Catalogue of American Amphibians and Reptiles.

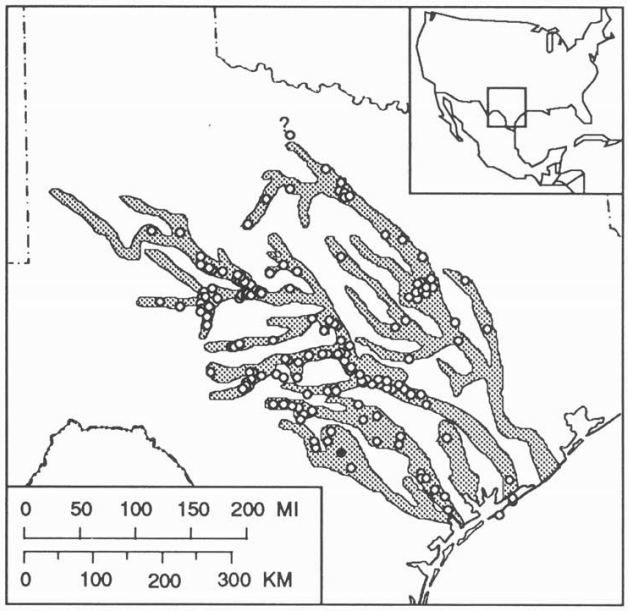
Etchberger, Cory R., and John B. Iverson. 1990. *Pseudemys texana.*

Pseudemys texana Baur
Texas Cooter

Pseudemys texana Baur, 1893:223. Type-locality, "San Antonio [Bexar County], Texas". Holotype, Academy of Natural Sciences Philadelphia (ANSP) 246, a stuffed female, collected by Dr. Heermann in 1893 (examined by authors).
Chrysemys texana: Strecker, 1915:12.
Pseudemys floridana texana: Carr, 1938:108.
Pseudemys concinna texana: Conant, 1958:59.
Chrysemys concinna texana: Conant, 1975:65.

• **Content.** *Pseudemys texana* is monotypic.

• **Definition.** Adult females reach approximately 319 mm in carapace length, whereas males attain only 253 mm carapace length. The adult carapace is oval in dorsal view, longitudinally rugose, and not highly domed. The medial vertebral keel is obvious but not prominent. The posterior margin of the carapace is bluntly serrated. Carapacial ground color is olive brown, with an obvious light, reticulate, symmetrical pattern in younger individuals that becomes diffuse and vermiculate with age. The juvenile pattern includes five or six distinct, lighter rings or whorls on the second pleural scutes, and four concentric rings on the ventral seams between the marginals. The plastron lacks a hinge, and is emarginate posteriorly; the interabdominal has the longest midline seam (at least 25% of maximum plastron length). No plastral pattern is obvious in older individuals, although the plastron is usually tinged with red, especially near the margins. Juveniles have a pattern of narrow dark lines generally following the plastral seams, and often diffusing outward from those seams. The head pattern is highly variable with many thin yellow stripes on a dark background, but almost always with a broad prominent yellow stripe extending posteroventrally from below the eye, with a broad vertical branch extending dorsally across the anterior margin of the tympanum. A narrow supraorbital stripe also broadens posteriorly in the temporal region. The chin and throat are marked with numerous longitudinal yellow stripes. The upper jaw has a medial tuberculate ridge and a central notch with a cusp on each side. The lower jaw rim is coarsely serrated, and the triturating surface is broad. The coronoid height is less than 30% of mandibular length and roughly equal to lower alveolar shelf width. Males have long, thick tails with the vent situated posterior to carapacial margin; females have short, stubby tails with the vent well anterior to the posterior carapacial margin. The nails on the manus of males are much longer than those of females.



Map. Distribution of *Pseudemys texana*. Solid circle indicates type-locality. Open circles indicate other localities.

• **Descriptions.** General descriptions are in Baur (1893), Carr (1938, 1942, 1952), Conant (1958, 1975), Pritchard (1967, 1979), Ernst and Barbour (1972, 1989), and Ward (1984), although only Baur (1893) and Ward (1984) referred to the species as currently defined.

• **Illustrations.** Black and white photographs are in Carr

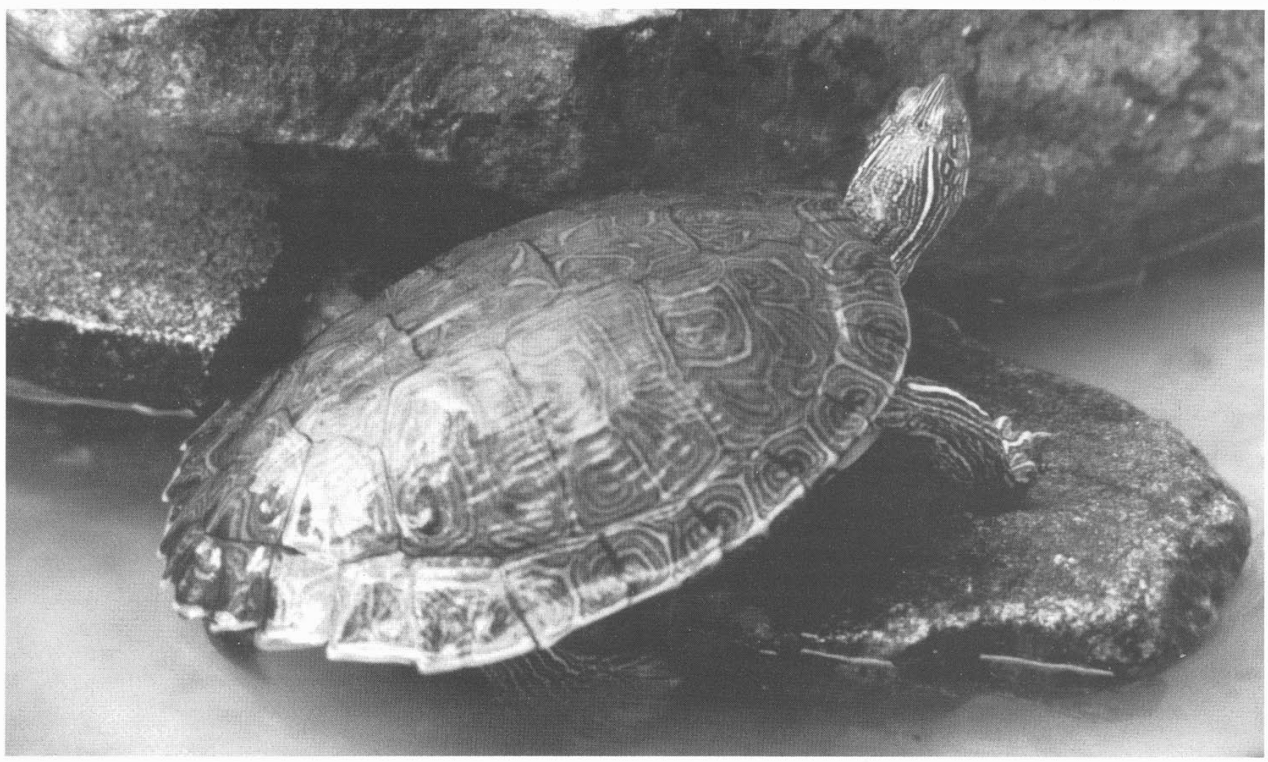


Figure 1. Adult *Pseudemys texana* from the Concho River, Concho County, Texas. Photograph by Edward Farmer.

(1952; an adult male and hatchlings, although Figures B, C, and D, Plate 60, page 313 are not *texana*, but *P. concinna* and *P. gorzugi*), Pritchard (1979; of a juvenile plastron), and Fritz (1989; carapace and plastron of male). Drawings of the head pattern and skull appear in Carr (1952) and Gaffney (1979), respectively.

• **Distribution.** *Pseudemys texana* occurs in the Colorado (Concho, Llano, San Sabo), Brazos, Guadalupe, and San Antonio river drainages in central Texas. The most accurate distribution maps appear in Ward (1984), Iverson (1986), and Dixon (1987).

• **Fossil Record.** None.

• **Pertinent Literature.** A general account of the biology of *Pseudemys texana* is unavailable, in part because much of the literature has confused *P.texana* with *P. floridana* or *P. concinna*. Important references are listed by topic. Mitotic chromosomes: Killebrew (1977; includes *concinna*). Algal relationships: Dixon (1960; includes *concinna*). Rostral pores: Winokur and Legler (1984; includes *concinna*). Mental glands: Winokur and Legler (1975; includes *concinna*). Choanal structure: Parsons (1960, 1968; include *concinna*). Hemoglobin: Sullivan and Riggs (1967a-c; includes *concinna*). Maximum size: Killebrew and Porter (1989). Captive maintenance and courtship: Fritz (1989). References to diet (Strecker, 1927) and dicephaly (Pilch, 1981) do not refer to *Pseudemys texana* as presently defined.

• **Etymology.** The specific name *texana* refers to the state in which the species occurs.

• **Remarks.** The definition of *Pseudemys texana* and its distinctiveness from *P. concinna* are far from clear. Dr. James R. Dixon (pers. comm.) has noted previously undocumented and significant geographic variation in color pattern even within the Colorado River basin. A definitive study of morphological as well as biochemical variation across drainage basins (and subdivisions thereof) in the *texana-concinna* species complex is badly needed. Such a study could confirm or deny whether the holotype was actually collected at the type-locality or merely shipped from that location.

Figure 2. Close-up of the head of an adult *Pseudemys texana* from Leon Creek, Kelly AFB, Bexar County, Texas. Photograph by Edward Farmer.

Literature Cited

Baur, George. 1893. Notes on the classification and taxonomy of the Testudinata. Proc. Amer. Philos. Soc. 31:210-225.

Carr, Archie F. 1938. A new subspecies of *Pseudemys floridana* with notes on the *floridana* complex. Copeia 1938(3):105-109.

———. 1942. The status of *Pseudemys concinna texana*, with notes on parallelism in *Pseudemys*. Proc. New England Zool. Club 21: 69-76.

———. 1952. Handbook of turtles. The turtles of the United States, Canada, and Baja California. Comstock Publ. Assoc., Cornell Univ. Press, Ithaca, New York. xv + 542 p.

Conant, Roger 1958. A field guide to reptiles and amphibians of the United States and Canada east of the 100th Meridian. Houghton Mifflin Co., Boston. 366 p.

———. 1975. A field guide to the reptiles and amphibians of eastern and central North America. Houghton Mifflin Co., Boston. 429 p.

Dixon, James R. 1960. Epizoophytic algae on some turtles of Texas and Mexico. Texas J. Sci. 12(1/2):36-38.

———. 1987. Amphibians and reptiles of Texas. Texas A & M Univ. Press, College Station. 434 p.

Ernst, Carl H., and Roger W. Barbour. 1972. Turtles of the United States. Univ. Press Kentucky, Lexington. x + 347 p.

——— and ———. 1989. Turtles of the world. Smithsonian Inst. Press, Washington, D.C. xii + 313 p.

Fritz, Uwe. 1989. Beitrag zur Kenntnis der Texas-Schmuckschildkröte (*Pseudemys texana* Baur 1893) (Reptilia: Testudines: Emydidae). Sauria (Berlin-W.) 11(1):9-14.

Gaffney, Eugene S. 1979. Comparative cranial morphology of Recent and fossil turtles. Bull. Amer. Mus. Nat. Hist. 164(2):67-376.

Iverson, John B. 1986. A checklist with distribution maps of the turtles of the world. Privately printed, Paust Press, Richmond, Indiana. viii + 283 p.

Killebrew, Flavius C. 1977. Mitotic chromosomes of turtles. IV. The Emydidae. Texas J. Sci. 39(3/4):245-253.

———, and Dan Porter. 1989. *Pseudemys texana* (Texas River Cooter): Size maximum. Herpetol. Rev. 20(3):70.

Parsons, Thomas S. 1960. The structure of the choanae of the Emydinae (Testudines, Testudinidae). Bull. Mus. Comp. Zool., Harvard 123(4):113-127.

———. 1968. Variation in the choanal structure of Recent turtles. Canad. J. Zool. 46(6):1235-263.

Pilch, Jim, Jr. 1981. *Chrysemys concinna texana* (Texas River Cooter): Morphology. Herpetol. Rev. 12(3):81.

Pritchard, Peter C. H. 1967. Living turtles of the world. T. F. H. Publ., Jersey City. 288 p.

———. 1979. Encyclopedia of turtles. T. F. H. Publ., Inc., Neptune, New Jersey. 895p.

Strecker, John K. 1915. Reptiles and amphibians of Texas. Baylor Univ. Mus. 18(4):1-82.

———. 1927. Observations on the food habits of Texas amphibians and reptiles. Copeia (162):6-9.

Sullivan, Bolling, and Austen Riggs. 1967a. Structure, function and evolution of turtle hemoglobins. I. Distribution of heavy hemoglobins. Comp. Biochem. Physiol. 23:437-447.

———. 1967b. Structure, function and evolution of turtle hemoglobins. II. Electrophoretic studies. Comp. Biochem. Physiol. 23:449-458.

———. 1967c. Structure, function and evolution of turtle hemoglobins. III. Oxygenation properties. Comp. Biochem. Physiol. 23:459-474.

Ward, Joseph P. 1984. Relationships of the chrysemyd turtles of North America (Testudines: Emydidae). Spec. Publ. Mus. Texas Tech. Univ. (21):1-50.

Winokur, Robert M., and John M. Legler. 1975. Chelonian mental glands. J. Morphol 147(3):275-292.

———. 1984. Rostral pores in turtles. J. Morphol. 143(1):107-120.

Cory R. Etchberger, Department of Biology, Indiana University, Bloomington, Indiana 47405, and **John B. Iverson,** Department of Biology, Earlham College, Richmond Indiana 47374.

Primary editor for this account, Carl H. Ernst.

Published 31 July 1990 and Copyright ©1990 by the Society for the Study of Amphibians and Reptiles.