADC 8745; photo voucher). At approximately 1440 h, one *P. gorzugi* was observed basking on a large rock in the Rio Grande River. The nearest recent specimen was reported on 11 June 2008 at Lake Casa Blanca State Park (Museum of Vertebrate Zoology, University of California, Berkeley [MVZ] 265703) which lies 137 km N of our observation. To our knowledge this is the first record of *P. gorzugi* from Starr County to be vouchered (Dixon 2013. Amphibians and Reptiles of Texas: with Keys, Taxonomic Synopses, Bibliography, and Distribution Maps. Texas A&M University Press, College Station, Texas 447 pp.). This new record fills the distribution gap between Hidalgo County to the south and Webb County to the north, thereby making the species' distribution continuous along the Rio Grande River.

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**STERNOTHERUS MINOR PELTIFER (Stripe-Necked Musk Turtle)**. USA: MISSISSIPPI: FORREST Co.: Myers Creek, 6 m downstream of North Gate Rd bridge, 6 km SSE of Hattiesburg at the intersection of North Gate Road and Hwy 98 (31.24461°N, 89.24176°W; WGS 84). 19 April 2015. Grover J. Brown. Verified by Kenneth L. Krysko. Florida Museum of Natural History (UF 175754; photo voucher). Small male (ca. 70 mm SCL) dipnetted from basking snag.

JONES Co.: 13.4 km SW of Ellisville, Mississippi, under River Road bridge over Snows Creek (31.55665°N, 89.32831°W; WGS 84). 31 May 2016. Grover J. Brown. Verified by Kenneth L. Krysko.

UF 179587 (photo voucher). Female (96.3 mm SCL) seen foraging among riprap and subsequently captured by hand.

LAMAR Co.: 6.1 km WNW of Hattiesburg, Mississippi, 65 m upstream of bridge crossing on Campbell Loop over Mixons Creek (31.34640°N, 89.35147°W; WGS 84). 19 May 2016. Grover J. Brown. Verified by Kenneth L. Krysko. UF 177826 (photo voucher). Adult male (100 mm SCL) was caught in a baited trap in the spillway under Interstate 59.

NEWTON Co.: Chunky River, 0.25 river km downstream from old Griffis Foundation Rd bridge in the town of Chunky (32.32080°N, 88.908167°W; WGS 84). 22 May 2016. Grover J. Brown and Peter V. Lindeman. Verified by Kenneth L. Krysko. UF 179454 (photo voucher). Basking juvenile (30 mm SCL) captured with dipnet. Chunky River, 0.52 river km upstream from old Griffis Fountain Rd. bridge in the town of Chunky (32.32080°N, 88.92912°W; WGS 84). 23 May 2016. Peter V. Lindeman. Verified by Kenneth L. Krysko. UF 179461 (photo voucher). Basking adult male (110 mm SCL) captured with basking trap.

Chunky River, 1.36 river km upstream from old Griffis Fountain Rd. bridge in the town of Chunky (32.31978°N, 88.94230°W; WGS 84). 23 May 2016. Peter V. Lindeman. Verified by Kenneth L. Krysko. UF 179455 (photo voucher). Basking female (67 mm SCL) captured by hand.

First county records. Although known from 12 other counties in the state, this species' distribution is not well documented within the Pascagoula River System (Iverson 1977. *Copeia* 1977:502–517; McCoy et al. 1978. *Herpetol. Rev.* 9:109; Newman and Lee 2011. *Herpetol. Rev.* 42:111). *Sternotherus minor peltifer* in South Mississippi seems to be tied to smaller-order stream systems and displaced by its congener, *S. carinatus*, in larger rivers, although in some areas both species occur syntopically (GJB, pers. obs.). The species has not been documented in Forrest, Jones, Lamar, or Newton counties in *Herpetological Review* records from 1967 through December 2016, the Mississippi Museum of Natural Science collection records, nor in museum records on VertNet.

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**TRACHEMYS SCRIPTA (Pond Slider)**. USA: OKLAHOMA: ATOKA Co.: Clear Boggy Creek, Hwy 7 crossing E of Wapanucka (34.36976°N, 96.32089°W; WGS 84). 24 July 2016. Peter V. Lindeman. Verified by C. Lechowicz. Florida Museum of Natural History (UF 179525; photo voucher). Basking specimen photographed in situ with a 36× Nikon CoolPix camera. New county record (Webb 1970. *Reptiles of Oklahoma*. University of Oklahoma Press, Norman, Oklahoma. 370 pp.). McKnight et al. (2015. *Copeia* 103:1043–1047) recently reported unvouchered captures of the species in four lakes in the Clear Boggy watershed in Atoka County and a voucher specimen was previously reported from a locality farther upstream in the Clear Boggy drainage in Pontotoc County (Webb 1970, *op. cit.*).

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## SQUAMATA — LIZARDS

**EUTROPIS MULTIFASCIATA (Many-lined Sun Skink)**. TAIWAN: CHIAYI COUNTY: Min-Hsiung Township (23.54574°N, 120.42065°E; WGS 84). 4 December 2015. Gerrut Norval. Verified by Jean-Jay Mao. Digital image voucher, Lee Kong Chian Natural History Museum, National University of Singapore, (ZRC[IMG] 2.299). Distribution extends through eastern India, through Southeast Asia to southern China and Hainan (Shang and Lin 2001. *Natural Portraits of the Lizards of Taiwan*. Big Trees Publishers, Taipei. 174 pp. [In Chinese]), and introduced into Florida, USA (Meshaka et al. 2004. *The Exotic Amphibians and Reptiles of Florida*. Krieger Publishing Company, Malabar, Florida. 166 pp.) and Taiwan (including offshore islet of Green Island) (Ota et al. 1994. *Zool. Stud.* 33:86–89; Chen et al. 2009. *Nat. Park Bull.* 19[3]:1–22 [In Chinese]). First county record. Nearest documented record ca. 15 km SE in Santzepu, Sheishan District, Chiayi County (Chuang 2015. *The Inventory and Population Monitoring of the Invasive Brown Anole in Chiayi County and Surrounding Areas*. Final report, Chiayi Forestry District Office, Forestry Bureau, Council of Agriculture, Executive Yuan, Chiayi City, 42 pp. [In Chinese]). Numerous individuals observed among vegetation surrounding Goose Lake on campus of National Chiayi University Min-Hsiung Campus, suggesting species locally established.

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**HEMIDACTYLUS PARVIMACULATUS (Sri Lankan Spotted House Gecko)**. USA: LOUISIANA: TANGIPAHOA PARISH: Joyce Wildlife Management Area, 13.5 km S Ponchatoula (30.3211°N, 90.4075°W; WGS 84), 0 m elev. 23 October 2016. James A. Erdmann. Verified by Timothy Borgardt. Southeastern Louisiana University Vertebrate Museum (SLU 6631–6633; tissue SLU-HerpTC 086). New parish record. At 1800 h, 20°C, calm wind, clear skies, and late afternoon light, I found three *H. parvamaculatus* under dry logs and large rocks adjacent to railroad tracks on the southwestern corner of Joyce Wildlife Management Area. Animals were prepared on 24 October 2016, under collector number JAE 2016–14. Specimen measurements: 1) 43.5 mm TL, 22 mm SVL, 0.21 g (sex unknown); 2) 76 mm TL, 35.5 mm SVL, 0.94 g (female); and 3) 97.5 mm TL, 51 mm SVL, 3.30 g (female). Larger female has a regrown tail, and is associated with the tissue sample. The range in sizes (young of year and large adult) suggests that this species has established in the area, and based on habitat is likely using the elevated and dark, rocky terrain as a refuge. These specimens represent the first individuals found in Tangipahoa Parish, and the fourth locality in Louisiana and the United States after being first discovered at the Audubon Zoo in New Orleans, Orleans Parish in 2012 (Heckard et al. 2013. *IRCF Reptiles and Amphibians* 20:192–196), and later in Jefferson Parish (40 km SSE from present locality; Borgardt 2015. *Herpetol. Rev.* 46:217) and St. Tammany Parish (40 km ENE from present locality; Glorioso 2016. *Herpetol. Rev.* 47:81). No *H. turcicus* were found at the locality. Specimens were collected under Louisiana Department of Wildlife and Fisheries Fishing License (#204-5171-564).

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**HEMIDACTYLUS TURCICUS (Mediterranean Gecko)**. USA: TENNESSEE: LOUDON Co.: 2400 Marmot Parkway, Loudon,

Tennessee 37774 (35.7285°N, 84.3561°W; WGS 84). 8 September 2015. Jack Woodrick. Verified by Floyd Scott. David H. Snyder Museum of Zoology, Austin Peay State University (APSU 19623; photo voucher). This specimen (ca. 7.6 cm TL) was found in a warehouse that was formerly operated by the International Muffler Company, which would receive shipments from Texas (J. Woodrick, pers. comm.). Mediterranean Geckos are well documented in eastern and southern Texas ([www.texasinvasives.org](http://www.texasinvasives.org)) and this may be the source of the introduction, though individuals have been observed as this locality previously (J. Woodrick, pers. comm.). Mediterranean Geckos were first documented in Tennessee in 2007 and have since been observed in numerous areas across the state (Nordberg et al. 2013. *J. Tennessee Acad. Sci.* 88:64–66.); however, this appears to be the first report of the species from Loudon County.

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**PLESTIODON FASCIATUS (Common Five-lined Skink)**. USA: PENNSYLVANIA: LYCOMING CO.: Washington Township, 13 km W Allenwood (41.113°W, 77.066°N; WGS 84). Bill Scheif. 24 July 1971. Verified by James E. Cole. Bloomsburg University Natural History Collection (BU H-20). First vouchered county record (Hulse et al. 2001. *Amphibians and Reptiles of Pennsylvania and the Northeast*. Cornell University Press. Ithaca, New York. 419 pp.). Specimens are known from adjacent Clinton and Northumberland counties, and literature records have been reported within adjacent Montour and Union counties, with the nearest record ca. 15 km W in Union County (McCoy 1982. *Amphibians and Reptiles in Pennsylvania: Checklist, Bibliography, and Atlas of Distribution*. Special Publications of the Carnegie Museum of Natural History 6:1–91; Hulse et al. 2001, *op. cit.*). The specimen, an adult female, was collected and deposited in the BU collection, with reported coordinates estimated from locality data included with the specimen. The Pennsylvania Amphibian and Reptile Survey ([www.paherpsurvey.org](http://www.paherpsurvey.org), accessed 5 Nov 2016) lists one recent (August 2015) sighting of *P. fasciatus* in Lycoming County, further confirming the presence of this species within the county. I thank Clay E. Corbin and Thomas S. Klinger for support of curatorial work that led to the recognition of the specimen reported herein.

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**PODARCIS SICULUS (Italian Wall Lizard)**. USA: MASSACHUSETTS: SUFFOLK CO.: Boston (42.344958°N, 71.092469°W; WGS 84). 3 October 2016. Colin M. Donihue. Verified by Gregory J. Watkins-Colwell. Museum of Comparative Zoology, Harvard University (MCZ R-194263, R-194264). New state record (Powell et al. 2016. *Peterson Field Guide to Reptiles and Amphibians of Eastern and Central North America*. Houghton Mifflin Harcourt Publishing Company, New York, New York. 494 pp.). This is a new northern extent for this invasive species previously documented in New York (Gibbs et al. 2007. *The Amphibians and Reptiles of New York State*. Oxford University Press, New York, New York. 504 pp.) and Connecticut (Donihue et al. 2014. *Herpetol. Rev.* 45:661–662). Multiple males, females, and young-of-the-year were seen in and around compost piles in the Fenway Victory Gardens on the same date. Specimen collection authorized under Massachusetts permit number 062.16SCRA.

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**SAUROMALUS HISPIDUS (Spiny Chuckwalla)**. MÉXICO: BAJA CALIFORNIA: MUNICIPALITY OF ENSENADA: Isla Mitlán (29.06594°N, 113.52222°W; WGS 84), 21 m elev. 5 July 2015. María José Monteverde. Verified by Adriana González-Hernández. Colección Nacional de Anfibios y Reptiles, Universidad Nacional Autónoma de México, Mexico City (CNAR-IBH-RF 158 [a–f]; photo vouchers). First island record, 0.36 km W of Isla Coronado, the closest island the species was previously reported from (Grismer 2002. *Amphibians and Reptiles of Baja California, Including its Pacific Islands and the Islands in the Sea of Cortés*. University of California Press, Berkeley, California. 399 pp.). Two adults were found, one in a burrow and the other digging a nest.

Isla Pata (29.01415°N, 113.51377°W; WGS 84), 35 m elev. 8 July 2015. Víctor Hugo Reynoso. Verified by Adriana González-Hernández. CNAR-IBH-RF 75 (a–f); photo vouchers. First island record, 1.64 km N of Isla Ventana, the closest island the species was previously reported from (Grismer 2002, *op. cit.*). Three lizards were seen basking on rocks; tissue sample was obtained from one of those.

Isla Bota (29.01062°N, 113.51399°W; WGS 84), 30 m elev. 8 July 2015. María José Monteverde. Verified by Adriana González-Hernández. CNAR-IBH-RF 101 (a–f), 102 (a–f), 103 (a–f) and 104 (a–f); photo vouchers. First island records, 1.20 km N from Isla Ventana, the closest island the species was previously reported from (Grismer 2002, *op. cit.*). Four adults were found in burrows near cholla cactus (*Cylindropuntia* sp.).

Isla Raza (28.82116°N, 112.98155°W; WGS 84), 2 m elev. 12 April 2014. Adrián Cerdá Ardura. Verified by Adriana González-Hernández. CNAR-IBH-T 35-C10YD1; tissue sample. First island record, 13.66 km NE of Isla San Lorenzo Norte (Ánimas), the closest island the species was previously reported from (Grismer 2002, *op. cit.*); the lizard may have been a remnant of specimens translocated by researchers to the island during the 1980s.

Punta La Gringa (29.03422°N, 113.53519°W; WGS 84), 26 m elev. 10 July 2015. Carmina Martínez González. Verified by Adriana González-Hernández. CNAR-IBH-RF 100 (a–f); photo vouchers. First non-insular record of the species from 3.26 km W of Isla Coronado, the closest island the species was previously reported from (Grismer 2002, *op. cit.*). Two specimens were found basking on rocks; a tissue sample was obtained from one of those.

*Sauromalus hispidus* was reported by Grismer (2002, *op. cit.*) on Isla Flecha (29.00516°N, 113.52287°W; WGS 84) and Isla Granito (29.5646°N, 113.53867°W; WGS 84). Because we were unable to find any iguanids or traces of their presence on these islands (e.g., tracks, dead bodies, scats, or nests), we now consider the species to be extinct locally. With our additions, the species is presently known from 13 islands and one mainland site in the Gulf of California. This project was financed by PAPIIT, UNAM: IN210315.

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## SQUAMATA — SNAKES

**ACRANTOPHIS DUMERILI (Duméril's Madagascan Ground Boa).** USA: FLORIDA: Bay Co.: Youngstown, Campflowers Road, 0.66 km W of US 231 (30.31483°N, 85.470°W; WGS 84). 10 September 2014. Jamie Henderson. Verified by Paul E. Moler. Florida Museum of Natural History (UF 173924). Adult specimen found DOR at 0703 h. Campflowers Road (30.3154°N, 85.46916°W, WGS 84). 7 October 2014. Michael L. Dobbs. Verified by Paul E. Moler. UF 174416 (photo voucher). DOR adult display at a local gas station. First county records.

MIAMI-DADE Co.: 30965 SW 192<sup>nd</sup> Avenue (25.47905°N, 80.50125°W; WGS 84). 23 May 2013. Jeffry M. Holmes. Verified by Paul E. Moler. UF 170273 (photo voucher). Adult found in suburb on residential property bordering agricultural field. Miami, 9340 SW 178<sup>th</sup> Terrace (25.60377°N, 80.34324°W; WGS 84). 16 January 2014. Liz Barraco. Verified by Paul E. Moler. UF 172354 (photo voucher). Adult found in residential neighborhood. First county records.

*Acrantophis dumerili* is indigenous to southern and southwestern Madagascar (Vences and Glaw 2003. Salamandra 39:181–206; Glaw and Vences 2007. A Field Guide to the Reptiles and Amphibians of Madagascar. Vences & Glaw Verlags GbR, Köln, Germany. 495 pp.). Hanslowe et al. (2015. Reptiles & Amphibians 22:90–92) reported *A. dumerili* from Big Cypress National Preserve, Collier County, collected on 25 December 2014, and mentioned four additional individuals from Miami-Dade County reported through the Early Detection and Distribution Mapping System ([www.eddmaps.org](http://www.eddmaps.org)) without providing vouchers. We provide the first vouchers for Miami-Dade and Bay counties, which were likely escaped or released pets. Florida already has three established species of booid snakes (one boa, two pythons), all introduced through the pet trade pathway (Krysko et al. 2011. Zootaxa 3028:1–64; Krysko et al. 2016. Reptiles & Amphibians 23:110–143). Although there is no clear evidence for an established population of *A. dumerili* in Florida at this time, the Bay County individuals in a rural area in the Florida panhandle are a particular concern given that two propagules were found at the same general site less than one month apart, and Florida has the largest number of introduced herpetofauna in the world with nonindigenous species having a one out of three chance of becoming established (Krysko et al. 2016, *op. cit.*). We strongly recommend greater efforts to survey these areas to evaluate the status of this species in Florida. We thank Jake R. Edwards, Jennifer K. Eckles, Kevin M. Enge, Jeffrey L. Fobb, Catherine Kennedy, Michael R. Rochford, Christina M. Romagosa, and Eric Suarez for helping us acquire vouchers and associated data.

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**BOAEDON PERISILVESTRIS (Near-Forest House Snake).** DEMOCRATIC REPUBLIC OF CONGO: MAI NDOMBE PROVINCE: Kutu (2.72725°S, 18.14425°E; WGS 84), 312 m elev. 22 June 2013. Eli Greenbaum, Chifundera Kusamba, Mwenebatu M. Aristote, and Wandegé M. Muninga. Verified by Jean-François Trape. University of Texas at El Paso Biodiversity Collections (UTEP 21497). Individual collected inside a house in the evening. New country record (Trape and Mediannikov 2016. Bull. Soc. Herpetol. Fr. 159:61–111), extending the distribution ca. 365 km

NE of the nearest locality at ORSTOM de Brazzaville, Congo, which is also the type locality for the species. Although Trape and Mediannikov (2016, *op. cit.*: table 1) included the Democratic Republic of Congo in the distribution for the species, the listing is in error (Trape, pers. comm.) and no specific locality record was provided. Specimen collected under approved 2013 export permit from Mr. Bolamba, Provincial Director (Mbandaka) of the Institut Congolais pour la Conservation de la Nature, Democratic Republic of the Congo.

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**CARPPOPHIS AMOENUS (Eastern Worm Snake).** USA: TENNESSEE: SULLIVAN Co.: Cherokee National Forest at the edge of Flat Woods Road (USFS Road 87; 36.4752°N, 82.0934°W; WGS 84). 15 April 2005. M. Kevin Hamed. Verified by A. Floyd Scott. David H. Snyder Museum of Zoology, Austin Peay State University (APSU 19777; photo voucher). Adult found under a Northern Red Oak (*Quercus rubra*) log immediately adjacent to a graveled road. New county record (Scott and Redman 2008. Atlas of Reptiles in Tennessee. <http://www.apsubiology.org/tnreptileatlas/>; 14 Nov 2016). The nearest known locality is 6.3 km south in adjacent Carter County (American Museum of Natural History [AMNH] R-101354).

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**COLUBER CONSTRICTOR (North American Racer).** USA: WISCONSIN: Rock Co.: specific locality information withheld due to the sensitive nature of the site. 11 May 2016. Richard Staffen. Verified by Joshua M. Kapfer. Milwaukee Public Museum (MPM VZP854a–c; photo voucher). Two individuals were observed in close proximity and one was captured and photographed. New county record filling a gap in the known range of this species in Wisconsin (Casper 1996. Geographic Distributions of the Amphibians and Reptiles of Wisconsin. Milwaukee Public Museum, Milwaukee, Wisconsin. 87 pp.). This observation complements a disjunct record, 63 km away to the east, from adjacent Walworth County (Vogt 1981. Natural History of Amphibians and Reptiles of Wisconsin. Milwaukee Public Museum, Milwaukee, Wisconsin. 205 pp.). The species had been observed on a property nearby in previous years. The property where the observations were made is an open, flat, mix of prairie remnant and old fields on sandy soils with invading prairie species (Butterfly Weed, Purple Prairie Clover, Lead Plant) and warm- and cool-season grasses. Associated snakes observed at the site are the Common Gartersnake (*Thamnophis sirtalis*), Plains Gartersnake (*Thamnophis radix*), Eastern Hog-nosed Snake (*Heterodon platirhinos*), and Western Foxsnake (*Pantherophis vulpinus*).

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**CROTALUS ATROX (Western Diamond-backed Rattlesnake).** USA: NEW MEXICO: LOS ALAMOS Co.: private residence on Isleta

Drive, White Rock (35.83°N, 106.199°W; WGS 84), 1940 m elev. 20 June 2010. Tom Wyant. Verified by Charles W. Painter. Museum of Southwestern Biology, University of New Mexico (MSB 74319). First confirmed specimen of this species for Los Alamos County (Degenhardt et al. 1996. *Amphibians and Reptiles of New Mexico*. University of New Mexico Press, Albuquerque, New Mexico. 431 pp.). The snake was killed by dogs at a private residence. The nearest specimen was collected in 2009 in Pajarito Village, Santa Fe County (MSB 75846), ca. 10.5 km to the northeast. Specimen collected under New Mexico Department of Game and Fish permit #3327 issued to CDH.

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**CROTALUS HORRIDUS** (**Timber Rattlesnake**). USA: ALABAMA: WALKER Co.: private property off CR 35, 3.98 road km E of AL Hwy 69 (33.61921°N, 87.31766°W; WGS 84). 16 October 2016. Keith Tidwell. Verified by David Laurencio. Auburn University Museum of Natural History (AUM AHAP-D 1257; photo voucher). New county record (Mount 1975. *The Reptiles and Amphibians of Alabama*. Agricultural Experiment Station, Auburn University, Auburn, Alabama. 347 pp.). This record fills a gap within the Shale Hills section of the Southwestern Appalachians ecoregion. The location lies approximately 25 km to the southeast of an unpublished museum record (Carnegie Museum of Natural History [CM] Herps 71989) within the county and 50 km to the northwest of the nearest published location in southern Jefferson County (Mount 1975, *op. cit.*). A search of unpublished museum specimens was conducted through VertNet. No previously published records were discovered using *Zoological Record*.

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**FARANCIA ABACURA** (**Red-bellied Mudsnake**). USA: ALABAMA: LOWNDES Co.: creek bottom off Lum Road, 4.43 road km S of CR 33 (32.08497°N, 86.61512°W; WGS 84). 17 September 2016. David S. Kelley. Verified by David Laurencio. Auburn University Museum of Natural History (AUM AHAP-D 1255; photo voucher). Specimen found while moving dirt with machinery. New county record (Mount 1975. *The Reptiles and Amphibians of Alabama*. Agricultural Experiment Station, Auburn University, Auburn, Alabama. 347 pp.). The individual was photographed and released unharmed. This record fills a gap within the Flatwoods/Blackland Prairie Margins section of the Southeastern Plains ecoregion. The nearest published location occurs ca. 37 km to the north in Autauga County (Mount 1975, *op. cit.*). Existing records were searched online via VertNet and *Zoological Record*.

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**GEOPHIS LATICINCTUS** (**Mesa Central Earth Snake**). MÉXICO: TABASCO: MUNICIPALITY OF TACOTALPA: Cerro del Madrigal, near Zunu, ca. 57.3 km SSE of Villahermosa, Tabasco (17.48266°N,

92.83773°W; WGS 84), 632 m elev. 3 August 2014. Luis Saúl Reynoso-Mendoza and Marco Antonio Torrez-Pérez. Verified by Luis Canseco-Márquez. Colección de Anfibios y Reptiles de Tabasco, Universidad Juárez Autónoma de Tabasco (CART 00740). First record for Tabasco, extending the known range ca. 48.13 km NW of a locality near Colonia Francisco Madero, ca. 1800 m elev., in the Municipality of Jitotol, Chiapas, México (Wilson and Townsend 2007. *Zootaxa* 1395:1–31). Another individual (CART 00741) was found nearby on 4 August at 590 m elev. Both specimens, a male and female, respectively, were found buried about 50 cm deep within the ground litter in rain forest. Fieldwork was supported by Universidad Juárez Autónoma de Tabasco through the project Programa de Fomento a la Investigación UJAT-2013-IB-30.

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**LAMPROPELTIS MEXICANA** (**San Luis Potosí Kingsnake**). MÉXICO: SAN LUIS POTOSÍ: MUNICIPALITY OF VILLA DE ARRIAGA: 8 km S of Pozuelos (22.01901°N, 101.13203°W; WGS 84), 2415 m elev. 6 October 2016. Levi N. Gray, Brittney A. White, Carlos J. Pavón-Vázquez, and Juan C. Sánchez-García. Verified by Manuel Feria-Ortiz. Herpetological Collection, Museo de Zoología, Facultad de Estudios Superiores Zaragoza, Universidad Nacional Autónoma de México (MZFZ IMG 14–16; photo vouchers). First municipality record (Lemos-Espinal and Dixon 2013. *Amphibians and Reptiles of San Luis Potosí*. Eagle Mountain Publishing, Eagle Mountain, Utah. 300 pp.) located ca. 51 km SW from the closest recorded site at Valle de los Fantasmas, municipality of Zaragoza, 20.0 mi. (32.16 km) E of the city of San Luis Potosí (UTA 35463–35464). The snake was found under a large rock (~1 m across) after a light afternoon rain on a stone-covered hillside with scattered vegetation; the hilltop was covered by a relatively dense, but short-tree oak forest. Fieldwork was conducted under the authority of collecting permit FAUT 0243 issued to Uri O. García-Vázquez by the Secretaría de Medio Ambiente y Recursos Naturales. The snake is being kept alive in MZFZ facilities for research and conservation-related purposes, and will be deposited after its death.

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**LICHANURA TRIVIRGATA** (**Rosy Boa**). MÉXICO: BAJA CALIFORNIA SUR: MUNICIPALITY OF LA PAZ: Isla San José (24.9076°N, 110.5796°W; WGS 84), 84 m elev. 21 May 2016. Halina Do-Linh, Aidan Greenwald, Natasha Grim, and Elliot Schoenig. Verified by L. Lee Grismer. La Sierra University Digital Photo Collection (LSUDPC 10066–10068; photo vouchers). A sub-adult female was

found actively moving across a rock outcrop at the edge of a dry creek bed at 2145 h under a completely full moon. First record for this species on Isla San José in the Gulf of California (Grismer 2002. *Amphibians and Reptiles of Baja California: Including its Pacific Islands and the Islands in the Sea of Cortez*. University of California Press, Berkeley, California. 399 pp.). *Lichanura trivirgata* is known from peninsular Baja Sur and other Gulf of California islands, including Ángel de la Guarda, Cerralvo, Mejía, San Marcos, and Tiburón (Grismer 2002, *op. cit.*), and more recently from Espiritu Santo (Frick et al. 2016. *Herpetol. Rev.* 47:83–84).

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**LIOPELTIS CALAMARIA (Lined Stripe-necked Snake)**. NEPAL: NARAYANI ZONE: CHITWAN DISTRICT: Kabilas VDC-09, Dhodeni (27.78418°N, 84.51605°E, WGS 84), 978 m elev. 17 July 2016. Santosh Bhattarai, Lina Chalise, and Ashish Gurung. Verified by Indraneil Das. Digital image voucher, Lee Kong Chian Natural History Museum, National University of Singapore. (ZRC (IMG) 2.300 a-b). First record for Nepal. Nearest published locality, Gonda, Uttar Pradesh, India, ca. 265 km south (Smith 1943. *The Fauna of British India, Ceylon and Burma, Including the Whole of the Indo-Chinese Sub-Region. Reptilia and Amphibia. Volume III – Serpentes*. Taylor and Francis, London. 483 pp.). Specimen matches description except loreal distinct from nasal.

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**LYCODON FASCIATUS (Banded Wolf Snake)**. INDIA: MIZORAM: Hmuifang Community Reserved Forest, Aizawl District (23.27176°N, 92.45043°E; WGS 84), 1483 m elev. Lalbiakzuala. 18 June 2016. Verified by Abhijit Das. From grass near Tourist Guest House at 1945 h. Departmental Museum of Zoology (MZMU 1298), Mizoram University. Digital image voucher, Lee Kong Chian Natural History Museum, National University of Singapore, ZRC (IMG) 2.294. First record for Mizoram State, species previously recorded from Assam (Sclater 1891. *J. Asiat. Soc. Bengal* 60:230–250), Meghalaya (BNHS 1220), and Nagaland (Ao et al. 2004. *Russian J. Herpetol.* 44:155–162), and extraliminally, from Myanmar, Thailand, Laos, Vietnam, and China (Das 2010. *A Field Guide to the Reptiles of Southeast Asia*. New Holland Publishers [UK] Ltd., London. 376 pp.).

Permission No. A.33011/2/99-CWLW/225 issued by Chief Wildlife Warden, Environment, Forest and Climate Change Department, Govt. of Mizoram, India.

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**LYCODON ZAWI (Zaw's Wolf Snake)**. INDIA: WEST BENGAL: Alipurduar District, Buxa Tiger Reserve, Buxa Duar village (26.75741°N, 89.58116°E and 26.75761°N, 89.58087°E; WGS 84); 652 m and 675 m elev. 9 June 2013. A. Ghosh, N. Mukherjee, and B. Rahut. Verified by Gernot Vogel. Digital image voucher, Lee Kong Chian Natural History Museum, National University of Singapore, ZRC (IMG) 2.290 a–d; ZRC (IMG) 2.291 a–d; ZRC (IMG) 2.291e–g. New record for West Bengal State, extending range ca. 180 km NW of nearest locality in Balpakram Tiger Reserve, Meghalaya State (Slowinski et al. 2001. *Proc. California Acad. Sci.* 52:397–405). One in roadside drainage channel, the other on grassy patch, between 2000–2030 h. Habitat was broadleaf forests in Himalayan foothills.

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**NERODIA SIPEDON (Common Watersnake)**. USA: MAINE: PENOBSCOT CO.: Lunksoos Stream, T4 R7 WELS. **CORRECTION**. Applegate et al. (1995. *Can. Field-Nat.* 109:444–446) published a significant northern range extension for *Nerodia sipedon* based on an individual captured during electrofishing surveys on 13 August 1990. The snake was handled and released, and no photographs were taken. In 2014, I contacted both observers, and it was apparent from their recollections of the snake (e.g., plain yellowish venter) that it was almost certainly a Common Garter-snake (*Thamnophis sirtalis*), the only moderately-sized species expected in the region (Randy Spencer and Fred Trasko, pers. comm.). This record was added to the Maine Amphibian and Reptile Atlas Project database (but now corrected), and mapped in Hunter et al. (1999. *Maine Amphibians and Reptiles*. University of Maine Press, Orono, Maine. 252 pp.). Erroneous reports such as this underscore the need to base published range extensions on observations documented with specimens or photographs. This locality is just outside the boundary of the newly designated Katahdin Woods and Waters National Monument.

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**OPHEODRYS VERNALIS (Smooth Greensnake)**. USA: SOUTH DAKOTA: EDMUNDS CO.: Bowdle Health Care Clinic parking lot; 5<sup>th</sup> St at jct with 8<sup>th</sup> Ave (45.44829°N, 99.66086°W; WGS 84). 8 August 2016. MyRon B. Zimmer. Verified by Travis J. LaDuc. Biodiversity Collections, University of Texas at Austin (TNHC 100884 [DRD 3817]). Adult male (248 mm SVL, 128 mm tail length, 7.26 g) found DOR. This specimen fills part of a large gap in the distribution of this species between the Black Hills and the Glacial Lakes region of the state (Ballinger et al. 2000. *Trans. Nebraska Acad. Sci.* 26:29–46). Numerous *Opheodrys vernalis* have been observed by MBZ near Bowdle, South Dakota since 2001. No *O. vernalis* specimens are known from the surrounding counties (Brown, Faulk, McPherson, Potter, and Walworth), though individuals have been reported from McPherson County, South Dakota (Beauchamp 2007. *Herpetofauna Survey 2007*, Samuel H. Ordway Prairie Preserve, McPherson County, South Dakota. Final Report to The Natural Conservancy. 5 pp.; Brockman et al.

2009. Herpetofauna Survey 2009. Samuel H. Ordway Memorial Prairie Preserve, McPherson County, SD, Final Report to The Nature Conservancy. 13 pp.). The closest known specimen to this individual is from ca. 189.5 km to the east, from near Veblen, Marshall County, South Dakota (Campbell Museum of Natural History, Clemson University [CUSC] 2169). This specimen was collected under a South Dakota Game, Fish and Parks Scientific Collecting Permit (2016\_#13) issued to DRD.

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**OPHIOPHAGUS HANNAH (King Cobra)**. PHILIPPINES: LUZON ISLAND: SORSOGON PROVINCE: Sorsogon City (13.05215°N, 123.92512°E; WGS 84), 620 m elev. 10 May 2012. Socrates D. Letana. Verified by Indraneil Das. Lee Kong Chian Natural History Museum, National University of Singapore (ZRC[IMG] 2.289; photo voucher). Specimen found DOR. First provincial record. Previously known to occur on Luzon in the provinces of Aurora, Benguet, Bulacan, Isabela, Laguna, Pangasinan, Nueva Ecija, and Zambales (Sy et al. 2016. *Herpetol. Rev.* 47:263–264).

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**OPHIOPHAGUS HANNAH (King Cobra)**. PHILIPPINES: BOHOL ISLAND: BOHOL PROVINCE: MUNICIPALITY OF CATIGBIAN: Barangay Poblacion Weste (09.84946°N, 123.99217°E; WGS 84), 219 m elev. 23 April 2015. Jeshela Mae R. Villorejo. Verified by Indraneil Das. Digital image voucher, Lee Kong Chian Natural History Museum, National University of Singapore, (ZRC [IMG] 2.296a–b). Total length ca. 203 cm. Killed by local residents. First record for Bohol Island.

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**OPHIOPHAGUS HANNAH (King Cobra)**. PHILIPPINES: LUZON ISLAND: NUEVA VIZCAYA PROVINCE: MUNICIPALITY OF KASIBU: Barangay Didipio (16.331311°N, 121.464778°E; WGS 84), 686 m elev. 17 September 2016. Bonifacio V. Labatos, Jr. Verified by Indraneil Das. Digital image voucher, Lee Kong Chian Natural History Museum, National University of Singapore ZRC [IMG] 2.292a–b. Specimen found DOR. First provincial record. Previously recorded on Luzon in the provinces of Aurora, Benguet, Bulacan, Isabela, Laguna, Pangasinan, Nueva Ecija, and Zambales (Sy et al. 2016. *Herpetol. Rev.* 47:263–264).

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**PANTHEROPHIS SPILOIDES (Gray Ratsnake)**. USA: ALABAMA: WALKER Co.: private property off CR 35, 3.98 road km E of AL Hwy 69 (33.62465°N, 87.33237°W; WGS 84). 16 October 2016. Keith Tidwell. Verified by David Laurencio. Auburn University Museum of Natural History (AUM AHAP-D 1256; photo voucher). New county record (Mount 1975. *The Reptiles and Amphibians of*

Alabama. Agricultural Experiment Station, Auburn University, Auburn, Alabama. 347 pp.). This record fills a gap within the Shale Hills section of the Southwestern Appalachians ecoregion. This species has been recorded from the following adjacent counties: Blount, Jefferson, Tuscaloosa, and Winston (Mount 1975, *op. cit.*). A search for museum specimens through VertNet yielded one unpublished record (Carnegie Museum of Natural History [CM] Herps 71979). No previously published records were discovered using *Zoological Record*.

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**PITUOPHIS CATENIFER (Gopher Snake)**. USA: TEXAS: LAVACA Co.: Hwy 111, ca. 0.5 km SE of the intersection of Hwy 111 and US 77 (29.19281°N, 96.97822°W; WGS 84). 22 May 2016. Romey L. Swanson. Verified by Travis J. LaDuc. Biodiversity Collections, University of Texas at Austin (TNHC 98985). Adult male (1330 mm SVL, 1510 mm TL, 1115 g) was found DOR. New county record (Dixon 2013. *Amphibians and Reptiles of Texas: with Keys, Taxonomic Synopses, Bibliography, and Distribution Maps*. Texas A&M University Press, College Station, Texas. 447 pp.). This record indicates an eastern range expansion within southcentral Texas. The nearest records are in adjacent counties; Gonzales to the NNW and Victoria to the SW. A photographic voucher is included within the iNaturalist database. This specimen was collected under a Texas Parks and Wildlife Scientific Permit (SPR-0316-095).

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**PLATYCEPS KARELINI (Spotted Desert Racer)**. KAZAKHSTAN: SOUTH KAZAKHSTAN REGION: SOZAK DISTRICT: Betpak-Dala Desert (45.027°N, 68.291°E; WGS 84). 8 June 2016. M. Guillemin. Verified by D. Showler. National Museum of Natural History, Smithsonian Institution, Herpetological Image Collection (USNM-HI 2855; photo voucher). This is the first record from the southern Betpak-Dala Desert. Betpak-Dala is a vast expanse of arid steppe habitat bordered by the Chu River to the south, the Syr Darya River to the west, Lake Balkash to the east, and the temperate grasslands ecotone to the north. Its extent spans approximately 1000 km E–W and 600 km N–S, between the latitudes 45–50°N and longitudes 62–72°E (Kühl et al. 2007. *Proc. R. Soc. Lond. B. Biol.* 274:1293–1299). The species is distributed widely in Uzbekistan, Turkmenistan, Pakistan, and Iran, and is currently mapped as occurring throughout much of western, southwestern, and southeastern Kazakhstan, including the Syr Darya River valley, the Shymkent area, and near the southwestern shore of Lake Balkash (Bannikov 1971. *Amphibians and Reptiles of the USSR*. Mysl Publishers, Moscow. 297 pp.; Sindaco and Jeremcenco 2008. *The Reptiles of the Western Palearctic*, Volume 2. Edizioni Belvedere, Latina. 543 pp.). Our record was made approximately 8 km N of the Chu River, near the southern border of Betpak-Dala, within open, *Artemisia*-dominated grassland habitats underlain by sandy loess soils. This observation consisted of a single dead individual found on a dirt road, where it had recently been crushed by a vehicle. We believe this represents the first record north of the Chu River in South Kazakhstan Region, and hence the first record for the southern Betpak-Dala Desert. The nearest existing records (as indicated by Sindaco and Jeremcenco

2008, *op. cit.*), occur approximately 200 km to the west, 370 km to the east, and 350 km to the southeast. Given that the species is also known to occur at similar or higher latitudes elsewhere in Kazakhstan (e.g., near Lake Balkash and to the northwest near the Aral Sea) and that the region remains poorly explored, further research is required to determine whether *P. karelini* occurs throughout the extent of Betpak-Dala, or only within a few, limited border regions.

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**PROTOBOTHROPS MUCROSQUAMATUS (Brown Spotted Pitviper)**. INDIA: MIZORAM: Tamdil National Wetland (23.44152°N, 92.57090°E; WGS 84), 760 m elev. H. T. Lalremsanga. Verified by Gernot Vogel. 27 September 2015. From footpath at edge of lake at 2130 h. Departmental Museum of Zoology (MZMU 1013), Mizoram University. Digital image voucher, Lee Kong Chian Natural History Museum, National University of Singapore, ZRC (IMG) 2.295. First record for Mizoram State. In India, has been reported from Assam (Prater 1929. *J. Bombay Nat. Hist. Soc.* 33:998) and Arunachal Pradesh (Bhatt 2004. Present Status of Ophidian Fauna and Habitat Ecology of Certain Species of Ophidians in Arunachal Pradesh, India. PhD. Thesis, Gauhati University, Assam, India) and Nagaland (Ao et al. 2004. *Russian J. Herpetol.* 44:155–162). Extralimitally, this species has been reported from Bangladesh, Laos, Myanmar, Vietnam, and South China (Das 2012. *A Naturalist's Guide to the Snakes of South-East Asia* including Malaysia, Singapore, Thailand, Myanmar, Borneo, Sumatra, Java and Bali. John Beaufoy Publishing [UK] Ltd., Oxford. 160 pp.).

Permit No. A.33011/2/99-CWLW/225 was issued by Chief Wildlife Warden, Environment, Forest and Climate Change Department, Govt. of Mizoram, India.

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**PSAMMODYNASTES PULVERULENTUS (Mock Viper)**. NEPAL: PROVINCE-3: CHITWAN DISTRICT: Chitwan National Park, Khagendra Malli Post, Harda Khola, Ratomate (27.482054°N, 84.693347°E; WGS 84), 380 m elev. 16 July 2016. Santosh Bhattarai and Ashish Gurung. Verified by Vivek Sharma. Digital image voucher, Lee Kong Chian Natural History Museum, National University of Singapore (ZRC [IMG] 2.302). First record for Province 3 and Chitwan District, and Chitwan National Park, a World Heritage Site. Nearest published locality is Butwal, Province-5, ca. 124 km W from Ilam, Khotang, and Udayapur; Province-1 (Schleich and Kästle 2002. *Amphibians and Reptiles of Nepal*. A.R.G. Gantner, Kommanditgesellschaft, Ruggell, Germany. 1200 pp.).

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**PSAMMOPHIS LONGIFRONS (Stocky Sand Racer)**. INDIA: KARNATAKA: SHIMOGA DISTRICT: Shikaripur (14.244876°N, 75.512481°E; WGS 84), 671 m elev. 2 December 2016. Suhas Premkumar and Vivek Sharma. Verified by Amit Sayyed. Lee Kong Chian Natural History Museum, National University of Singapore (ZRC[IMG] 2.303a–c). Specimen was photographed dead on road within maize cropland and *Eucalyptus* plantation. New record for Karnataka State and southernmost record for species (Vyas and Patel 2013. *Russian J. Herpetol.* 20:217–222), new locality ca. 406 km from nearest published locality, Satara, Maharashtra State (Sayyed 2016. *J. Threat. Taxa* 8:9637–9561). We thank Ashok Captain and Amit Sayyed for discussion on localities for this species.

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**STORERIA DEKAYI (Dekay's Brownsnake)**. USA: TENNESSEE: LINCOLN CO.: residential property off of McElroy Hollow Rd (35.09442°N, 86.63542°W; WGS 84). 16 October 2016. Matt A. McFerrin. Verified by Floyd Scott. David H. Snyder Museum of Zoology, Austin Peay State University (APSU19760; photo voucher). One adult found near the house. New county record that is 66.2 km W of the nearest vouchered specimen of this species (Scott and Redman 2008. *Atlas of Reptiles in Tennessee*. <http://www.apsubiology.org/tnreptileatlas/>; 16 Oct 2016).

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**THAMNOPHIS CYRTOPSIS (Black-necked Gartersnake)**. USA: ARIZONA: MOHAVE CO.: Aquarius Mountains, East Ash Creek, ca. 60.0 km SSW Seligman (35.05609°N, 113.43766°W; NAD 83), 1341 m elev. 13 April 2015. David Partridge and Katie Harbin. Verified by G. Bradley. Museum of Natural History, University of Arizona (UAZ 57563; photo voucher). McGee Wash, ca. 40.0 km NNE Wikieup (35.02759°N, 113.42195°W; NAD 83), 1253 m elev. 14 September 2016. Matt Chmiel. Verified by A. T. Holycross. Arizona State University Herpetological Collection (ASU HP-00106; photo voucher). Trout Creek, ca. 29.5 km N Wikieup (34.97190°N, 113.59642°W; WGS 84), 821 m elev. 17 June 2015. David Partridge. Verified by A. T. Holycross. ASU HP-00107 (photo voucher). Lookout Wash, ca. 49.0 km WSW Seligman (35.19483°N, 113.39324°W; NAD 83), 1497 m elev. 17 June 2015. Gregg Cummins and Matt Chmiel. Verified by A. T. Holycross. ASU HP-00105 (photo voucher).

These records, the results of native fish surveys in the area, are the first from the Aquarius Mountains and extend the known range of *T. cyrtopsis* into the upper Bill Williams River drainage (Brennan and Holycross 2006. *Amphibians and Reptiles in Arizona*. Arizona Game and Fish Department, Phoenix, Arizona. 150 pp.), and provide important data for a part of the Arizona *T. cyrtopsis* distribution that is among the least understood. The nearest reported, but unvouchered records are from Francis Creek ca. 32 km SSE of the McGee Wash site and ca. 49 km SSE of the Lookout Wash site (Jones 1990. *Southwest. Nat.* 35:115–122). Buus (1983. *Herpetol. Rev.* 14:53–54) reported *T. cyrtopsis* from the upper Bill Williams River in the Hualapai Mountains, ca. 42 km W of the Trout Creek site, but this record is also unvouchered (BLM 8358, part of a collection recently transferred to USNM, specimen cannot be found; S. Gotte, pers. comm.).



East Ash Creek and McGee Wash are tributaries of Ash Creek in the headwaters of Trout Creek, and Lookout Wash is a headwater tributary of Knight Creek. Together, Trout and Knight creeks form the Big Sandy River. All of these systems have perennial, interrupted water and intermittent flow, often for fairly short stream reaches (e.g., in Trout Creek *T. cyrtopsis* were seen only within a 400 m reach); most of these streams are seasonally dry. Surrounding terrestrial habitats are largely Mohave desert scrub and Great Basin conifer woodland, depending on elevation and aspect (Brown 1994. Biotic Communities Southwestern United States and Northwestern Mexico. University of Utah Press, Salt Lake City, Utah. 342 pp.). Riparian communities include perennial reaches dominated by Velvet Ash (*Fraxinus pennsylvanicus*), Cottonwood (*Populus fremontii*) and Goodding Willow (*Salix gooddingii*). Other riparian vertebrates at these sites include Lowland Leopard Frog (*Rana yavapaiensis*) and Speckled Dace (*Rhinichthys osculus*), although non-native Green Sunfish (*Lepomis cyanellus*) also occupy some sites.

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**THAMNOPHIS CYRTOPSIS (Black-necked Gartersnake).** ARIZONA: MOHAVE Co.: Cottonwood Mountains, Wright Canyon, Juniper Springs, ca. 6.0 km ENE Valentine (35.40161°N, 113.59649°W; NAD 83), 1368 m elev. 18 October 2012. Ammon Wilhelm and Rebecca Peck. Verified by Thomas R. Jones. Arizona State University Herpetological Collection (ASU HP-00114; photo voucher). Wright Canyon empties into Truxton Wash, a major tributary of endorheic Red Lake in the Hualapai Valley north of Kingman, Arizona. This is the first record from the Cottonwood Mountains and in a major watershed from which *T. cyrtopsis* was previously unknown (Brennan and Holycross 2006. Amphibians and Reptiles in Arizona. Arizona Game and Fish Department, Phoenix, Arizona. 150 pp.). This record extends the known range ca. 30 km NW of the nearest recent records from the Big Sandy River watershed in the Aquarius Mountains (Partridge et al. 2017. Herpetol. Rev. 48: 131–132) and ca. 46 km NE of a record from the Hualapai Mountains (Buus 1983. Herpetol. Rev. 14:53–54). Additional unvouchered observations of *T. cyrtopsis* in this watershed have been made at Truxton Wash north of Valentine (S. MacVean, Arizona Game and Fish Department, pers. comm.).

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**THAMNOPHIS RUFIPUNCTATUS (Narrow-headed Gartersnake).** USA: ARIZONA: APACHE Co.: Apache-Sitgreaves National Forest, Reservation Creek (33.71517°N, 109.48604°W; NAD 83). 15 May 2016. Rex Bergamini, Kayla Christy, and Michael Morton. Verified by Andrew T. Holycross. Arizona State University Herpetological Collection (ASU HP-00111, HP-00112; photo vouchers). Range extension (Holycross et al. 2006. Surveys for *Thamnophis eques* and *Thamnophis rufipunctatus* in the Gila River Watershed of Arizona and New Mexico. Final report to Arizona Game and Fish Department, Phoenix, Arizona). One adult female (540 mm SVL, 160 VTL, 93 g mass, ASU HP-00111) and one adult male (450 mm SVL, 148 VTL, 53.5 g mass, ASU HP-00112) were captured in Gee minnow traps, both on the edge of the main channel. These specimens represent a new population within the geographic

distribution of *T. rufipunctatus*, and extend the range 3.2 river km N of the closest unvouchered sightings from the Black River in 2007 (Rosen 2007. Scientific Collecting Permit Report, Permit# 570968. Final report to Arizona Game and Fish Department, Phoenix, Arizona), and 2.8 river km W and 3.2 river km N of the closest vouchered sightings from the Black River in 2005 (ASU HP-00031; Holycross et al. 2006, *op. cit.*).

*Thamnophis rufipunctatus* has suffered dramatic population declines and fragmentation throughout its range (Brennan and Holycross 2006. Amphibians and Reptiles in Arizona. Arizona Game and Fish Department, Phoenix, Arizona. 150 pp.; Hibbitts et al. 2009. Southwest. Nat. 54:461–467) and the species is currently federally-listed as Threatened by the U.S. Fish and Wildlife Service (U.S. Fish and Wildlife Service 2014. Fed. Reg. 79:38678–38746). Recent surveys of historical localities in the Black River and Gila River watersheds have produced few to no sightings (Holycross et al. 2006, *op. cit.*), prompting a listing of the Black River population as “Likely not viable” (U.S. Fish and Wildlife Service 2014, *op. cit.*). Additional surveys in these watersheds have also documented apparent local extirpations as a result of catastrophic wildfire (Nowak and Drost 2015. Effects of Wildfires on Threatened Narrow-headed Gartersnakes: 2014 Surveys. Unpubl. interim report to U.S. Fish and Wildlife Service, U.S. Geological Survey Southwest Biological Science Center, Flagstaff, Arizona). With watershed declines in eastern Arizona and western New Mexico, the range extension from a mainstem stream into a remote tributary refugium provides an important distribution record and may indicate a possible mechanism of local persistence for the species in the Black River drainage.

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**VIRGINIA VALERIAE ELEGANS (Western Smooth Earthsnake).** USA. TENNESSEE: HENDERSON Co.: Dogwood Lake (35.69606°N 88.24236°W; WGS 84). 2 June 2016. Austin C. Hulbert and Joshua M. Hall. Verified by A. Floyd Scott. David H. Snyder Museum of Zoology, Austin Peay State University (APSU 19755; photo voucher). Individual was found under leaf litter. New county record (Scott and Redmond 2008. Atlas of Reptiles in Tennessee. <http://www.apsubiology.org/tnreptileatlas/>; 21 Sept 2016). The nearest known voucher specimen is ca. 32 km to the southeast in Perry County (Vertebrate Zoology Collection, University of Tennessee, Knoxville [UT] 6736).

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**XENOPHIDION ACANTHOGNATHUS (Bornean Spine-jawed Snake).** MALAYSIA: SARAWAK: MIRI DIVISION: Lambir Hills National Park (4.115331°N, 114.021338°E; WGS 84). 25 November 2016. N.

Rowntree, P. Rowntree, and J. Griffiths. Verified by Björn Lardner. Lee Kong Chian Natural History Museum, National University of Singapore (ZRC[IMG] 2.305a–c; photo voucher). This species is known previously from Mendolong, Sipitang District, Sabah, East Malaysia (northern Borneo; Field Museum of Natural History [FMNH] 235170), collected in 1987 (Günther and Manthey 1995.

Amphibia-Reptilia 16:229–240). Extends range southwest to Sarawak. Individual found at 2015 h lying vertically on damp, mossy log.

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## Distributional Records of Amphibians and Reptiles from South Dakota, USA

Information on the distributions of amphibians and reptiles in South Dakota has frequently been recognized as deficient (Chiszar et al. 1994; Ballinger et al. 2000; Kiesow 2006). In the past two decades there have been few reports of new county-level distribution records from South Dakota, which is surprising given how little is known about species distributions in the state. Ballinger et al. (2000) estimated that less than 60% of the distributional extent of amphibian and reptile species in the state was known, which is less than other states in the region (70–80%). Given this paucity of information on species distributions in the state, it is critical to document species presence, especially in regions where habitat loss continues to occur at alarming rates (Johnston 2013; Wright and Wimberly 2013).

Here, we report 26 new county records of 14 species of amphibians and reptiles from South Dakota that are the result of fieldwork conducted across the state during 2015 and 2016. Though records are included from across South Dakota, these records are primarily from eastern South Dakota (east of the Missouri River). County records were determined by examining Ballinger et al. (2000), Platt et al. (2005), Davis et al. (2016), published accounts in *Herpetological Review*, and museum holdings. Voucher specimens were deposited at the Biodiversity Collections at the University of Texas at Austin (TNHC) and all identifications were verified by Travis J. LaDuc. Locality information was collected by a handheld GPS (WGS 84), and all nomenclature follows that of Crother (2012). Specimens were collected under South Dakota Game, Fish and Parks Scientific Collecting Permits (2015\_#11, 2016\_#13) issued to DRD and followed approved University of South Dakota IACUC protocols (#16-02-13-16C, #13-04-16-19D). Genetic tissue samples (liver or skeletal muscle) were collected from all individuals and deposited along with the specimen. Many of the closest known specimens to these records are formerly part of the University

of South Dakota Herpetological Collection that is now housed at the University of Nebraska State Museum (UNSM).

### CAUDATA — SALAMANDERS

**AMBYSTOMA MAVORTIUM** (*Western Tiger Salamander*). McCook Co.: Healy Slough Game Production Area (43.64835°N, 97.20726°W). 14 July 2015. Jillian K. Farkas, Brianna L. Henry, and Elizabeth A. Berg. TNHC 100548 (DRD 2108). Larval individual (85 mm SVL, 66 mm tail length, 20.31 g) collected alive in minnow trap in wetland. This specimen represents a new county record and fills part of a gap in the distribution of this species in southeastern South Dakota (Ballinger et al. 2000). This species is expected to occur throughout most of South Dakota (Fischer et al. 1999; Kiesow 2006) and has been reported from McCook County (Backlund 2005), but no vouchered specimens exist. *Ambystoma mavortium* is known from adjacent Hutchinson, Lake, and Minnehaha counties, South Dakota (Ballinger et al. 2000) and the nearest known population is from ca. 23.8 km to the northeast from Buffalo Lake, Minnehaha County, South Dakota (UNSM 22673–22675, 22679, 22681, 22685–22705). We recognize this individual as *A. mavortium* but note that little information is known about the boundary between *A. mavortium* and *A. tigrinum* in South Dakota.

### ANURA — FROGS

**ANAXYRUS AMERICANUS** (*American Toad*). Hamlin Co.: Boder Waterfowl Production Area (44.57229°N, 97.02486°W). 22 May 2016. Drew R. Davis. TNHC 100550–100552 (DRD 2787–2789). Three adult males (TNHC 100550: 68 mm SVL, 29.86 g; TNHC 100551: 63 mm SVL, 27.30 g; TNHC 100552: 60 mm SVL, 21.44 g) collected while calling along edge of a small wetland. These specimens represent a new county record and fill part of a gap in the distribution of this species in eastern South Dakota (Ballinger et al. 2000). This species has been previously reported from Hamlin County (Fischer et al. 1999; Naugle et al. 2005), but no vouchered specimens exist. *Anaxyrus americanus* is known from adjacent Brookings and Deuel counties, South Dakota (Ballinger et al. 2000; Davis et al. 2016) and the nearest known population is from ca. 14.3 km to the south from Oakwood Lakes, Brookings County, South Dakota (UNSM 17552–17565, 17568–17574).

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McCook Co.: Lake Vermillion Game Production Area (43.64147°N, 97.16771°W). 13 May 2015. Drew R. Davis, Jessi R. Vlcek, and Kalie M. Leonard. TNHC 100549 (DRD 1864). Adult male (80 mm SVL, 50.14 g) collected along shore of a small seasonal wetland. This specimen represents a new county record and extends the western edge of the distribution of this species in the state (Ballinger et al. 2000). This species has been previously reported from McCook County (Fischer et al. 1999), but no vouchered specimens exist. *Anaxyrus americanus* is known from adjacent Lake, Minnehaha, and Turner counties, South Dakota (Ballinger et al. 2000) and the nearest known population is from ca. 16.1 km to the northeast from southwest of Colton, Minnehaha County, South Dakota (Biodiversity Institute, University of Kansas [KU] 288747).

**HYLA CHRYSOSCELIS (Cope's Gray Treefrog).** YANKTON CO.: USGS Yankton Field Research Station (42.87010°N, 97.47653°W). 5 August 2016. Catherine C. Beall. TNHC 100554 (DRD 3680). Juvenile individual (22 mm SVL, 0.56 g) collected inside research station facility. This specimen represents a new county record and fills the remaining gap in the distribution of this species in southeastern South Dakota (Ballinger et al. 2000). This species is expected to occur in Yankton County (Fischer et al. 1999; Kiesow 2006), but no vouchered specimens exist. *Hyla chrysoseleis* is known from adjacent Bon Homme and Clay counties, South Dakota (Ballinger et al. 2000) and Cedar and Knox counties, Nebraska (Ballinger et al. 2010; Fogell 2010; Davis et al. 2014). The nearest known population to this individual is from ca. 34.4 km to the west from Springfield, Bon Homme County, South Dakota (UNSM 22501).

**PSEUDACRIS MACULATA (Boreal Chorus Frog).** TURNER CO.: temporary wetland in agricultural field N of 294<sup>th</sup> Ln, 0.4 rd km E jct 458<sup>th</sup> Ave (43.13115°N, 97.11704°W). 11 June 2015. Drew R. Davis. TNHC 97888–97890 (DRD 1835–1837). Three adult males (TNHC 97888: 22 mm SVL, 0.76 g; TNHC 97889: 22 mm SVL, 0.65 g; TNHC 97890: 23 mm SVL, 0.82 g) collected at 0130 h while calling. These specimens represent a new county record and fill part of a gap in the distribution of this species in southeastern South Dakota (Ballinger et al. 2000). This species has been previously reported from Turner County (Fischer et al. 1999; Backlund 2005; Naugle et al. 2005), but no vouchered specimens exist. *Pseudacris maculata* is known from adjacent Clay, Lincoln, and Minnehaha counties, South Dakota (Ballinger et al. 2000) and the nearest known population is from ca. 27.9 km to the southeast from north of Vermillion, Clay County, South Dakota (UNSM 20455).

**RANA BLAIRI (Plains Leopard Frog).** LINCOLN CO.: Oak Ridge Game Production Area, along west shore of Big Sioux River (43.17006°N, 96.46946°W). 29 July 2016. Drew R. Davis. TNHC 100570 (DRD 2966). Juvenile individual (44 mm SVL, 4.97 g) collected along large cobble; dozens of additional juveniles observed but not collected at this locality. This specimen represents a new county record and extends the northern edge of the distribution of this species in the state (Ballinger et al. 2000). This species is expected to occur in Lincoln County (Kiesow 2006), but no vouchered specimens exist. *Rana blairi* is known from adjacent Clay County, South Dakota (Ballinger et al. 2000) and the nearest known population is from ca. 32.1 km to the south from north of Akron, Union County, South Dakota (UNSM 20743).

**RANA CATESBEIANA (American Bullfrog).** LINCOLN CO.: dammed pond S of Lake Alvin Recreation Area southeast entrance

(43.43823°N, 96.61047°W). 10 May 2016. Drew R. Davis and Jillian K. Farkas. TNHC 100544, 100545 (DRD 2744, 2745). Sub-adult (TNHC 100544: 90 mm SVL, 67.03 g) and adult (TNHC 100545: 116 mm SVL, 161.16 g) females collected along shoreline. These specimens represent a new county record and fill part of a gap in the distribution of this species in southeastern South Dakota (Ballinger et al. 2000). This species has been previously reported from Lincoln County (Backlund 2005), but no vouchered specimens exist. *Rana catesbeiana* is known from adjacent Clay, Minnehaha, and Union counties, South Dakota (Davis et al. 2016; see below) and Lyon and Sioux counties, Iowa (LeClere 2013). The nearest known population to these individuals is from ca. 21.4 km to the northwest from Family Park, Sioux Falls, Minnehaha County, South Dakota (TNHC 100547; see below).

MINNEHAHA CO.: Family Park (Ellis St at jct with Sands St), Sioux Falls (43.54906°N, 96.82757°W). 29 July 2016. Drew R. Davis. TNHC 100547 (DRD 2977). Adult female (106 mm SVL, 99.05 g) collected along north shoreline of lake. This specimen represents a new county record and extends the northern edge of the distribution of this species in the state (Ballinger et al. 2000). This species is expected to occur in Minnehaha County (Kiesow 2006), but no vouchered specimens exist. *Rana catesbeiana* is known from adjacent Lincoln County, South Dakota (see above) and Sioux County, Iowa (LeClere 2013). The nearest known population to this individual is from ca. 21.4 km to the southeast from near Lake Alvin, Lincoln County, South Dakota (TNHC 100544, 100545; see above).

UNION CO.: shallow pool along vegetated sandbar along Missouri River, ca. 25.2 river km downstream of Vermillion–Newcastle Bridge (42.66456°N, 96.70411°W). 4 July 2015. Drew R. Davis. TNHC 100537 (DRD 2081). Single tadpole collected alive at 1245 h. This specimen represents a new county record and fills part of a gap in the distribution of this species in southeastern South Dakota (Ballinger et al. 2000). This species has been previously reported from Union County (Naugle et al. 2005), but no vouchered specimens exist. *Rana catesbeiana* is known from adjacent Clay and Lincoln counties, South Dakota (Davis et al. 2016; see above), Sioux and Plymouth counties, Iowa (LeClere 2013), and Dakota and Dixon counties, Nebraska (Ballinger et al. 2010; Fogell 2010; Hubbs 2016). The nearest known population to this individual is from ca. 24.3 km to the northwest from North Alabama Bend, Clay County, South Dakota (TNHC 93499; Davis et al. 2016).

YANKTON CO.: Lewis and Clark Recreation Area, Gavins Point Section, wetland southwest of boat launch (42.85815°N, 97.55092°W). 30 June 2016. Drew R. Davis and Jillian K. Farkas. TNHC 100546 (DRD 2866). Adult male (127 mm SVL, 179.4 g) collected in aquatic vegetation while calling. Numerous other males were heard calling but not collected. This species has been previously reported from Yankton County (Fischer et al. 1999; Backlund 2005; Naugle et al. 2005), but no vouchered specimens exist. While listed by Ballinger et al. (2000), a thorough examination of museum holdings did not yield a specimen from Yankton County. This specimen represents a new county record and fills a gap in the distribution of this species in southeastern South Dakota (Ballinger et al. 2000). *Rana catesbeiana* is known from adjacent Bon Homme and Clay counties, South Dakota (Ballinger et al. 2000; Davis et al. 2016) and Cedar and Knox counties, Nebraska (Ballinger et al. 2010; Fogell 2010; Davis et al. 2014). The nearest known population to this individual is from ca. 7.9 km to the west from the north shore of Lewis and Clark Lake (UNSM 21800).

## TESTUDINES — TURTLES

**APALONE MUTICA (Smooth Softshell).** UNION CO.: Bolton Game Production Area, along north shore of Missouri River (42.67009°N, 96.79164°W). 1 September 2016. Drew R. Davis. TNHC 100593 (DRD 3703). Hatchling (37 mm carapace length, 28 mm plastron length, 5.15 g) collected in shallow water off the shore of a sandbar. This specimen represents a new county record and fills the remaining gap in the known distribution of this species in southeastern South Dakota (Ballinger et al. 2000). This species has been previously reported from Union County (Bandas and Higgins 2004; Backlund 2005), but no vouchered specimens exist. *Apalone mutica* is known from adjacent Clay County, South Dakota (Ballinger et al. 2000), Woodbury County, Iowa (LeClere 2013), and Dixon County, Nebraska (Ballinger et al. 2010; Fogell 2010). The nearest known population to this individual is from ca. 10.7 km to the northwest from the mouth of the Vermillion River, Clay County, South Dakota (UNSM 18004–18008, 18010–18012, 18015, 18470).

**APALONE SPINIFERA (Spiny Softshell).** LINCOLN CO.: Big Sioux River, public water access south of Canton (43.29496°N, 96.58968°W). 29 July 2016. Drew R. Davis. TNHC 100610 (DRD 2975). Adult female (350 mm carapace length, 245 mm plastron length) caught on fishing line. This specimen represents a new county record and fills part of a gap in the known distribution of this species in southeastern South Dakota (Ballinger et al. 2000). This species has been previously reported from Lincoln County (Backlund 2005), but no vouchered specimens exist. *Apalone spinifera* is known from adjacent Clay and Minnehaha counties, South Dakota (Ballinger et al. 2000) and Lyon and Sioux counties, Iowa (LeClere 2013). The nearest known population to this individual is from ca. 47.9 km to the north from Garretson City Park, Split Rock Creek, Minnehaha County, South Dakota (Natural History Museum of Los Angeles County [LACM] 105356).

**CHELYDRA SERPENTINA (Snapping Turtle).** LAKE CO.: SD Hwy 19, immediately S of jct with 235<sup>th</sup> St (43.97848°N, 97.07795°W). 17 May 2016. Drew R. Davis, Kalie M. Leonard, and Frank T. Turner. TNHC 100897 (DRD 2854). Sub-adult collected DOR. This specimen represents a new county record and fills part of the poorly documented distribution of this species in eastern South Dakota (Ballinger et al. 2000). This species has been previously reported from Lake County (Bandas and Higgins 2004), but no vouchered specimens exist. *Chelydra serpentina* is known from adjacent Brookings, McCook, Minnehaha, and Moody counties, South Dakota (Davis et al. 2016; see below) and the nearest known population is from ca. 33.5 km to the south from Lost Lake WPA, Minnehaha County, South Dakota (TNHC 93513; Davis et al. 2016).

McCook Co.: Lake Vermillion Game Production Area (43.64147°N, 97.16771°W). 15 July 2015. Drew R. Davis, Rachel E. Johannsen, and Kalie M. Leonard. TNHC 97924 (DRD 2141). Adult male (326 mm carapace length, 245 mm plastron length) collected within a shallow semi-permanent wetland. This specimen represents a new county record and fills part of the poorly documented distribution of this species in eastern South Dakota (Ballinger et al. 2000). This species has been previously reported from McCook County (Bandas and Higgins 2004), but no vouchered specimens exist. *Chelydra serpentina* is known from adjacent Lake and Minnehaha counties, South Dakota

(Davis et al. 2016; see above) and the nearest known population is from ca. 9.7 km to the east from Lost Lake WPA, Minnehaha County, South Dakota (TNHC 93513; Davis et al. 2016).

OGLALA LAKOTA CO.: Kyle Reservoir (Kyle Dam Rd, ca. 1.2 rd km N jct BIA Hwy 2), road to dam outflow (43.43347°N, 102.17865°W). 1 June 2015. Drew R. Davis. TNHC 100896 (DRD 1549). Sub-adult male collected DOR. This specimen represents a new county record and fills part of the poorly documented distribution of this species in eastern South Dakota (Ballinger et al. 2000). This species has been previously reported from Oglala Lakota County (Bandas and Higgins 2004; Backlund 2005), but no vouchered specimens exist. *Chelydra serpentina* is known from Bennett, Fall River, and Jackson counties, South Dakota (Ballinger et al. 2000; Platt et al. 2005) and Sheridan County, Nebraska (Ballinger et al. 2010; Fogell 2010). The nearest known population to this individual is from ca. 60.8 km to the southeast from Lacreek National Wildlife Refuge, Bennett County, South Dakota (Campbell Museum of Natural History, Clemson University [CUSC] 2310).

**CHRYSEMYS PICTA (Painted Turtle).** MARSHALL CO.: Mud Lake along Marshall Co Rd 10, ca. 2.5 rd km N jct Sica Hollow Rd (45.73368°N, 97.25880°W). 21 August 2016. Drew R. Davis and Jillian K. Farkas. TNHC 100613 (DRD 3691). Sub-adult male (101 mm carapace length, 90 mm plastron length, 121.55 g) collected alive in box trap. This specimen represents a new county record and fills a gap in the known distribution of this species in northeastern South Dakota (Ballinger et al. 2000). This species has been previously reported from Marshall County (Bandas and Higgins 2004), but no vouchered specimens exist. *Chrysemys picta* is known from adjacent Day and Roberts counties, South Dakota (Ballinger et al. 2000) and Sargent County, North Dakota (LeClere et al. 2009; Johnson 2015). The nearest known population to this individual is from ca. 25.7 km to the south from Pickrel Lake, Day County, South Dakota (UNSM 18313).

McCook Co.: Healy Slough Game Production Area (43.64998°N, 97.20840°W). 11 May 2015. Drew R. Davis, Jessi R. Vlcek, and Kalie M. Leonard. TNHC 100886–100893 (DRD 1851). Eight hatchlings found dead near an excavated nest with no visible signs of predation. This specimen represents a new county record and fills a gap in the known distribution of this species in southeastern South Dakota (Ballinger et al. 2000). This species has been previously reported from McCook County (Bandas and Higgins 2004), but no vouchered specimens exist. *Chrysemys picta* is known from adjacent Hanson, Hutchinson, Lake, Minnehaha, and Turner counties, South Dakota (Ballinger et al. 2000; Davis et al. 2016) and the nearest known population is from ca. 40.6 km to the east from Sioux Falls, Minnehaha County, South Dakota (UNSM 18265).

MOODY CO.: 227<sup>th</sup> Ave, ~0.1 rd km E jct 468<sup>th</sup> Ave (44.09479°N, 96.84688°W). 14 July 2016. Drew R. Davis, Rachel E. Johannsen, and Kalie M. Leonard. TNHC 100611 (DRD 2935). Adult female (208 mm carapace length, 196 mm plastron length) collected crossing road. This specimen represents a new county record and fills the remaining gap in the distribution of this species along the eastern border of South Dakota (Ballinger et al. 2000). This species has been previously reported from Moody County (Bandas and Higgins 2004), but no vouchered specimens exist. *Chrysemys picta* is known from adjacent Brookings, Lake, and Minnehaha counties, South Dakota (Ballinger et al. 2000) and Pipestone County, Minnesota (Moriarty and Hall 2014). The nearest known population to this individual is from ca. 19.8 km

to the northwest from southwest of Volga, Brookings County, South Dakota (UNSM 18161).

LAWRENCE CO.: Reausaw Lake (Nemo Rd, ~7.9 rd km E jct US Highway 385), E shore along dam (44.25232°N, 103.61465°W). 27 June 2015. Drew R. Davis. TNHC 97923 (DRD 2063). Adult female (159 mm carapace length, 140 mm plastron length, 413.85 g) collected at 2245 h while foraging among emergent vegetation. This specimen represents a new county record and fills the remaining gap in the distribution of this species along the western border of South Dakota (Ballinger et al. 2000). This species has been previously reported from Lawrence County (Bandas and Higgins 2004; Backlund 2005), but no vouchered specimens exist. *Chrysemys picta* is known from adjacent Pennington County, South Dakota (Ballinger et al. 2000) and has been reported from Crook and Weston counties, Wyoming (Lewis 2011). The nearest known population to this individual is from ca. 51.2 km to the south from Custer State Park, Custer County, South Dakota (Sternberg Museum of Natural History, Fort Hayes State University [FHSM] 8622).

#### SQUAMATA — LIZARDS

**PLESTIODON SEPTENTRIONALIS (Prairie Skink).** LINCOLN CO.: Rolling Game Production Area (43.13568°N, 96.45255°W). 29 July 2016. Drew R. Davis. TNHC 100585 (DRD 2964). Juvenile (39 mm SVL, 53 mm tail length, 1.1 g) found under erosion control material along the shore of a quarry pond. This specimen represents a new county record and fills a gap in the distribution of this species in southeastern South Dakota (Ballinger et al. 2000). This species has been previously reported from Lincoln County (Backlund 2005), but no vouchered specimens exist. *Plestiodon septentrionalis* is known from adjacent Clay, Turner, and Union counties, South Dakota (Ballinger et al. 2000) and Lyon and Sioux counties, South Dakota (LeClere 2013). The nearest known population to this individual is from ca. 34.5 km to the southwest from near Union Grove State Park, Union County, South Dakota (Louisiana Museum of Natural History, Louisiana State University [LSUMZ] 87769).

McCook Co.: Healy Slough Game Production Area (43.64939°N, 97.20811°W). 23 May 2016. Drew R. Davis. TNHC 100584 (DRD 2795). Sub-adult female (46 mm SVL, 36 mm tail length, 1.89 g) collected under cover board. This specimen represents a new county record and fills a gap in the distribution of this species in southeastern South Dakota (Ballinger et al. 2000). This species has been previously reported from McCook County (Backlund 2005), but no vouchered specimens exist. *Plestiodon septentrionalis* is known from adjacent Hanson, Hutchinson, and Turner counties, South Dakota (Ballinger et al. 2000) and the nearest known population is from ca. 45.7 km to the southwest from north of Menno, Hutchinson County, South Dakota (UNSM 16589).

#### SQUAMATA — SNAKES

**DIADOPHIS PUNCTATUS (Ring-necked Snake).** YANKTON CO.: Lewis and Clark Recreation Area, Gavins Point Section, Gavins Point Nature Trail (42.85891°N, 97.55265°W). 29 May 2016. Drew R. Davis and Jillian K. Farkas. TNHC 100555 (DRD 2797). Juvenile female (130 mm SVL, 23 mm tail length, 1.29 g) collected in damp organic matter under a small log. This specimen represents a new county record and fills a gap in the distribution of this species in southeastern South Dakota (Ballinger et al. 2000). This species

has been previously reported from Yankton County (Backlund 2005), but no vouchered specimens exist. *Diadophis punctatus* is known from adjacent Bon Homme and Clay counties, South Dakota (Ballinger et al. 2000) and Knox County, Nebraska (Ballinger et al. 2010; Fogell 2010). The nearest known population to this individual is from ca. 28.2 km to the west from near Springfield, Bon Homme County, South Dakota (UNSM 16394).

**THAMNOPHIS RADIX (Plains Gartersnake).** DOUGLAS CO.: US Hwy 18, ca. 0.6 rd km W jct 404<sup>th</sup> Ave (43.23978°N, 98.11761°W). 21 October 2016. Drew R. Davis. TNHC 100614 (DRD 3806). Adult male (485 mm SVL, 93 mm tail length, 48.3 g) collected DOR at 1804 h. This specimen represents a new county record and fills a gap in the distribution of this species in southeastern South Dakota (Ballinger et al. 2000). This species is expected to occur throughout South Dakota (Thompson and Backlund 1998; Kiesow 2006), but no vouchered specimens exist from Douglas County. *Thamnophis radix* is known from adjacent Aurora, Charles Mix, Davison, and Hutchinson counties, South Dakota (Ballinger et al. 2000; Davis et al. 2016) and the nearest known population is from ca. 24.5 km to the west from Lake Andes, Charles Mix County, South Dakota (UNSM 16239).

TURNER CO.: private residence at 531 Lincoln St, Centerville (43.11799°N, 96.95626°W). 4 May 2016. Drew R. Davis and Kristopher A. Pitcher. TNHC 100541–100543 (DRD 2727–2729). Three adult males (TNHC 100541: 407 mm SVL, 130 mm tail length, 29.58 g; TNHC 100542: 460 mm SVL, 157 mm tail length, 47.56 g; TNHC 100543: 528 mm SVL, 174 mm tail length, 58.82 g) collected under wooden deck. These specimens represent a new county record and fill a gap in the distribution of this species in southeastern South Dakota (Ballinger et al. 2000). This species is expected to occur throughout South Dakota (Thompson and Backlund 1998; Kiesow 2006), but no vouchered specimens exist from Turner County. *Thamnophis radix* is known from adjacent Clay, Hutchinson, Lincoln, McCook, Minnehaha, and Yankton counties, South Dakota (Ballinger et al. 2000; Davis et al. 2016) and the nearest known population is from ca. 12.1 km to the south from north of Vermillion, Clay County, South Dakota (UNSM 16273, 16274).

**THAMNOPHIS SIRTALIS (Common Gartersnake).** CHARLES MIX CO.: SD Highway 50, ca. 0.7 rd km S jct 287<sup>th</sup> St (43.22080°N, 98.70717°W). 20 October 2015. Drew R. Davis. TNHC 97879 (DRD 2362). Sub-adult female (455 mm SVL, 99 mm tail length, 27.7 g) collected DOR at 1610 h. SD Highway 50, ca. 0.7 rd km S jct 379<sup>th</sup> Ave (43.16995°N, 98.59515°W). 20 October 2015. Drew R. Davis. TNHC 97880 (DRD 2363). Adult female (450 mm SVL, 133 mm tail length, 40.17 g) collected DOR at 1623 h. These specimens represent a new county record and fill part of a gap in the distribution of this species in southeastern South Dakota (Ballinger et al. 2000). This species has been previously reported from Charles Mix County (Backlund 2005), but no vouchered specimens exist. *Thamnophis sirtalis* is known from adjacent Bon Homme, Brule, and Gregory counties, South Dakota (Ballinger et al. 2000) and Boyd and Knox counties, Nebraska (Ballinger et al. 2010; Fogell 2010; Davis 2016). The nearest known population to these individuals is from ca. 25.1 km to the southwest from near Bonesteel, Gregory County, South Dakota (UNSM 16203).

McCook Co.: 451<sup>st</sup> Ave, ca. 0.3 rd km S jct 257<sup>th</sup> St (43.65657°N, 97.18882°W). 11 September 2015. Jillian K. Farkas and Brianna L. Henry. TNHC 100560 (DRD 2296). Adult male (478 mm SVL, 124 mm tail length, 41.28 g) collected DOR at 1206 h. This

specimen represents a new county record and fills part of a gap in the distribution of this species in southeastern South Dakota (Ballinger et al. 2000). This species is expected to occur throughout South Dakota (Thompson and Backlund 1998; Kiesow 2006), but no vouchered specimens exist from McCook County. *Thamnophis sirtalis* is known from adjacent Hanson and Minnehaha counties, South Dakota (Ballinger et al. 2000) and the nearest known population is from ca. 47.3 km to the west from near Lake Hanson, Hanson County, South Dakota (UNSM 16253).

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# One Hundred and Ninety-four New County Records for Amphibians and Reptiles in Alabama, USA

There have been a number of publications in recent years to supplement Mount's (1975) field guide to the reptiles and amphibians of Alabama (Graham et al. 2009; Folt et al. 2015; Guyer et al. 2015). However, a review of mapped records accumulated from various published sources based on vouchered specimens reveals numerous gaps in county distributions remain, even for the most common species. This contribution augments those previous efforts to more accurately display reptile and amphibian distributions within Alabama.

Presented are 194 county records representing 56 species. Records were collected primarily by weekly road cruise surveys regardless of weather conditions. Supplementing these are older records collected by the Alabama Department of Conservation Heritage Section staff for which photo vouchers were taken. Additionally, photographs submitted by email and other outlets are included with the observer's permission. Specimens and digital vouchers were verified by David Laurencio and deposited at the Auburn University Museum of Natural History (AUM) and the associated Alabama Herp Atlas Project (AHAP).

*Herpetological Review* and *Zoological Record* were searched for published records. Existing unpublished museum vouchers were checked via VertNet, and in doing so it was discovered that several of our records were preceded by collections held at various institutions. We have decided to include these records based on personal experience with the questionable persistence of online records which are subject to an institution's participation and the website's continued existence. In addition, a new series of reptile and amphibian books updating Mount's (1975) guide are currently being released (Guyer et al. 2015). Therein, dot maps illustrate species occurrences within the state. The maps were populated using both vouchered and unvouchered records with no differentiation. Any overlap herein represents vouchered documentation of what is assumed to be an unvouchered observation.

## CAUDATA — SALAMANDERS

**AMBYSTOMA MACULATUM (Spotted Salamander).** BLOUNT CO.: CR 9, 1.35 rd km E of US Hwy 31 (33.97818°N, 86.74646°W; WGS 84). 2 December 2015. B. Holt. AUM AHAP-D 1158. Three individuals found DOR.

LOWNDES CO.: Lowndes Wildlife Management Area (32.33253°N, 86.59119°W; WGS 84). 15 January 2016. B. Holt. AUM AHAP-D 1169. Individual found under log.

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PERRY CO.: CR 23, 0.54 rd km S of Walter Boyles Road (32.74099°N, 87.41726°W; WGS 84). 21 January 2016. B. Holt. AUM AHAP-D 1171. Individual found AOR. Perry County is represented on VertNet.

**AMBYSTOMA OPACUM (Marbled Salamander).** PERRY CO.: Perry Lake Park/Barton's Beach property (32.69770°N, 87.25249°W; WGS 84). 21 January 2016. B. Holt. AUM AHAP-D 1170. Individual found under log. Perry County is represented on VertNet.

SUMTER CO.: CR 85, 5.45 rd km N of AL Hwy 116 (32.85376°N, 88.20435°W; WGS 84). 21 March 2015. B. Holt and E. Lawrence. AUM AHAP-D 962. Individual found AOR. Mount (1975) included Sumter County based on a reported observation believed to be valid.

**AMBYSTOMA TALPOIDEUM (Mole Salamander).** MONROE CO.: CR 1, 0.44 rd km north of AL Hwy 59 (31.30915°N, 87.70038°W; WGS 84). 20 May 2015. B. Holt. AUM AHAP-D 1025. Individual found DOR.

**AMBYSTOMA TEXANUM (Small-mouthed Salamander).** LIMESTONE CO.: near Mooresville (location information withheld and on file with the Alabama Department of Conservation and Natural Resources). 29 April 2015. B. Holt. AUM AHAP-D 995. This is one of two sites in the county first discovered by Scott Gravette in 2004.

**AMBYSTOMA TIGRINUM (Eastern Tiger Salamander).** LAUDERDALE CO.: private residence off CR 47 ca. 0.66 rd km N of CR 320 (34.88581°N, 87.61004°W; WGS 84). 21 March 2003. A. Peters and D. Peters. AUM AHAP-D 1041. Individual found alive in swimming pool.

**DESMOGNATHUS CONANTI (Spotted Dusky Salamander).** LIMESTONE CO.: Wheeler National Wildlife Refuge, off Refuge Road, 1.32 rd km E of CR 129 (34.56401°N, 86.83165°W; WGS 84). 29 April 2015. B. Holt. AUM AHAP-D 998. Limestone County is represented on VertNet.

**EURYCEA GUTTOLINEATA (Three-lined Salamander).** BULLOCK CO.: CR 8, 1.65 rd km W of intersection with AL Hwy 239 (31.94205°N, 85.63837°W; WGS 84). 17 April 2015. B. Holt. AUM AHAP-D 992. Individual found AOR. Bullock County is represented on VertNet.

**NOTOPHTHALMUS VIRIDESCENS (Eastern Newt).** CLARKE CO.: CR 39, 2.78 rd km north of US Hwy 82 (31.60607°N, 87.59481°W; WGS 84). 27 October 2015. B. Holt. AUM 42760. Approximately eight individuals observed along a 100-m stretch of road. Clarke County is represented on VertNet.

**PLETHODON GLUTINOSUS (Northern Slimy Salamander).** BLOUNT CO.: woods at entrance to Rickwood Caverns State Park (33.87673°N, 86.86752°W; WGS 84). 2 December 2015. B. Holt. AUM AHAP-D 1162. Blount County is represented on VertNet and in the AUM collection.

LIMESTONE Co.: Wheeler National Wildlife Refuge, off Refuge Road, 0.34 rd km E of CR 129 (34.56497°N, 86.84202°W; WGS 84). 29 April 2015. B. Holt. AUM AHAP-D 996. Although Lannoo (2005) lists both *P. glutinosus* and *P. mississippi* for Limestone County, this individual is assumed to represent *P. glutinosus* based on a more eastern location within the county and moderate as opposed to abundant lateral spotting mentioned by Highton (1989). Either way this represents a county record for the *P. glutinosus* complex.

**PLETHODON MISSISSIPPI (Mississippi Slimy Salamander)**. HALE Co.: Lock 7 Road, 0.40 rd km N of CR 38 (32.78152°N, 87.82159°W; WGS 84). 3 June 2015. B. Holt and C. Taylor. AUM AHAP-D 1035. Individual found beneath bark of fallen pine tree. Assumed to be *P. mississippi* based on distribution proposed by Lannoo (2005). Hale County is represented on VertNet.

#### ANURA — FROGS

**ACRIS CREPITANS (Eastern Cricket Frog)**. HALE Co.: off AL Hwy 61, 1.56 rd km N of CR 12 (32.53097°N, 87.53134°W; WGS 84). 2 June 2015. B. Holt and C. Taylor. AUM 42766.

**ACRIS GRYLUS (Southern Cricket Frog)**. CLARKE Co.: off CR 19, 7.22 rd km E of CR 15 (31.36357°N, 87.78242°W; WGS 84). 27 May 2015. B. Holt and E. Lawrence. AUM 42767. Clarke County is represented on VertNet.

MONROE Co.: off CR 8, 1.96 rd km S of CR 1 (31.34464°N, 87.64323°W; WGS 84). 20 May 2015. B. Holt. AUM 42775.

**ANAXYRUS FOWLERI (Fowler's Toad)**. CHOCTAW Co.: CR 42, 1.35 rd km E of CR 15 (32.28042°N, 88.10976°W; WGS 84). 6 May 2015. B. Holt. AUM AHAP-D 1006. Individual found AOR.

LIMESTONE Co.: Goode Road, 1.07 rd km E of Hatchett Ridge Road (34.69577°N, 87.03422°W; WGS 84). 7 July 2015. B. Holt. AUM AHAP-D 1053. Individual found AOR. Limestone County is represented on VertNet.

SUMTER Co.: CR 5, 2.44 rd km S of CR 10 (32.36331°N, 88.36594°W; WGS 84). 6 May 2015. B. Holt. AUM AHAP-D 1002. Individual found AOR. Sumter County is represented on VertNet.

**ANAXYRUS QUERCICUS (Oak Toad)**. CLARKE Co.: off CR 19, 7.22 rd km S of CR 2 (31.37828°N, 87.76942°W; WGS 84). 27 May 2015. B. Holt and E. Lawrence. AUM AHAP-C 91. Individual heard calling with several *Scaphiopus holbrookii*.

**ANAXYRUS TERRESTRIS (Southern Toad)**. SUMTER Co.: off CR 6, 1.78 rd km W of CR 10 (32.32314°N, 88.32700°W; WGS 84). 6 May 2015. B. Holt. AUM AHAP-D 1003. Individual found AOR.

**GASTROPHRYNE CAROLINENSIS (Eastern Narrow-mouthed Toad)**. DALE Co.: CR 26, 0.35 rd km W of CR 441 (31.23155°N, 85.76125°W; WGS 84). 26 July 2016. B. Holt. AUM AHAP-C 140. Individuals heard calling. Dale County is represented on VertNet. An additional unpublished Dale County specimen is held at the Auburn University Museum of Natural History (AUM 19551).

HALE Co.: CR 2, 1.87 rd km W of AL Hwy 69 (32.53175°N, 87.71069°W; WGS 84). 2 June 2015. B. Holt and C. Taylor. AUM AHAP-C 94. Individuals heard calling.

MORGAN Co.: pond off South Seneca Drive, 0.64 rd km S of CR 460 (Old Hwy 24) (34.58239°N, 87.09607°W; WGS 84). 10 June 2015. N. Sharp. AUM AHAP-C 99. Individuals heard calling at pond. Morgan County is represented on VertNet.

WINSTON Co.: CR 28, 5.21 rd km N of AL Hwy 74 (34.17406°N, 87.53912°W; WGS 84). 14 July 2015. B. Holt. AUM AHAP-C 114. Individuals heard calling.

**HYLA AVIVOCA (Bird-voiced Treefrog)**. CHOCTAW Co.: CR 42, 1.35 rd km E of CR 15 (32.28042°N, 88.10976°W; WGS 84). 6 May 2015. B. Holt. AUM AHAP-C 70. Individuals heard calling. Choctaw County is represented on VertNet.

COFFEE Co.: CR 660, 1.08 rd km W of CR 665 (31.22061°N, 85.89147°W; WGS 84). 16 June 2015. B. Holt. AUM AHAP-C 100. Individuals heard calling.

CONECUH Co.: CR 6, ca. 2.07 rd km W of CR 68 (31.27313°N, 86.80503°W; WGS 84). 7 April 2015. B. Holt. AUM AHAP-C 58. Individuals heard calling.

ESCAMBIA Co.: US Hwy 29, ca. 0.62 rd km W of CR 43 (31.16371°N, 86.80882°W; WGS 84). 7 April 2015. B. Holt. AUM AHAP-C 61. Individuals heard calling.

FRANKLIN Co.: cypress pond in Red Bay off CR 28, 0.26 rd km W of Mud Creek Road (34.46009°N, 88.10535°W; WGS 84). 26 May 2016. N. Sharp. AUM AHAP-C 135. Individuals heard calling. This represents the northernmost record for the state.

GREENE Co.: CR 69, 3.61 rd km W of CR 20 (32.64270°N, 87.91929°W; WGS 84). 7 May 2015. B. Holt. AUM AHAP-C 72. Individuals heard calling. Greene County is represented on VertNet.

MONROE Co.: CR 39, 5.78 rd km W of AL Hwy 41 (31.57667°N, 87.46027°W; WGS 84). 26 May 2015. B. Holt and E. Lawrence. AUM AHAP-C 86. Individuals heard calling.

MONTGOMERY Co.: CR 28, 1.48 rd km W of US Hwy 231 (32.04034°N, 86.05016°W; WGS 84). 24 March 2016. B. Holt. AUM AHAP-C 132. Individuals heard calling.

PERRY Co.: CR 29, 0.32 rd km N of CR 154 (32.82930°N, 87.43271°W; WGS 84). 3 June 2015. B. Holt and C. Taylor. AUM AHAP-C 97. Individuals heard calling. Perry County is represented on VertNet.

PICKENS Co.: CR 63, 2.81 rd km N of CR 22 (33.15324°N, 87.89877°W; WGS 84). 13 May 2015. B. Holt. AUM AHAP-C 76. Individuals heard calling.

SUMTER Co.: CR 1 (T.K. Culpepper Road), 1.14 rd km S of CR 5 (32.31932°N, 88.38220°W; WGS 84). 6 May 2015. B. Holt. AUM AHAP-C 66. Individuals heard calling.

**HYLA CHRYSOSCELIS (Cope's Gray Treefrog)**. CHAMBERS Co.: CR 246, 0.62 rd km W of US Hwy 431 (33.08723°N, 85.34492°W; WGS 84). 12 August 2015. B. Holt. AUM AHAP-D 1100. Individual found AOR. Chambers County is represented on VertNet.

CHEROKEE Co.: CR 103, 0.19 rd km N of CR 848 (34.49257°N, 85.52032°W; WGS 84). 23 June 2015. B. Holt. AUM AHAP-C 106. Individuals heard calling.

CHOCTAW Co.: CR 42, 1.35 rd km E of CR 15 (32.28042°N, 88.10976°W; WGS 84). 6 May 2015. B. Holt. AUM AHAP-C 71. Individuals heard calling.

DALE Co.: CR 83, 0.13 rd km N of CR 16 (31.42063°N, 85.42903°W; WGS 84). 17 June 2015. B. Holt. AUM AHAP-C 104. Individuals heard calling.

ESCAMBIA Co.: US Hwy 29, ca. 0.62 rd km W of CR 43 (31.16371°N, 86.80882°W; WGS 84). 7 April 2015. B. Holt. AUM AHAP-C 60. Individuals heard calling.

FAYETTE Co.: AL Hwy 18, 0.17 rd km E of CR 128 (33.69131°N, 87.53457°W; WGS 84). 15 July 2015. B. Holt. AUM AHAP-C 120. Individuals heard calling.



FRANKLIN Co.: private property off Shady Grove Road, 0.22 rd km N of Lost Creek Road (34.53322°N, 87.89658°W; WGS 84). 17 October 2015. A. Peters. AUM AHAP-D 1143.

GENEVA Co.: roadside ditch at intersection of AL Hwy 52 and CR 4 (31.04741°N, 85.89618°W; WGS 84). 13 April 2015. B. Holt. AUM AHAP-D 975.

HALE Co.: CR 2, 1.87 rd km W of AL Hwy 69 (32.53175°N, 87.71069°W; WGS 84). 2 June 2015. B. Holt and C. Taylor. AUM AHAP-C 93. Individuals heard calling.

LOWNDES Co.: CR 40, 0.30 rd km S of Robinson Switch Road (32.32818°N, 86.57082°W; WGS 84). 30 September 2015. B. Holt. AUM 42761. Individual found AOR.

MARENGO Co.: CR 53, 2.51 rd km W of CR 80 (32.31986°N, 87.57773°W; WGS 84). 12 May 2015. B. Holt. AUM AHAP-C 73. Individuals heard calling.

MARION Co.: AL Hwy 13, 1.27 rd km N of CR 79 (34.29096°N, 87.69545°W; WGS 84). 14 July 2015. B. Holt. AUM AHAP-D 1060. Individual found AOR. Marion County is represented on VertNet.

PICKENS Co.: CR 63, 8.88 rd km S of AL Hwy 6 (33.22375°N, 87.89758°W; WGS 84). 13 May 2015. B. Holt. AUM AHAP-C 75. Individuals heard calling. Pickens County is represented on VertNet.

WALKER Co.: Pleasant Grove Road, 0.63 rd km S of AL Hwy 124 (33.81315°N, 87.36098°W; WGS 84). 15 July 2015. B. Holt. AUM AHAP-C 115. Individuals heard calling. Walker County is represented on VertNet.

WINSTON Co.: AL Hwy 13, 0.71 rd km S of AL Hwy 129 (34.20952°N, 87.62004°W; WGS 84). 14 July 2015. B. Holt. AUM AHAP-C 113. Individuals heard calling. Winston County is represented on VertNet.

***HYLA CINEREA (Green Treefrog)***. BULLOCK Co.: CR 14, 0.21 rd km W of intersection with CR 41 (32.02127°N, 85.54078°W; WGS 84). 17 April 2015. B. Holt. AUM AHAP-D 991. Individual found DOR.

CHEROKEE Co.: CR 15, 1.22 rd km N of CR 46 (34.39582°N, 85.57787°W; WGS 84). 23 June 2015. B. Holt. AUM AHAP-C 108. Individuals heard calling.

CHOCTAW Co.: CR 42, 1.35 rd km E of CR 15 (32.28042°N, 88.10976°W; WGS 84). 6 May 2015. B. Holt. AUM AHAP-C 68. Individuals heard calling. Choctaw County is represented on VertNet.

CLAY Co.: AL Hwy 49, 0.80 rd km N of CR 31 (33.42297°N, 85.77972°W; WGS 84). 5 August 2015. B. Holt. AUM AHAP-D 1084. Individual found DOR.

CLEBURNE Co.: CR 24, 1.71 rd km E of CR 3 (33.54803°N, 85.69484°W; WGS 84). 4 August 2015. B. Holt. AUM AHAP-C 121. Individuals heard calling.

ETOWAH Co.: private residence off Island Way, 0.16 rd km W of Riverview Drive (33.88262°N, 86.03422°W; WGS 84). 16 August 2015. T. Barger. AUM AHAP-D 1101.

GREENE Co.: CR 69, 3.61 rd km W of CR 20 (32.64270°N, 87.91929°W; WGS 84). 7 May 2015. B. Holt. AUM AHAP-D 1007. Individual found AOR. Greene County is represented on VertNet.

HALE Co.: CR 62, 0.32 rd km S of Becker Road (32.55076°N, 87.76759°W; WGS 84). 2 June 2015. B. Holt and C. Taylor. AUM AHAP-C 92. Individuals heard calling.

MARION Co.: AL Hwy 13, 1.27 rd km N of CR 79 (34.29096°N, 87.69545°W; WGS 84). 14 July 2015. B. Holt. AUM AHAP-C 112. Individuals heard calling.

PERRY Co.: CR 29, 0.32 rd km N of CR 154 (32.82930°N, 87.43271°W; WGS 84). 3 June 2015. B. Holt and C. Taylor. AUM AHAP-D 1037. Individual found AOR. Perry County is represented on VertNet.

PICKENS Co.: CR 63, 8.88 rd km S of AL Hwy 6 (33.22375°N, 87.89758°W; WGS 84). 13 May 2015. B. Holt. AUM AHAP-C 74. Individuals heard calling.

RANDOLPH Co.: CR 91, 1.85 rd km N of AL Hwy 22 (33.17234°N, 85.30127°W; WGS 84). 11 August 2015. B. Holt. AUM AHAP-C 123. Individuals heard calling.

SUMTER Co.: CR 5, 0.95 rd km S of CR 10 (32.37654°N, 88.36477°W; WGS 84). 6 May 2015. B. Holt. AUM AHAP-D 1001. Individual found DOR.

WALKER Co.: Swindle Loop Road, 0.63 rd km N of Old York Road (33.72835°N, 87.39482°W; WGS 84). 15 July 2015. B. Holt. AUM AHAP-C 117. Individuals heard calling.

***HYLA FEMORALIS (Pine Woods Treefrog)***. BUTLER Co.: CR 8, 7.30 rd km W of US Hwy 31 (31.55291°N, 86.81198°W; WGS 84). 9 August 2016. B. Holt. AUM AHAP-C 143. Individuals heard calling.

DALE Co.: CR 24, 0.80 rd km S of CR 437 (31.26592°N, 85.76952°W; WGS 84). 26 July 2016. B. Holt. AUM AHAP-C 141. Individuals heard calling.

DALLAS Co.: CR 960, 0.42 rd km W of CR 31 (32.24622°N, 87.24008°W; WGS 84). 13 July 2016. B. Holt. AUM AHAP-C 138. Individuals heard calling.

ESCAMBIA Co.: 3 Mile Road, 3.32 rd km W of CR 1 (31.12838°N, 87.59856°W; WGS 84). 20 May 2015. B. Holt. AUM AHAP-C 81. Individuals heard calling.

GENEVA Co.: CR 4, 1.36 rd km W of AL Hwy 52 (31.04466°N, 85.91026°W; WGS 84). 13 April 2015. B. Holt. AUM AHAP-D 978. Individual found AOR.

MONROE Co.: CR 39, 0.16 rd km E of US Hwy 84 (31.54196°N, 87.51146°W; WGS 84). 26 May 2015. B. Holt and E. Lawrence. AUM AHAP-C 85. Individuals heard calling.

WILCOX Co.: CR 13, 1.42 rd km S of CR 12 (31.87367°N, 87.47041°W; WGS 84). 26 May 2015. B. Holt and E. Lawrence. AUM AHAP-C 89. Individuals heard calling.

***HYLA GRATIOSA (Barking Treefrog)***. CHOCTAW Co.: CR 42, 1.35 rd km E of CR 15 (32.28042°N, 88.10976°W; WGS 84). 6 May 2015. B. Holt. AUM AHAP-C 69. Individuals heard calling.

CLAY Co.: CR 31, 0.08 rd km S of Highland Road (33.35547°N, 85.82576°W; WGS 84). 5 August 2015. B. Holt. AUM AHAP-D 1087. Individual found DOR.

COFFEE Co.: CR 643, 1.12 rd km N of CR 655 (31.21996°N, 85.94955°W; WGS 84). 16 June 2015. B. Holt. AUM AHAP-C 103. Individuals heard calling.

DALE Co.: CR 67, 0.05 rd km N of Mt. Carmel Road (31.42134°N, 85.46588°W; WGS 84). 17 June 2015. B. Holt. AUM AHAP-C 105. Individuals heard calling.

MARSHALL Co.: CR 466, 1.04 rd km W of 11 Forty Road (34.49897°N, 86.37100°W; WGS 84). 24 June 2015. B. Holt. AUM AHAP-C 110. Individuals heard calling. Marshall County is represented on VertNet.

RANDOLPH Co.: CR 91, 1.85 rd km N of AL Hwy 22 (33.17234°N, 85.30127°W; WGS 84). 11 August 2015. B. Holt. AUM AHAP-C 122. Individuals heard calling.

SUMTER Co.: CR 15, 0.04 rd km E of AL Hwy 17 (32.33038°N, 88.18177°W; WGS 84). 6 May 2015. B. Holt. AUM AHAP-D 1005. Individual found DOR.

WALKER Co.: Swindle Loop Road, 0.63 rd km N of Old York Road (33.72835°N, 87.39482°W; WGS 84). 15 July 2015. B. Holt. AUM AHAP-C 116. Individuals heard calling.

WINSTON Co.: CR 28, 5.21 rd km N of AL Hwy 74 (34.17406°N, 87.53912°W; WGS 84). 14 July 2015. B. Holt. AUM AHAP-D 1064. Individual found DOR.

***HYLA SQUIRELLA (Squirrel Treefrog)***. CLARKE Co.: Bird Jackson Road, 5.47 rd km S of Simmons Creek Road (31.55037°N, 87.69828°W; WGS 84). 27 May 2015. B. Holt and E. Lawrence. AUM AHAP-C 90. Individuals heard calling.

COFFEE Co.: CR 636, 1.48 rd km E of CR 617 (31.25731°N, 85.93472°W; WGS 84). 16 June 2015. B. Holt. AUM AHAP-C 102. Individuals heard calling.

DALLAS Co.: CR 9 at intersection with CR 2 (Cahaba Road) (32.31124°N, 87.12587°W; WGS 84). 13 July 2016. B. Holt. AUM AHAP-C 137. Individuals heard calling.

ESCAMBIA Co.: CR 1, 3.64 rd km N of CR 14 (31.14120°N, 87.56281°W; WGS 84). 20 May 2015. B. Holt. AUM AHAP-C 82. Individuals heard calling.

GENEVA Co.: roadside ditch at intersection of AL Hwy 52 and CR 4 (31.04741°N, 85.89618°W; WGS 84). 13 April 2015. B. Holt. AUM AHAP-D 976. Geneva County is represented on VertNet.

HALE Co.: CR 12, 0.48 rd km E of AL Hwy 25 (32.52343°N, 87.59164°W; WGS 84). 2 June 2015. B. Holt and C. Taylor. AUM AHAP-C 95. Individuals heard calling.

RANDOLPH Co.: CR 91, 1.85 rd km N of AL Hwy 22 (33.17234°N, 85.30127°W; WGS 84). 11 August 2015. B. Holt. AUM AHAP-C 124. Individuals heard calling.

WILCOX Co.: CR 13, 6.56 rd km S of CR 12 (31.83657°N, 87.45256°W; WGS 84). 26 May 2015. B. Holt and E. Lawrence. AUM AHAP-C 88. Individuals heard calling.

***LITHOBATES CATESBEIANUS (American Bullfrog)***. BALDWIN Co.: CR 61, 3.39 rd km S of Redtown Road (31.10012°N, 87.63239°W; WGS 84). 20 May 2015. B. Holt. AUM AHAP-C 80. Individuals heard calling. Baldwin County is represented on VertNet.

GENEVA Co.: roadside ditch at intersection of AL Hwy 52 and CR 4 (31.04741°N, 85.89618°W; WGS 84). 13 April 2015. B. Holt. AUM AHAP-D 977. Geneva County is represented on VertNet.

LAWRENCE Co.: CR 170, 0.72 rd km N of CR 316 (34.55092°N, 87.18599°W; WGS 84). 8 July 2015. B. Holt. AUM AHAP-D 1058. Individual found AOR. Lawrence County is represented on VertNet.

LIMESTONE Co.: CR 15, 0.52 rd km N of CR 34 (34.76010°N, 87.16060°W; WGS 84). 7 July 2015. B. Holt. AUM AHAP-D 1052. Individual found AOR. Limestone County is represented on VertNet.

MARION Co.: CR 79, 0.74 rd km E of AL Hwy 13 (34.27970°N, 87.69021°W; WGS 84). 14 July 2015. B. Holt. AUM AHAP-D 1061. Individual found DOR.

MONROE Co.: CR 8, 6.94 rd km W of AL Hwy 21 (31.32516°N, 87.53699°W; WGS 84). 20 May 2015. B. Holt. AUM AHAP-C 83. Individuals heard calling.

PERRY Co.: CR 23, 2.23 rd km E of CR 29 (32.76333°N, 87.41300°W; WGS 84). 3 June 2015. B. Holt and C. Taylor. AUM AHAP-C 98. Individuals heard calling. Perry County is represented on VertNet.

PICKENS Co.: CR 63, 0.96 rd km S of CR 22 (33.13476°N, 87.93062°W; WGS 84). 13 May 2015. B. Holt. AUM AHAP-C 77. Individuals heard calling.

***LITHOBATES CLAMITANS (Green Frog)***. CHAMBERS Co.: CR 155, 1.20 rd km W of CR 258 (33.06940°N, 85.41357°W; WGS 84). 12 August 2015. B. Holt. AUM AHAP-C 125. Individuals heard calling. Chambers County is represented on VertNet.

LIMESTONE Co.: Wheeler National Wildlife Refuge, off Refuge Road, 0.34 rd km E of CR 129 (34.56497°N, 86.84202°W; WGS 84). 29 April 2015. B. Holt. AUM AHAP-C 65. Individuals heard calling. Limestone County is represented on VertNet.

MARENGO Co.: CR 53, 2.51 rd km W of CR 80 (32.31986°N, 87.57773°W; WGS 84). 12 May 2015. B. Holt. AUM AHAP-D 1013. Individual found AOR.

MARSHALL Co.: CR 466, 0.09 rd km E of CR 37 (34.50203°N, 86.24171°W; WGS 84). 24 June 2015. B. Holt. AUM AHAP-D 1050. Individual found AOR.

MONROE Co.: CR 1, 1.59 rd km W of Weatherford Road (31.34861°N, 87.69041°W; WGS 84). 20 May 2015. B. Holt. AUM AHAP-C 84. Individuals heard calling.

PERRY Co.: CR 29, 0.32 rd km N of CR 154 (32.82930°N, 87.43271°W; WGS 84). 3 June 2015. B. Holt and C. Taylor. AUM AHAP-C 96. Individuals heard calling. Perry County is represented on VertNet.

RANDOLPH Co.: CR 17, 0.28 rd km N of CR 30 (33.20211°N, 85.27574°W; WGS 84). 11 August 2015. B. Holt. AUM AHAP-D 1098. Individual found AOR.

SUMTER Co.: CR 10, 1.07 rd km E of CR 6 (32.33351°N, 88.30182°W; WGS 84). 6 May 2015. B. Holt. AUM AHAP-C 67. Individuals heard calling.

WALKER Co.: Coal Valley Road, 5.78 rd km W of AL Hwy 69 (33.75188°N, 87.41782°W; WGS 84). 15 July 2015. B. Holt. AUM AHAP-C 118. Individuals heard calling.

WILCOX Co.: CR 13, 8.02 rd km S of CR 12 (31.83302°N, 87.44006°W; WGS 84). 26 May 2015. B. Holt and E. Lawrence. AUM AHAP-C 87. Individuals heard calling.

WINSTON Co.: CR 28, 1.88 rd km N of AL Hwy 74 (34.15600°N, 87.51350°W; WGS 84). 14 July 2015. B. Holt. AUM AHAP-D 1065. Individual found AOR.

***LITHOBATES PALUSTRIS (Pickerel Frog)***. BLOUNT Co.: CR 9, 2.91 rd km E of US Hwy 31 (33.97260°N, 86.73179°W; WGS 84). 1 December 2015. B. Holt. AUM AHAP-D 1160. Individual found DOR.

CLEBURNE Co.: CR 19, 3.14 rd km E of AL Hwy 9 (33.57837°N, 85.58325°W; WGS 84). 4 August 2015. B. Holt. AUM 42773. Individual found DOR.

LAWRENCE Co.: Bankhead National Forest, off Bunyan Hill Road (CR 5), 4.36 rd km W of CR 6 (34.30857°N, 87.39467°W; WGS 84). 21 May 2009. A. Peters and E. Soehren. AUM AHAP-D 1043.

***LITHOBATES SPHENOCEPHALUS (Southern Leopard Frog)***. BLOUNT Co.: CR 9, 4.03 rd km E of US Hwy 31 (33.96623°N, 86.72486°W; WGS 84). 1 December 2015. B. Holt. AUM AHAP-D 1161. Individual found DOR. Blount County is represented on VertNet.

CHOCTAW Co.: CR 13, 3.38 rd km W of CR 39 (31.87597°N, 88.44888°W; WGS 84). 7 October 2015. B. Holt. AUM AHAP-D 1132. Individual found DOR.

CLARKE Co.: CR 29, 5.74 rd km S of CR 19 (31.46009°N, 87.70807°W; WGS 84). 27 May 2015. B. Holt and E. Lawrence. AUM AHAP-D 1031. Individual found DOR.

CLAY Co.: CR 31, 0.45 rd km W of AL Hwy 49 (33.41466°N, 85.78595°W; WGS 84). 5 August 2015. B. Holt. AUM AHAP-D 1085. Individual found DOR.

CLEBURNE Co.: CR 10, 4.10 rd km W of CR 63 (33.50895°N, 85.42664°W; WGS 84). 4 August 2015. B. Holt. AUM AHAP-D 1082. Individual found DOR.

LIMESTONE Co.: CR 24, 0.33 rd km W of CR 15 (34.77711°N, 87.16402°W; WGS 84). 7 July 2015. B. Holt. AUM AHAP-D 1051. Individual found DOR. Limestone County is represented on VertNet.

MARENGO Co.: CR 39, 0.46 rd km N of CR 33 (32.30363°N, 87.72259°W; WGS 84). 12 May 2015. B. Holt. AUM AHAP-D 1014. Individual found DOR.

PERRY Co.: CR 23, 2.23 rd km E of CR 29 (32.76333°N, 87.41300°W; WGS 84). 3 June 2015. B. Holt and C. Taylor. AUM AHAP-D 1038. Individual found DOR. Perry County is represented on VertNet.

WALKER Co.: Coal Valley Road, 5.78 rd km W of AL Hwy 69 (33.75188°N, 87.41782°W; WGS 84). 15 July 2015. B. Holt. AUM AHAP-D 1068. Individual found DOR. Walker County is represented on VertNet.

WINSTON Co.: CR 20, 0.94 rd km W of CR 13 (34.16297°N, 87.58125°W; WGS 84). 14 July 2015. B. Holt. AUM AHAP-D 1066. Individual found DOR.

**PSEUDACRIS BRACHYPHONA (Mountain Chorus Frog).** PERRY Co.: CR 23, 1.16 rd km N of Lower Polecat Road (32.72689°N, 87.42207°W; WGS 84). 21 January 2016. B. Holt. AUM AHAP-C 130. Individuals heard calling.

**PSEUDACRIS CRUCIFER (Spring Peeper).** BLOUNT Co.: CR 9, 2.28 rd km E of US Hwy 31 (33.97595°N, 86.73685°W; WGS 84). 1 December 2015. B. Holt. AUM 42758. Individual found AOR.

PERRY Co.: CR 48, 2.36 rd km W of CR 23 (32.61895°N, 87.46417°W; WGS 84). 21 January 2016. B. Holt. AUM AHAP-C 129. Individuals heard calling. Perry County is represented on VertNet.

ST. CLAIR Co.: Lock 3 Road, 1.86 rd km E of Valley Road (33.76895°N, 86.05867°W; WGS 84). 18 November 2015. B. Holt. AUM AHAP-D 1157. Individual found DOR. An unpublished voucher is present in the AUM collection for St. Clair County.

**PSEUDACRIS FERIARUM (Upland Chorus Frog).** MARENGO Co.: Rosedale Drive, 0.14 rd km S of US Hwy 80 (32.50215°N, 87.83056°W; WGS 84). 21 January 2016. B. Holt. AUM AHAP-C 127. Individuals heard calling.

PERRY Co.: AL Hwy 183, 0.95 rd km N of US Hwy 80 (32.45750°N, 87.51112°W; WGS 84). 21 January 2016. B. Holt. AUM AHAP-C 128. Individuals heard calling.

ST. CLAIR Co.: Center Star Road, 0.24 rd km N of CR 57 (33.65120°N, 86.23468°W; WGS 84). 18 November 2015. B. Holt. AUM 42772. Individual found DOR.

Unpublished vouchers are present in the AUM collection for Marengo, Perry, and St. Clair counties.

**PSEUDACRIS NIGRITA (Southern Chorus Frog).** GENEVA Co.: CR 4, 3.04 rd km W of intersection with CR 65 (31.03427°N, 85.98891°W; WGS 84). 13 April 2015. B. Holt. AUM AHAP-C 63. Individuals heard calling. Geneva County is represented on VertNet.

**PSEUDACRIS ORNATA (Ornate Chorus Frog).** GENEVA Co.: CR 4, 3.41 rd km E of AL Hwy 87 (31.03418°N, 85.99020°W; WGS 84). 4 November 2015. B. Holt. AUM AHAP-C 126. Several choruses heard from this point west to the intersection with AL Hwy 87 and then north along AL Hwy 87 for approximately 4.75 km.

**SCAPHIOPUS HOLBROOKII (Eastern Spadefoot).** AUTAUGA Co.: CR 9, 2.71 rd km S of AL Hwy 14 (32.43238°N, 86.75629°W; WGS 84). 16 December 2015. B. Holt. AUM AHAP-D 1164. Individual found AOR.

CLARKE Co.: CR 29, 0.64 rd km N of CR 2 (31.42684°N, 87.70118°W; WGS 84). 27 May 2015. B. Holt and E. Lawrence. AUM AHAP-D 1032. Individual found AOR.

## TESTUDINES — TURTLES

**CHELYDRA SERPENTINA (Snapping Turtle).** HOUSTON Co.: seepage area at Dothan Trail Creek Park, off Mill Creek Circle, ca. 0.54 rd km S of Flowers Chapel Road (31.21871°N, 85.46435°W; WGS 84). 28 May 2015. W. Barger. AUM AHAP-D 1040.

LOWNDES Co.: US Hwy 80, 0.33 rd km W of 4<sup>th</sup> Street (32.30477°N, 86.82282°W; WGS 84). 12 March 2016. B. Holt. AUM AHAP-D 1174. Specimen found AOR.

**GOPHERUS POLYPHEMUS (Gopher Tortoise).** MONTGOMERY Co.: US Hwy 82, 11.12 rd km E of US Hwy 231 (32.14291°N, 86.01945°W; WGS 84). 16 August 2016. B. Holt and C. Taylor. AUM AHAP-D 1252. Specimen found DOR. Two Alabama Herp Atlas Project "sight" records exist for Montgomery County but are not associated with corresponding vouchers.

**PSEUDEMYIS CONCINNA (River Cooter).** ST. CLAIR Co.: Center Star Road, just S of Refuge Road (33.67153°N, 86.23569°W; WGS 84). 18 November 2015. B. Holt. AUM 42771. Specimen found DOR.

**TERRAPENE CAROLINA (Eastern Box Turtle).** LIMESTONE Co.: seepage area on Wheeler National Wildlife Refuge, off Refuge Road, 1.32 rd km E of CR 129 (34.56401°N, 86.83165°W; WGS 84). 29 April 2015. B. Holt. AUM AHAP-D 997. Carapace found.

MARION Co.: Bear Creek Recreation Area, off CR 79, 0.74 rd km E of AL Hwy 13 (34.27715°N, 87.68921°W; WGS 84). 15 July 2015. B. Holt. AUM AHAP-D 1063.

WINSTON Co.: AL Hwy 5, 3.09 rd km S of AL Hwy 74 (34.06526°N, 87.57545°W; WGS 84). 15 July 2015. B. Holt. AUM AHAP-D 1067. Individual found DOR. Winston County is represented on VertNet.

**TRACHEMYS SCRIPTA (Pond Slider).** CHILTON Co.: US Hwy 82, 1.18 rd km S of AL Hwy 22 (32.75754°N, 86.87257°W; WGS 84). 14 May 2015. B. Holt. AUM AHAP-D 1020. Individual found AOR.

## SQUAMATA — LIZARDS

**ANOLIS SAGREI (NOROPS SAGREI) (Brown Anole).** BALDWIN Co.: Commerce Loop, Gulf Shores, ca. 1.59 air km E of AL Hwy 59 (30.28522°N, 87.66962°W; WGS 84). 22 April 2015. B. Holt. AUM 42776. This species has been observed by B. Holt in Gulf Shores for numerous years at several locations. Baldwin County is represented on VertNet.

MOBILE Co.: Home Depot garden center on Montlimar Drive, 0.41 rd km S of Airport Boulevard (30.67264°N, 88.13353°W; WGS 84). 13 October 2016. B. Holt. AUM AHAP-D 1254. Nineteen individuals of all age classes present. This location was first reported to B. Holt by William Lilly in 2015. Based on additional reports to B. Holt it has been observed in the city of Mobile for roughly a decade. One unpublished voucher from Mobile County is present in the AUM collection.

HOUSTON Co.: Lowe's Home Improvement garden center at intersection of AL Hwy 52 and US Hwy 231 (31.20621°N, 85.42466°W; WGS 84). 28 September 2016. B. Holt. AUM 42757. Thirteen individuals observed. Individuals were observed at two other locations: one individual at the Econo Lodge on US Hwy 231, 1.24 rd km south of AL Hwy 52 (31.21745°N, 85.43105°W; WGS 84) and fifteen individuals at the Home Depot at the intersection of AL Hwy 53 and US Hwy 231 (31.24715°N, 85.42881°W; WGS 84).

**HEMIDACTYLUS TURCICUS (Mediterranean Gecko).** BALDWIN Co.: private residence in Gulf Shores at W 24th Ave, 0.81 rd km W of AL Hwy 59 (30.27813°N, 87.69521°W; WGS 84). 21 May 2015. B. Holt. AUM AHAP-D 1028. This species has been observed by B. Holt in Gulf Shores for numerous years at several locations. Baldwin County is represented on VertNet.

CALHOUN Co.: Anniston at First Christian Church, E 14th St., 0.18 rd km E of AL Hwy 21 (33.66238°N, 85.82461°W; WGS 84). 7 September 2015. F. Cobb. AUM AHAP-D 1102.

CLARKE Co.: Grove Hill off AL Hwy 295, 1.05 rd km N of CR 22 (31.71906°N, 87.77482°W; WGS 84). 6 October 2015. B. Holt. AUM AHAP-D 1130. Individual found at hotel lights.

HOUSTON Co.: Dothan, off US Hwy 231, 0.57 rd km N of Fortner Street (31.21748°N, 85.43030°W; WGS 84). 17 June 2015. C. Taylor. AUM AHAP-D 1048. Individual found at hotel lights.

MARENGO Co.: Demopolis, off US Hwy 80, 0.46 rd km E of US Hwy 43 (32.50238°N, 87.83092°W; WGS 84). 22 September 2015. B. Holt. AUM AHAP-D 1116. Individual found at hotel lights.

**PLESTIODON FASCIATUS (Common Five-lined Skink).** DALLAS Co.: Six Mile Creek Park off CR 77 (32.32653°N, 87.01457°W; WGS 84). 12 July 2016. B. Holt. AUM 42756. Individual found under bark of a fallen tree.

MARENGO Co.: Spillway Falls Park off Lower Pool Road 0.81 rd km north of Gandy Ferry Road (32.52048°N, 87.88531°W; WGS 84). 13 May 2015. B. Holt. AUM AHAP-D 1018. Individual found under board.

**PLESTIODON LATICEPS (Broad-headed Skink).** ELMORE Co.: Yates Lake Forever Wild Tract off Goldmine Road (32.62945°N, 85.93213°W; WGS 84). 13 January 2016. B. Holt. AUM AHAP-D 1168. Individual found under rock. An unpublished voucher can be found in the AUM.

#### SQUAMATA — SNAKES

**AGKISTRODON CONTORTRIX (Copperhead).** CONECUH Co.: CR 73, 2.56 rd km W of CR 7 (31.39289°N, 87.20144°W; WGS 84). 28 October 2015. B. Holt. AUM AHAP-D 1146. Individual found DOR.

DALLAS Co.: Found AOR on CR 2 (Cahaba Road), 0.44 rd km E of CR 123 (32.28878°N, 87.16354°W; WGS 84). 13 July 2016. B. Holt. AUM AHAP-D 1243. Individual found AOR.

**CEMOPHORA COCCINEA (Scarletsnake).** COFFEE Co.: CR 248, 2.51 rd km N of AL Hwy 12 (31.41898°N, 85.96082°W; WGS 84). 16 June 2015. B. Holt. AUM AHAP-D 1045. Individual found AOR.

ELMORE Co.: private residence off Whippoorwill Road, 0.26 rd km NW of Gold Mine Road (32.63430°N, 85.93230°W; WGS 84). 1 June 2015. M. Wright. AUM AHAP-D 1175.

GENEVA Co.: AL Hwy 153, 1.72 rd km S of AL Hwy 52 (31.09729°N, 86.11177°W; WGS 84). 25 July 2016. B. Holt. AUM AHAP-D 1245. Individual found DOR.

**COLUBER CONSTRICTOR (North American Racer).** ELMORE Co.: AL Hwy 229, 0.96 rd km N of CR 44 (32.62703°N, 85.95037°W; WGS 84). 18 May 2015. B. Holt. AUM AHAP-D 1024. Individual found DOR.

HALE Co.: intersection of CR 16 and CR 35 (32.61238°N, 87.70385°W; WGS 84). 3 June 2015. B. Holt and C. Taylor. AUM AHAP-D 1034. Individual found DOR.

**COLUBER FLAGELLUM (Coachwhip).** MONROE Co.: River Ridge Road, 0.43 rd km E of AL Hwy 41 (31.72618°N, 87.40837°W; WGS 84). 9 July 2013. B. Holt and W. Barger. AUM AHAP-D 1022. Individual found DOR.

WASHINGTON Co.: Found DOR on CR 20 0.41 rd km west of CR 25 (31.35464°N, 88.23161°W; WGS 84). 12 May 2015. W. Barger. AUM AHAP-D 1023. Washington County is represented on VertNet.

**CROTALUS HORRIDUS (Timber Rattlesnake).** MARENGO Co.: CR 44, 0.92 rd km W of CR 51 (32.35363°N, 87.66785°W; WGS 84). 12 May 2015. B. Holt. AUM AHAP-D 1016. Individual found DOR. Marengo County is represented on VertNet.

PICKENS Co.: off CR 88, 1.25 rd km SE of AL Hwy 159 (33.38742°N, 87.86710°W; WGS 84). 6 August 2016. J. Fair. AUM AHAP-D 1251.

**LAMPROPELTIS CALLIGASTER (Yellow-bellied Kingsnake).** LAUDERDALE Co.: CR 61 at intersection with CR 335 (34.89126°N, 87.62209°W; WGS 84). 7 April 2010. B. Holt and J. Trent. AUM AHAP-D 1059. Individual found DOR.

**LAMPROPELTIS ELAPSOIDES (Scarlet Kingsnake).** SUMTER Co.: CR 10, 0.75 rd km W of CR 9 (32.35971°N, 88.27348°W; WGS 84). 6 May 2015. B. Holt. AUM 42777. Individual found DOR.

**LAMPROPELTIS GETULA (Eastern Kingsnake).** ELMORE Co.: private residence off Whippoorwill Road, 0.26 rd km NW of Gold Mine Road (32.63430°N, 85.93230°W; WGS 84). 2 June 2015. M. Wright. AUM AHAP-D 1176. A specimen identified as *L. getula* can be found in the AUM collection; however, the extremely thin banding on the specimen calls into question the determination as hybrids are known from the area (D. Laurencio, pers. comm.).

**LAMPROPELTIS NIGRA (Eastern Black Kingsnake).** GREENE Co.: CR 69, 4.82 rd km W of CR 20 (32.63555°N, 87.92939°W; WGS 84). 7 May 2015. B. Holt. AUM AHAP-D 1008. Individual found DOR.

HALE Co.: off Lock 7 Road, 2.02 rd km N of CR 38 (32.78452°N, 87.83421°W; WGS 84). 3 June 2015. B. Holt and C. Taylor. AUM AHAP-D 1036. Hale County is represented on VertNet.

**OPHEODRYS AESTIVUS (Rough Greensnake).** HOUSTON Co.: CR 4 (Junction Road), 0.08 rd km W of intersection with CR 35 (31.02913°N, 85.45454°W; WGS 84). 14 April 2015. B. Holt. AUM AHAP-D 986. Individual found DOR.

RANDOLPH Co.: CR 87, 0.75 rd km S of CR 480 (33.33319°N, 85.31657°W; WGS 84). 11 August 2015. B. Holt. AUM 42764. Individual found DOR.

WILCOX Co.: CR 13, 0.69 rd km N of CR 12 (31.89905°N, 87.40454°W; WGS 84). 14 October 2015. B. Holt. AUM AHAP-D 1142. Individual found DOR.

**PANTHEROPHIS GUTTATUS (Red Cornsnake).** GREENE Co.: CR 69, 0.16 rd km E of CR 50 (32.63721°N, 87.96547°W; WGS 84). 7 May 2015. B. Holt. AUM AHAP-D 1117. Individual found DOR. Greene County is represented on VertNet.

LIMESTONE Co.: CR 24, 0.32 rd km W of CR 29 (34.75016°N, 87.04190°W; WGS 84). 8 July 2015. B. Holt. AUM AHAP-D 1057. Individual found DOR.

MONROE Co.: CR 1, 3.07 rd km S of CR 10 (31.39572°N, 87.56408°W; WGS 84). 13 October 2015. B. Holt. AUM 42769. Individual found DOR.

PERRY Co.: CR 48, 6.06 rd km W of CR 23 (32.61931°N, 87.50356°W; WGS 84). 3 June 2015. B. Holt and C. Taylor. AUM AHAP-D 1039. Individual found DOR.

SUMTER Co.: CR 10, 3.86 rd km S of US Hwy 11 (32.40063°N, 88.36183°W; WGS 84). 6 May 2015. B. Holt. AUM AHAP-D 1000. Individual found AOR.

**PANTHEROPHIS SPILOIDES (Gray Ratsnake).** COOSA Co.: AL Hwy 22, 0.53 rd km W of CR 63 (32.88297°N, 86.05656°W; WGS 84). 11 August 2015. B. Holt. AUM AHAP-D 1097. Individual found DOR.

GREENE Co.: CR 72, 2.57 rd km S of CR 148 (32.70869°N, 87.99501°W; WGS 84). 7 May 2015. B. Holt. AUM AHAP-D 1010. Individual found DOR. Greene County is represented on VertNet.

LAUDERDALE Co.: Goose Shoals in Shoal Creek at CR 8 (34.95341°N, 87.59336°W; WGS 84). 20 May 2008. A. Peters and D. Peters. AUM AHAP-D 1044. Individual found swimming. Lauderdale County is represented on VertNet.

LIMESTONE Co.: Goode Road, 1.49 rd km E of Hatchett Ridge Road (34.69562°N, 87.02966°W; WGS 84). 7 July 2015. B. Holt. AUM AHAP-D 1054. Individual found DOR.

MARENGO Co.: Maria Avenue, 0.79 rd km N of US Hwy 80 (32.49954°N, 87.85630°W; WGS 84). 13 May 2015. B. Holt. AUM AHAP-D 1019. Individual found DOR.

ST. CLAIR Co.: US Hwy 231, 1.55 rd km N of AL Hwy 174 (33.63654°N, 86.27896°W; WGS 84). 22 October 2015. W. Barger. AUM AHAP-D 1144. Individual found DOR.

SUMTER Co.: CR 85, 3.61 rd km S of CR 34 (32.90849°N, 88.20152°W; WGS 84). 10 March 2016. B. Holt. AUM 42765. Individual found DOR.

**STORERIA OCCIPITOMACULATA (Red-bellied Snake).** BALDWIN Co.: Gulf Shores School off E 15<sup>th</sup> Ave (30.26883°N, 87.67808°W; WGS 84). 13 November 2015. D. Craig. AUM AHAP-D 1152. Baldwin County is represented on VertNet.

CLARKE Co.: CR 15, 3.15 rd km N of Society Hill Road (31.43618°N, 87.86628°W; WGS 84). 6 October 2015. B. Holt. AUM 42759. Individual found DOR.

HOUSTON Co.: Beaver Creek Trails Park in Dothan (31.21710°N, 85.45225°W; WGS 84). 20 May 2016. B. Holt, A. Peters, E. Lawrence, C. Taylor. AUM AHAP-D 1232.

**THAMNOPHIS SAURITUS (Eastern Ribbonsnake).** CLARKE Co.: CR 15, 1.47 rd km S of CR 2 (31.47747°N, 87.87898°W; WGS 84). 6 October 2015. B. Holt. AUM 42768. Individual found DOR.

CONECUH Co.: CR 73, 1.83 rd km E of AL Hwy 41 (31.40922°N, 87.22479°W; WGS 84). 28 October 2015. B. Holt. AUM 42762. Individual found DOR.

GREENE Co.: CR 69, 0.75 rd km W of CR 48 (32.63717°N, 87.96068°W; WGS 84). 7 May 2015. B. Holt. AUM 42763. Individual found DOR.

**THAMNOPHIS SIRTALIS (Common Gartersnake).** CHOCTAW Co.: CR 39, 2.62 rd km S of CR 13 (31.84479°N, 88.43268°W; WGS 84). 7 October 2015. B. Holt. AUM 42770. Individual found DOR.

CLARKE Co.: CR 15, 1.82 rd km S of CR 2 (31.47433°N, 87.87865°W; WGS 84). 6 October 2015. B. Holt. AUM AHAP-D 1128. Individual found AOR.

CLAY Co.: CR 31, 1.29 rd km S of Caldwell Road (33.32557°N, 85.84788°W; WGS 84). 5 August 2015. B. Holt. AUM 42774. Individual found DOR.

COFFEE Co.: CR 239, 1.50 rd km W of CR 223 (31.47611°N, 85.93187°W; WGS 84). 16 June 2015. B. Holt. AUM AHAP-D 1046. Individual found DOR.

LIMESTONE Co.: private residence off Inverness Place, 0.19 rd km W of Brigadoon Drive (34.75495°N, 87.16776°W; WGS 84). 30 July 2014. J. Paustian. AUM AHAP-D 1056.

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## New Island Records for Reptiles in the Florida Keys, Monroe County, Florida, USA

The Florida Keys consist of approximately 1700 small, narrow, limestone islands comprised of mangrove swamps, tropical hammocks, and pine rocklands. These islands form a gentle arc southwesterly for ca. 220 km from the southeastern tip of peninsular Florida. A sea-level fall that began ca. 100,000 years ago is believed to be responsible for the distribution of a large part of the Pleistocene coral reef system and exposure of the Florida Keys (Randazzo and Halley 1997). Around 18,000 years ago when the sea level was >100 m lower than present day (Lidz and Shinn 1991), Florida was nearly twice its present size, and dry land extended from the present Florida mainland to the Dry Tortugas (MacNeil 1950; Hoffmeister and Multer 1968), allowing plants and animals to expand their ranges into previously unreachable areas. Subsequent melting of glaciers has caused sea level rise, and the exposed Keys are now elevated 1–6 m (highest is Windley Key) above mean sea level (Hoffmeister and Multer 1968; Randazzo and Halley 1997). Today, clear, shallow water and tens of thousands of hectares of sea grass beds and mangrove forests surround the low-elevation Florida Keys.

Many of the species that have successfully colonized the Florida Keys are now isolated from their mainland congeners. Florida's Fish and Wildlife Conservation Commission (FWC) lists seven reptile taxa (or populations) from the Florida Keys as state threatened: the Lower Keys population of Striped Mud Turtle (*Kinosternon baurii*), Florida Keys Mole Skink (*Plestiodon egregius egregius*), Keys Ring-necked Snake (*Diadophis punctatus acricus*), Lower Keys population of the Red Cornsnake (*Pantherophis guttatus*), Lower Keys population of the Florida Brownsnake (*Storeria victa*), Rim Rock Crowned Snake (*Tantilla oolitica*), and the Lower Keys population of the Eastern Ribbonsnake (*Thamnophis sauritus*). From January 2015 to July 2016, FWC's Fish and Wildlife Research Institute conducted a project targeting listed reptiles in the Lower Keys to garner more information on their distribution, rarity, and effective techniques for detection. Sampling methodologies included trapping, road cruising, timed pedestrian surveys, and artificial cover objects.

Here we report 25 new island records for reptiles in the Florida Keys (all in Monroe County). New records were determined by consulting Krysko et al. (2011). Voucher specimens or photos were

deposited at the Florida Museum of Natural History and verified by Kenneth L. Krysko. Locality information was recorded with a handheld GPS (WGS 84). Surveys were performed under U.S. Fish and Wildlife Service permit #FF04RFKD0-2015-027 and Florida Department of Environmental Protection permit #05261515.

### TESTUDINES — TURTLES

**KINOSTERNON BAURII (Striped Mud Turtle).** Big Torch Key, Dorn Road (24.72763°N, 81.44615°W). 26 January 2016. Jonathan D. Mays and E. Pierson Hill. UF 178935 (photo voucher). Adult female found AOR at dusk. First verified record for island.

Little Torch Key, SR 4A near Torchwood Estates (24.68065°N, 81.39488°W). 31 October 2015. Michael T. Jones and Jonathan D. Mays. UF 177201 (photo voucher). Adult female found DOR. First verified record for island.

No Name Key, S of Watson Road (24.69694°N, 81.32917°W). 26 April 2016. Matthew Rubenstein. UF 178936 (photo voucher). Two adults found active in a solution hole wetland.

Ramrod Key, Johnson Road (24.68065°N, 81.39488°W). 31 October 2015. Jonathan D. Mays, Kevin M. Enge, and Sarah Steele. UF 178449 (photo voucher). Adult female found AOR just after sunset. First verified record for island.

**TERRAPENE BAURII (Florida Box Turtle).** Little Torch Key, W of SR 4A, Torchwood Acres (24.68297°N, 81.39652°W). 14 January 2015. Jonathan D. Mays, Adam Emerick, Kevin M. Enge, Randy Grau, Lindsay Nester, and Ricardo Zambrano. UF 175342 (photo voucher). Adult male.

**TRACHEMYS SCRIPTA SCRIPTA (Yellow-bellied Slider).** Big Pine Key, Key Deer National Wildlife Refuge (24.68241°N, 81.35913°W). 27 August 2015. Jonathan D. Mays and Kevin M. Enge. UF 176015 (photo voucher). Adult male (189 mm CL, 1223 g) captured in collapsible bait trap set in freshwater mosquito ditch.

Stock Island, Key West Botanical Garden (24.57313°N, 81.74891°W). 25 July 2015. Kevin M. Enge and Jonathan D. Mays. UF 176013 (photo voucher). One adult female observed swimming in pond with numerous *Trachemys scripta elegans* (Red-eared Slider). Both *T. s. elegans* and *T. s. scripta* are introduced in the Lower Keys.

### CROCODYLIA — CROCODYLIANS

**ALLIGATOR MISSISSIPPIENSIS (American Alligator).** No Name Key, Key Deer National Wildlife Refuge, water-filled rock quarry S of Watson Road (24.69545°N, 81.32967°W). 26 August 2015. Jonathan D. Mays and Kevin M. Enge. UF 176012 (photo voucher). Subadult (ca. 1 m TL) observed swimming in quarry.

### SQUAMATA — LIZARDS

**ASPIDOSCELIS SEXLINEATA (Six-lined Racerunner).** Bahia Honda Key, Bahia Honda State Park (24.65766°N, 81.27626°W).

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29 October 2015. Jonathan D. Mays and Kevin M. Enge. UF 177200 (digital photo voucher). Two adults found together DOR.

Middle Torch Key, N end of island (24.69337°N, 81.40714°W). 29 October 2015. Jonathan D. Mays. UF 177199 (photo voucher). One adult observed moving through leaf litter in a stand of buttonwood.

**IGUANA IGUANA (Green Iguana).** Cudjoe Key, Blimp Rd (24.67496°N, 81.49963°W). 15 June 2016. Jonathan D. Mays and Kevin M. Enge. UF 178467(photo voucher). Small adult found DOR.

Lower Matecumbe Key, Islamorada, SW corner of island in parking area for Florida Keys Overseas Heritage Trail, just before bridge over Channel Two (24.84523°N, 80.74764°W). 1 November 2015. Jonathan D. Mays and Michael T. Jones. UF 177198 (photo voucher). Five adults observed basking atop large rocks at water's edge.

Spanish Harbor Key (a.k.a. Scout Key), E/NE corner of island, S of US 1 in parking lot overlooking Old Bahia Honda Bridge (24.65299°N, 81.30258°W). 28 January 2016. Jonathan D. Mays and E. Pierson Hill. UF 177334 (photo voucher). Five adults observed of varying sizes.

**PLESTIODON EGREGIUS EGREGIUS (Florida Keys Mole Skink).** Boca Chica Key, beach SW of Geiger Creek and SE of Boca Chica Road, (24.56736°N, 81.67154°W). 27 January 2016. E. Pierson Hill and Jonathan D. Mays. UF 177339 (photo voucher). Adult male (45 mm SVL) found in litter. First verified record for island.

Sawyer Key, Great White Heron National Wildlife Refuge (24.75690°N, 81.56994°W). 27 February 2016. Adam Emerick and Jonathan D. Mays. UF 177355 (photo voucher). Single adult female raked out of litter.

**SPHAERODACTYLUS NOTATUS NOTATUS (Florida Reef Gecko).** Bahia Honda Key, Bahia Honda State Park (24.65481°N, 81.28117°W). 28 August 2015. Kevin M. Enge and Jonathan D. Mays. UF 176016 (photo voucher). Four individuals captured under coverboards. Subsequent surveys in the park observed 21 more of both sexes every month of the year except July.

Sawyer Key, Great White Heron National Wildlife Refuge (24.75637°N, 81.57088°W). 27 February 2016. Jonathan D. Mays and Adam Emerick. UF 177358 (photo voucher). Adult female found under debris.

#### SQUAMATA — SNAKES

**COLUBER CONSTRICTOR PRIAPUS (Southern Black Racer).** Spanish Harbor Key (a.k.a. Scout Key), E/NE corner of island, S of US 1 and W of parking lot overlooking Old Bahia Honda Bridge (24.65299°N, 81.30258°W). 28 January 2016. Jonathan D. Mays and E. Pierson Hill. UF 177332 (photo voucher). Adult observed hunting wrack line.

**CROTALUS ADAMANTEUS (Eastern Diamond-backed Rattlesnake).** Sawyer Key, Great White Heron National Wildlife Refuge (24.75682°N, 81.57023°W). 27 February 2016. Jonathan D. Mays

and Adam Emerick. UF 177356 (photo voucher). Two adults and one juvenile observed basking just above the wrack line.

**DIADOPHIS PUNCTATUS ACRICUS (Key Ring-necked Snake).** Cudjoe Key, Key Deer National Wildlife Refuge (24.67621°N, 81.49095°W). 25 January 2016. E. Pierson Hill and Jonathan D. Mays. UF 177337 (photo voucher). Adult found under coverboard.

**INDOTYPHLOPS BRAMINUS (Brahminy Blindsnake).** Boca Chica Key, beach SW of Geiger Creek and SE of Boca Chica Rd (24.56728°N, 81.67164°W). 27 January 2016. E. Pierson Hill and Jonathan D. Mays. UF 177336 (photo voucher). Large adult raked from under sea-grape leaves.

Spanish Harbor Key (a.k.a. Scout Key), Camp Sawyer/Camp Wesumkee (24.64875°N, 81.31020°W). 28 January 2016. E. Pierson Hill and Jonathan D. Mays. UF 177335 (photo voucher). Adult found under cover object.

**NERODIA CLARKII COMPRESSICAUDA (Mangrove Salt-marsh Watersnake).** Geiger Key, Boca Chica Road (24.58025°N, 81.65291°W). 24 July 2015. Jonathan D. Mays and Kevin M. Enge. UF 176830 (photo voucher). Adult found DOR.

Sawyer Key, Great White Heron National Wildlife Refuge (24.75637°N, 81.57088°W). 27 February 2016. Adam Emerick and Jonathan D. Mays. UF 177360 (photo voucher). Copper-colored adult found flipping debris near the wrack line.

**THAMNOPHIS SAURITUS (Eastern Ribbonsnake).** Big Torch Key, Dorn Road (24.72763°N, 81.44549°W). 27 September 2014. Adam Emerick. UF 178981 (photo voucher). Two adults observed AOR.

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## Past and Present Distribution of the North American Racer (*Coluber constrictor*) in Maine, USA

*Coluber constrictor* reaches the northeastern terminus of its extensive distribution in southern Maine, USA, where it inhabits dry pitch pine and scrub oak forests, sandplain barrens, and other early-successional habitats such as old fields and utility rights-of-way (Vickery 1999; McCollough et al. 2003; Mays and Persons 2011). In 1986, *C. constrictor* was listed as Endangered by the Maine Department of Inland Fisheries and Wildlife (MDIFW; McCollough et al. 2003). In addition to apparent small population size and limited range in the southern half of the state, its status as Endangered was partly based upon a perceived reduction of its distribution in Maine over the past century (Vickery 1999; McCollough et al. 2003). However, evidence for a wider past distribution has always been limited and has not been critically examined. Here, we review records of *C. constrictor* from Maine and evaluate the evidence for a formerly more extensive distribution.

### DISTRIBUTION OF *COLUBER CONSTRICTOR* AS DEPICTED IN THE LITERATURE

The distribution of *C. constrictor* near the northeastern edge of its range has often been imprecisely depicted in the literature, possibly contributing to the impression of a rapidly contracting range in recent times. For example, Auffenberg (1955), Bleakney (1958), Conant (1958), and Wright and Wright (1957) all depicted *C. constrictor* as occurring in the Canadian Maritime provinces. Cook (1967) thoughtfully rejected the Maritimes records, which were all based on sight reports, and Gilhen (1984) similarly rejected reports from Nova Scotia. However, the most recent edition of the popular Golden Guide to Reptiles and Amphibians (Zim et al. 2001) still depicts the range as including most of New Brunswick and Nova Scotia, as well as all of Maine. The most recent editions of the Peterson field guide (Conant and Collins 1998; Powell et al. 2016) do not include the Maritimes within the range of *C. constrictor*, but still depict the distribution as extending along the coast of Maine as far east as Penobscot Bay (Fig. 1), and the range is similarly mapped in DeGraaf and Rudis (1983) and Ernst and Ernst (2003), although a revision of the former (DeGraaf and Yamasaki 2001) more accurately restricts the distribution to extreme southern Maine. The widespread depiction of *C. constrictor* occurring as far east as Penobscot Bay is probably based on two Maine localities plotted by Auffenberg (1955), which were likely the source of the same two reports (identified as “literature records”) and corresponding range boundary mapped by Wilson (1978). While the westernmost of these two records likely represents a specimen record from

Auburn (see below), the easternmost dot, near the western edge of Penobscot Bay, does not correspond to any specimen or literature reference of which we are aware.

Hunter et al. (1999) mapped individual township records of *C. constrictor*, but only included those gathered as part of the Maine Amphibian and Reptile Atlas Project (MARAP) and did not include previous museum specimens or literature records. Most of the township reports included in Hunter et al. (1999) were sight records lacking detailed descriptions, including all of those from the northern half of the mapped range in northern York County and southern Oxford County (MARAP data files). The most detailed distribution map published for *C. constrictor* in Maine is McCollough et al. (2003), who presented an up-to-date dot distribution map for the species. However, this map includes a number of unverified and suspect reports, and, like Hunter et al. (1999), only those records from the extreme southern portion of the range in York County are based on documented reports. Specifically, the map in McCollough et al. (2003) includes a number of records from northern York and southern Oxford counties that were gleaned from landowner interviews (Haskins 2000). While a few of these reports are suggestive of the recent past occurrence of *C. constrictor*, without documentation they should not be taken as evidence of its historic or current presence in these areas. Likewise, two records plotted in eastern Cumberland County in McCollough et al. (2003) are based on undocumented reports lacking detailed descriptions, and one of these observers has since questioned their own identification (MDIFW data files). The most noteworthy record plotted in McCollough et al. (2003) is a 2002 observation from Mechanic Falls in extreme southern Androscoggin County, which would appear to represent a range extension to the northeast, and is just west of Auburn, the stated locality of an 1883 specimen (see below). The Mechanic Falls snake was captured by MDIFW personnel in a residential area, photographed, and released on the outskirts of town. Recent examination of these documentation photographs in MDIFW files showed the snake was not *C. constrictor*, but instead an all-black kingsnake, perhaps *Lampropeltis getula nigra* or *L. g. nigrita*, and therefore represented an escaped or liberated captive. All documented Maine township records of *C. constrictor* are presented in Table 1, and Fig. 1 shows all documented locality records as well as significant undocumented and questionable historic records discussed below.

### EVIDENCE FOR RANGE CONTRACTION

Current evidence for a more extensive past distribution of *C. constrictor* in Maine primarily consists of a single museum specimen and an undocumented literature reference from well north of the current known range of the species, as well as a number of unverified historic reports from closer to the current known range. Vickery (1999) states: “Originally widespread throughout the southern part of the state, racers have declined in recent years, and their range now appears to be restricted to York and southern Oxford counties.” Similarly, McCollough et al. (2003) state that “although it was common as far north as

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Cobbosseecontee Lake in the 1930s, the black racer is now rare, and its range is limited to York, Cumberland, and southern Oxford counties.” McCollough et al. (2003) elsewhere note a “drastic reduction in range” and add “at the height of farming in Maine, the species ranged farther north to the Belgrade Lakes area [presumably a reference to the Cobbosseecontee Lake report, which is approximately 18 km south of the Belgrade Lakes]. Its numbers and range declined drastically as agricultural land reverted to forest land or was developed.” *Coluber constrictor* favors early-successional habitats in northern New England (e.g., Vickery 1999; Kjoss and Litvaitis 2001), and the hypothesis that they increased in numbers and range during widespread land clearing in the 1800s and during the subsequent period of farm abandonment and concomitant temporary increase of early-successional habitats in the early 1900s (Litvaitis 1993) seems logical. However, the evidence supporting this past wider distribution of *C. constrictor* in Maine is, as outlined below, largely unconvincing.

Fowler (1942) compiled records of amphibians and reptiles he observed or collected at a YMCA camp on the western shore of Cobbosseecontee Lake in Winthrop, Kennebec County between 1934 and 1941. This location is 104–110 km northeast of the closest documented records of *C. constrictor* in York County (Fig. 1). His brief account of *C. constrictor* (“a common species often seen along the stone walls of the fields back of the lake”) is too casual for a species that at that location should have been more noteworthy, and the fact that no specimens were collected, as they were for most other species he reported from the area (specimens at CM and USNM), further undermines the reliability of the observations. Although agricultural fields may have been locally more extensive in the 1930s than today, nothing about the habitat suggests it was an especially likely location to harbor a relict population of *C. constrictor*. In addition to aquatic lakeshore habitats, Fowler (1942) described the area surrounding the lake as “a fringe of mixed coniferous forest containing several sphagnum bogs, back from which are cultivated hillsides reaching an elevation of 400 feet.” While we cannot completely rule out the possibility of a relict population of *C. constrictor*, now apparently gone, it seems more likely that Fowler (1942) misidentified another species, perhaps dark-colored Common Gartersnakes (*Thamnophis sirtalis*), individuals of which are sometimes reported as *C. constrictor* (MARAP data files). Likewise, Common Watersnakes (*Nerodia sipedon*) are sometimes reported as *C. constrictor* when seen away from water (MARAP data files), and when dry often appear solidly black, although Fowler’s (1942) description of seeing the snakes along stone walls is more suggestive of *T. sirtalis*. All in all, the unlikely location, lack of physical evidence or written description, and absence of independent reports or collections from the region combine to suggest that Fowler’s (1942) report was probably in error.

The other record suggestive of a substantially more extensive distribution is a specimen (USNM 14489) reportedly collected at Auburn, Androscoggin County, by George P. Merrill on 12 October 1883. Auburn is approximately 70–80 km northeast of the closest documented records (Fig. 1). This specimen was examined by Ortenburger (1928), and is likely the westernmost of two Maine records plotted by Auffenberg (1955) and Wilson (1978). The specimen is part of a series of 13 amphibian and reptile specimens at USNM with the same date and locality, suggesting that the date at least may refer to when the specimens were received by the museum rather than actually collected. In any event, two details

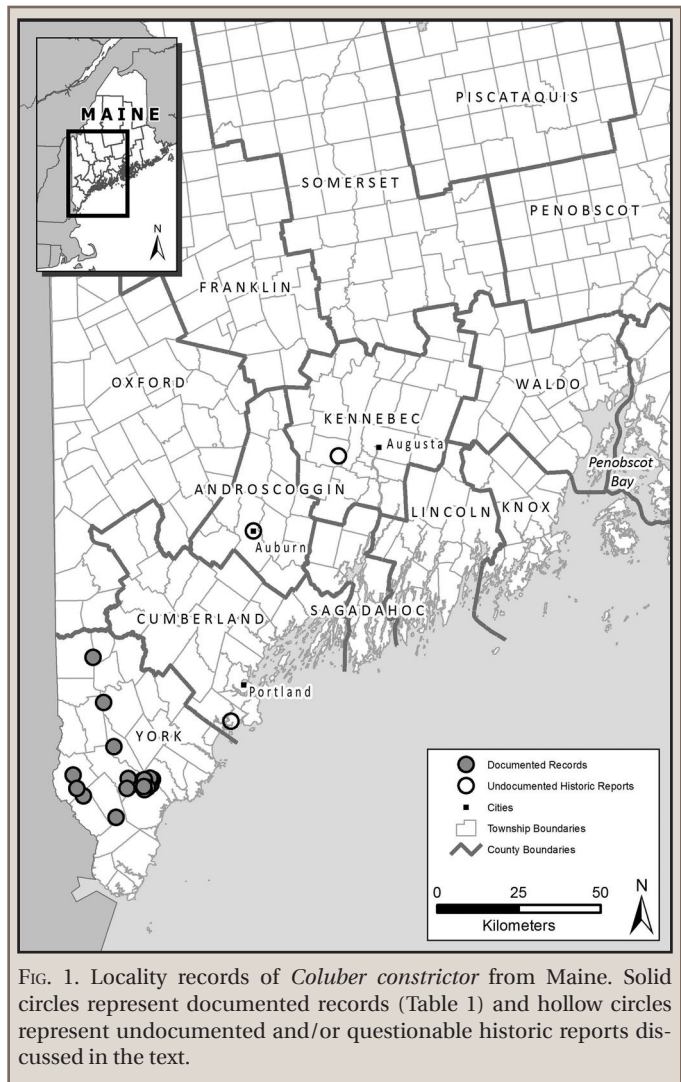


FIG. 1. Locality records of *Coluber constrictor* from Maine. Solid circles represent documented records (Table 1) and hollow circles represent undocumented and/or questionable historic reports discussed in the text.

of this series of specimens immediately raise red flags. First, 11 of the 13 specimens are given consecutive catalog numbers (USNM 13710–13720), while the *C. constrictor* and its predecessor, USNM 14488, were apparently cataloged later; and second, USNM 14488 is a specimen of Tiger Salamander (*Ambystoma tigrinum sensu lato*), a species that occurs no closer to Maine than Long Island, New York (Conant and Collins 1998). We examined photographs of USNM 14488 and 14489, and both appear to be correctly identified. In addition to the suspect cataloging, several features of the *C. constrictor* specimen are inconsistent with a Maine (or New England) origin. The specimen is a juvenile male and is very light-colored (although this could be an artifact of preservation), has numerous relatively small dorsal blotches that become difficult to discern and count posteriorly, and has a sparsely spotted venter. These characters are more consistent with juveniles from the southern and western portions of the continental range, as northern and eastern juveniles tend to be darker above, have larger and less numerous dorsal blotches, and more extensive ventral dark spotting (Auffenberg 1955). In addition, Ortenburger (1928) counted 166 ventrals on this specimen, a figure we confirmed from photographs, and which is 9–15 lower than means from his samples of *C. c. constrictor* and *C. c. flaviventris* throughout the eastern U.S. range except for Texas. Wilson (1970) reported a mean of 165.9 (161–170)

TABLE 1. Township records of *Coluber constrictor* from Maine, USA, documented with photographs or museum specimens. Photographs are on file with the Maine Department of Inland Fisheries and Wildlife. Some townships are represented by multiple locality records (see Fig. 1).

Township (all in York Co.)	Record type (specimen numbers)
Alfred	photograph
Berwick	photograph
Kennebunk	specimen (YPM 12251, 12252, 17325)
Lebanon	photograph
North Berwick	photograph
Parsonsfield	specimen (MCZ 176988)
Sanford	specimen (YPM 17027)
Waterboro	photograph
Wells	specimen (YPM 17324)

ventrals for male *C. c. flaviventris* from Louisiana and eastern Texas, and Ortenburger (1928) reported a mean of 170.2 for male *C. c. mormon* from California, Oregon, Washington, and western Canada. In his Fig. 44, Ortenburger (1928; p. 206) shows USNM 14489 (his entire Maine sample) as a significant outlier among eastern U.S. *C. constrictor*, counter to the trend of increasing numbers of ventrals from southwest to northeast. Rather than suspect error, Ortenburger (1928) used these data to support a general theory of a steep reversal in the number of ventrals at the extreme northern periphery of the range, which is weakly supported by his data on West Coast *C. c. mormon*. We examined photographs of the five other Maine specimens available for study (Table 1; YPM 12251 is too badly mangled) and calculated a mean of 176.8 (170–181) ventrals, similar to other northeastern samples. The range of variation in ventrals within any population of *C. constrictor* makes assignment of a single individual to a given geographic region based solely on this character nearly impossible. However, the relatively low number of ventrals on USNM 14489 is additional reason for suspicion. This, in conjunction with dorsal pattern and cataloging irregularities, as well as a lack of other historic or recent valid reports from the Auburn area, all suggest that the specimen was not collected in Maine. While it may be impossible to know where it actually was collected, it is suggestive that the next catalog number in sequence (USNM 14490) is an *A. tigrinum* collected (or received) at Fort Wingate, McKinley County, New Mexico in 1885. Although poorly preserved, the *A. tigrinum* purportedly from Maine is virtually unicolored, as are many from New Mexico, especially those from higher elevations (Degenhardt et al. 1996). Since *C. constrictor* also occurs sparingly in northwestern New Mexico (Degenhardt et al. 1996), it seems plausible that this region could be the source of both USNM 14488 and 14489.

Norton (1929) regarded Josselyn's (1674) account of large snakes "black of colour" killed at Black Point, Scarborough, Cumberland County to represent *C. constrictor*. Josselyn described some of these snakes as being "as big as the small of my leg" and "three yards long." Such exaggeration is so extreme as to render hopeless any attempt to calibrate his observations with the actual proportions of any native snake species. Although Black Point is less than 30 km northeast of recent documented records of *C. constrictor* from Kennebunk, York County (Fig. 1), given the coastal location it is more likely that Josselyn observed

dark-colored *Thamnophis sirtalis*, or possibly *Nerodia sipedon*, although that species, while widely distributed in southern Maine, is not known from Scarborough or nearby coastal areas (Hunter et al. 1999; MARAP data files).

Other, less outlying historic reports of *C. constrictor* north of its currently documented range include those from northern York, southern Oxford, and western Cumberland counties gleaned from interviews with elderly landowners who reported observing snakes in past decades (Haskins 2000), as well as various additional undocumented reports from these areas in the MARAP data files, many of which were mapped by Hunter et al. (1999) and McCollough et al. (2003). While some of these historic reports could be correct, none of them include sufficient detail to be considered valid records for a species range extension.

The single documented historic record of *C. constrictor* north of its current known range is an adult specimen (MCZ 176988) from Parsonsfield, northern York County, collected August 1912. The specimen is legitimate and represents the northernmost documented locality for *C. constrictor* in Maine (Fig. 1). It should be noted that in the online VertNet specimen database, as well as in MCZ's master catalog, the locality is given as "East Parransfield." This is a transcription error from when the specimen was transferred from the Lee Museum of Biology, Bowdoin College (formerly catalog number R86) in 1992, as the original handwritten specimen label reads "East Parsonsfield, Me." The fact that until 1992 the specimen was housed in a small collection likely explains why it was overlooked by Ortenburger (1928), Auffenberg (1955), and Wilson (1978). The locality of this specimen is approximately 14 km north-northwest of the current northernmost documented locality at Waterboro Barrens in Waterboro. This does suggest *C. constrictor* may have been more widespread within the general region currently occupied, and the abandonment of agricultural land and re-growth of forests is a plausible mechanism to explain such a decline. *Coluber constrictor* occurring in Parsonsfield is not surprising given reports from nearby New Hampshire, including one individual photographed in 2014 at Ossipee, Carroll County, ca. 23 km west of East Parsonsfield and only ca. 12 km west of the Maine border (RAARP 2010; Mike Marchand and Brendan Clifford, New Hampshire Fish and Game Dept., pers. comm.). Although the historic East Parsonsfield record may represent an extirpated local population, survey effort has been minimal in this region and *C. constrictor* may in fact persist in the area.

The only other published reference to outlying records of *C. constrictor* in Maine is Brotherton et al. (2004), who suggested that two reported observations in the 1970s from Acadia National Park, Mount Desert Island, Hancock County, may have represented a "failed colonization"; these were most likely melanistic *T. sirtalis*. Coman (1987) stated that although *C. constrictor* occurred in the general region (an assumption likely based on inaccurate field guide maps) he could not find any reliable reports of the species from Mount Desert Island.

*Coluber constrictor* may have ranged farther north during the warmer hypsithermal period approximately 3,000–5,000 years ago. This is certainly the case for the Blanding's Turtle (*Emydoidea blandingii*) and Eastern Ribbonsnake (*Thamnophis sauritus*), species that currently reach the northern limit of their range in southern Maine but that also persist as relict populations in southern Nova Scotia (Gilhen 1984). However, *C. constrictor* left no such evidence of a similar former range. Especially relevant to hypothesizing about its distribution at the time of European settlement is the fact that New England was

then in the middle of a cold period, the so-called Little Ice Age, which lasted from about 1350 to 1870 (Pielou 1991). Smith et al. (1981) characterized Maine's climate during the period 1785–1885 as “cool with short intervals of warmer weather.” Also at the time of European settlement in New England, early-successional habitats potentially favored by *C. constrictor* were to some degree created and maintained by Native American agricultural practices, including extensive burning (Askins 1997). This was followed by widespread land clearing by Europeans, creating more potential habitat, that reached its peak around 1880 (Irland 1982). How *C. constrictor* in southern Maine responded to the opposing forces of increased habitat availability and colder temperatures than today is unknown. Not long after the Little Ice Age began to abate in the late 1800s, the amount of open habitat favored by *C. constrictor* began a steady decline. Without valid historic records significantly north of its current known range, discussion of when and how *C. constrictor* may have colonized these areas (e.g., McCollough et al. 2003) is academic. In any case, the availability of open habitats does not alone determine the northern range limit potential for *C. constrictor*. On a continental scale, Rosen (1991) found the northern distributional limit of *C. constrictor* to be closely correlated with the mean frost depth contour of 101.6 cm. While open, sunny habitats are undoubtedly especially important for thermoregulation of active snakes at the northern edge of their range, the successful incubation of eggs in the summer and survival of snakes over winter are probably the factors ultimately limiting their distribution in Maine, factors that are likely more favorable today than at the height of land clearing in the 1800s.

#### CONCLUSION

We have found no compelling evidence that *Coluber constrictor* was historically distributed appreciably farther north in Maine than it is today, and it might previously have been largely confined to the open pitch pine and scrub oak woodlands and associated sandplain barren habitats which are currently its stronghold. Agricultural land clearing following European settlement, like earlier pre-settlement prescribed burning by Native Americans, likely opened up new habitats within the generally occupied (and climatically hospitable) range, and it is reasonable to speculate that the subsequent decline of these agricultural lands led to local declines or extirpations of *C. constrictor* populations. While we find no evidence for a significant retraction in range, this does not imply that its future in the state is secure. On the contrary, rampant development throughout the limited range of *C. constrictor* in southern Maine, mostly in the form of urban sprawl (Maine State Planning Office 1997), has reduced and fragmented available habitat. For example, it is projected that from 1995 to 2050 York County will have lost 43,300 hectares of forest and agricultural land to urban development (Plantinga et al. 1999). In addition, increasing vehicle traffic in the region likely negatively impact existing populations through road mortality. Maintaining viable populations of *C. constrictor* in Maine will likely necessitate conservation and management of large areas of currently occupied habitat as well as suitable migration corridors and buffer zones to facilitate connectivity between populations.

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