

Catalogue of American Amphibians and Reptiles.

Lovich, J.E. and C.J. McCoy. 1994. *Graptemys ernsti*.

***Graptemys ernsti* Lovich and McCoy**
Escambia Map Turtle

Graptemys pulchra: Cagle, 1952:223 (part).

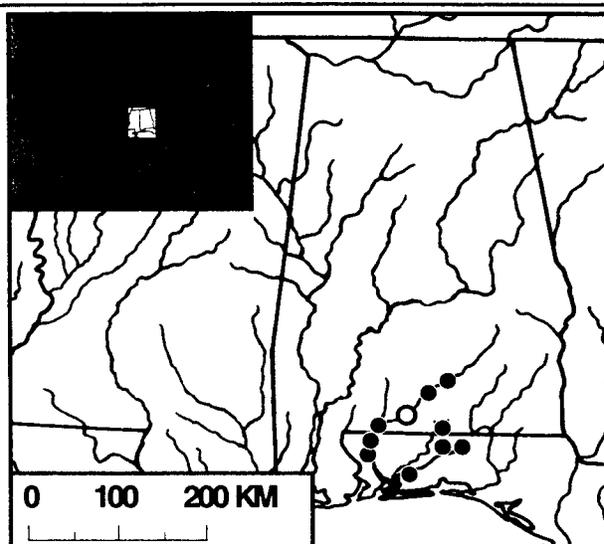
Graptemys ernsti Lovich and McCoy, 1992:293. Type-locality, "Concuh River, 1 mile upstream from County Road 4 Bridge, 14 km east of East Brewton, Escambia County, Alabama, USA." Holotype, Carnegie Museum 122408, a subadult female collected by Jeffrey E. Lovich, Anthony M. Mills, and Joshua Schachter on 30 September 1988.

• **Content.** No subspecies are recognized.

• **Definition.** The Escambia Map Turtle is a large (to 284 mm carapace length) species. The shell is high-domed, possesses a median keel, and has relatively wide yellow bars on the dorsal surface of the marginal scutes. The median carapace keel is composed of prominent spines on the posterior portions of the second and third vertebrals. Old females frequently appear "hump-backed" due to the dramatic anterior-posterior incline of the first vertebral scute. A broken black stripe, most pronounced anteriorly, marks the median vertebral keel, and each pleural scute has wide yellow rings and vermiculations on the distal part. The plastron is pale yellow with seam-following dark pigment, particularly on the transverse seams. Ground color of the head and limbs is brown to olive with light yellow or yellowish-green stripes and blotches. The head pattern consists of a large interorbital blotch that is not connected to the large postorbital blotches. Supraoccipital spots are usually present and these may fuse with the dorsal paramedian neck stripes. A three-pronged yellow blotch (nasal trident) is present on the dorsal head surface behind the nares.

Adult females can be over twice the length and weight of adult males (Gibbons and Lovich, 1990), and have conspicuously enlarged heads with broad jaw surfaces. Males have longer tails with the vent posterior to the rim of the carapace. Both sexes have relatively flat plastra.

• **Descriptions.** Complete descriptions are given in Lovich and McCoy (1992), McCoy and Lovich (in press), and Ernst et al. (1994). Prior descriptions are clouded by the fact that the Escambia Map Turtle was formerly considered to be *G. pulchra* (in part). The



Map. Range of *Graptemys ernsti*. The large circle marks the type-locality, dots indicate other selected localities (from Iverson, 1992).

reader is referred to Lovich (1985) for these composite descriptions.

• **Illustrations.** Color photographs of *Graptemys ernsti* are found in Ernst and Barbour (1972), Ernst et al. (1994), and Marion (1986). Black and white photographs are found in Ernst and Barbour (1972, 1989), Mount (1975), Pritchard (1979), and Shealy (1976, 1978, 1992). Composite illustrations of *G. ernsti* (as *G. pulchra*, in part) are listed in Lovich and McCoy (1992). Black and white photographs of a nuchal bone (AUMP 943) and a first left costal bone (AUMP 944), designated as *G. pulchra* by Dobie (1981), are *G. ernsti*.

• **Distribution.** The Escambia Map Turtle is found only in large to medium-sized rivers emptying into Escambia Bay, including the Concuah, Escambia, Yellow, and Shoal rivers in southern Alabama and western Florida, USA.

• **Fossil Record.** None.

• **Pertinent Literature.** Literature prior to the recognition of



Figure. A female *Graptemys ernsti* from the Concuah River in Escambia County, Alabama. Photograph by J.E. Lovich.

Graptemys ernsti as a separate species is summarized in Lovich (1985). Tinkle (1962), Little (1973), and Lovich and Ernst (1989) examined scute morphology in *G. pulchra* (*sensu lato*), including specimens of *G. ernsti*. Literature dealing specifically with turtle populations now recognized as *G. ernsti* is listed by topic: natural history data on reproduction, diet, habitat, and conservation (Cagle, 1952; McCoy and Lovich, in press; Shealy, 1976, 1978, 1992; Ernst et al., 1994), geographic distribution in Florida (Ashton and Ashton, 1985), correction of distributional records (Dobie, 1972), sexual size dimorphism (Gibbons and Lovich, 1990), blood proteins (McKown, 1972), and systematics and taxonomy (Lovich and McCoy, 1992; Lamb et al., 1994).

• **Etymology.** The specific epithet *ernsti* is a patronym honoring Dr. Carl H. Ernst of George Mason University.

• **Comment.** The Escambia Map Turtle was described by Lovich and McCoy (1992), who demonstrated that the species *Graptemys pulchra* Baur (1893:675) is a composite which consists of three distinct, allopatric species. The other species in the complex include *G. pulchra* (*sensu stricto*) of rivers tributary to the Mobile Bay Drainage in Alabama, Mississippi, and northwestern Georgia; and *G. gibbonsi* in the Pascagoula and Pearl river drainages, Mississippi and eastern Louisiana. The three species are well-differentiated on the basis of morphology and pattern, and exhibit divergent mtDNA genotypes (Lovich and McCoy, 1992; Lamb et al., 1994). These three species, together with *G. barbouri*, form the *Graptemys pulchra* species group. Additional information on *G. ernsti* (as *G. pulchra*, in part) was summarized by Lovich (1985).

Literature Cited

- Ashton, R.E., Jr. and P.S. Ashton. 1985. Handbook of the reptiles and amphibians of Florida. Part II. Lizards, turtles and crocodylians. Windward Publishing Co., Miami, Florida.
- Baur, G. 1893. Two new species of North American Testudinata. *Amer. Nat.* 27:675-677.
- Cagle, F.R. 1952. The status of the turtles *Graptemys pulchra* Baur and *Graptemys barbouri* Carr and Marchand, with notes on their natural history. *Copeia* 1952:223-234.
- Dobie, J.L. 1972. Correction of distributional records for *Graptemys barbouri* and *Graptemys pulchra*. *Herpetol. Rev.* 4:23.
- . 1981. The taxonomic relationships between *Malaclemys* Gray, 1844 and *Graptemys* Agassiz, 1857 (Testudines, Emydidae). *Tulane Stud. Zool. Bot.* 23:85-102.
- Ernst, C.H. and R.W. Barbour. 1972. Turtles of the United States. Univ. Press Kentucky, Lexington.
- and ———. 1989. Turtles of the world. Smithsonian Institution Press, Washington, D.C.
- , J.E. Lovich, and R.W. Barbour. 1994. Turtles of the United States and Canada. Smithsonian Institution Press, Washington, D.C.
- Gibbons, J.W. and J.E. Lovich. 1990. Sexual dimorphism in turtles with emphasis on the slider turtle (*Trachemys scripta*). *Herpetol. Monogr.* 4:1-29.
- Iverson, J.B. 1992. A revised checklist with distribution maps of the turtles of the world. Privately printed, Richmond, Indiana.
- Lamb, T., C. Lydeard, R.B. Walker, and J.W. Gibbons. 1994. Molecular systematics of map turtles (*Graptemys*): a comparison of mitochondrial restriction site versus sequence data. *Syst. Biol.* 43:543-559.
- Little, R.B. 1973. Variation in the plastral scutellation of *Graptemys pulchra* (Reptilia, Chelonia, Emydidae). *A.S.B. Bull.* 20:65-66.
- Lovich, J.E. 1985. *Graptemys pulchra* Baur. Alabama map turtle. *Cat. Amer. Amphib. Rept.*:360.1-360.2.
- and C.H. Ernst. 1989. Variation in the plastral formulae of selected turtles with comments on taxonomic utility. *Copeia* 1989:304-318.
- and C.J. McCoy. 1992. Review of the *Graptemys pulchra* group (Reptilia, Testudines, Emydidae), with descriptions of two new species. *Ann. Carnegie Mus.* 61:293-315.
- Marion, K.R. 1986. Alabama map turtle, p. 50-52. *In* R.H. Mount (ed.), Vertebrate animals of Alabama in need of special attention. Alabama Agr. Exp. Sta., Auburn, Alabama.
- McCoy, C.J. and J.E. Lovich. In press. *Graptemys ernsti*, Escambia map turtle. *In* P.C.H. Pritchard and A. Rhodin (eds.), Conservation of freshwater turtles. IUCN Species Survival Commission.
- McKown, R.R. 1972. Phylogenetic relationships within the turtle genera *Graptemys* and *Malaclemys*. Ph.D. diss., Univ. Texas, Austin.
- Mount, R.H. 1975. The Reptiles and Amphibians of Alabama. Auburn Univ. Agr. Exp. Sta., Auburn, Alabama.
- Pritchard, P.C.H. 1979. Encyclopedia of turtles. T.F.H. Publ., Inc., Neptune, New Jersey.
- Shealy, R.M. 1976. The natural history of the Alabama map turtle, *Graptemys pulchra* Baur, in Alabama. *Bull. Florida St. Mus. Biol. Sci.* 21:47-111.
- . 1978. Alabama map turtle, p. 50-51. *In* R.W. McDiarmid (ed.), Rare and endangered biota of Florida, volume three, amphibians and reptiles. Univ. Presses of Florida, Gainesville.
- . 1992. Alabama map turtle, p. 200-203. *In* P. E. Moler (ed.), Rare and endangered biota of Florida. Volume III, amphibians and reptiles. Univ. Press of Florida, Gainesville.
- Tinkle, D.W. 1962. Variation in shell morphology of North American turtles. I. The carapacial seam arrangements. *Tulane Stud. Zool.* 9:331-349.

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