

REPTILIA: TESTUDINES: EMYDIDAE

Graptemys pearlensis

Catalogue of American Amphibians and Reptiles.

Ennen, J.R., J.E. Lovich, and R. Birkhead. 2012.
Graptemys pearlensis.

***Graptemys pearlensis* Ennen, Lovich,
Kreiser, Selman, and Qualls
Pearl River Map Turtle**

Graptemys pulchra: Cagle 1952:223 (part).

Graptemys gibbonsi: Lovich and McCoy 1992:293
(part).

Graptemys pearlensis Ennen, Lovich, Kreiser, Selman, and Qualls 2010:104. Type-locality, "Pearl River at State Highway 28, near Georgetown, Copiah County, Mississippi, USA". Holotype, Carnegie Museum of Natural History (CM) 62162, an adult male, collected by T.E. Magers on 23 September 1967.

• **CONTENT.** No subspecies are recognized.

• **DEFINITION.** The Pearl River Map Turtle, *Graptemys pearlensis*, is a large aquatic species with maximum carapace length (CL) reaching 295 mm in females and a maximum CL of 120.7 mm in males (Ennen et al. 2010). The high-domed shell has a pronounced median keel with a complete black or brown stripe and prominent spines on the posterior portions of the 2nd and 3rd vertebral scutes. Dorsally, the marginal scutes have a relatively narrow vertical yellow bar without secondary pigmentation or conspicuous, concentric rings as in *Graptemys gibbonsi*. The 12th marginal scutes possess a vertical yellow bar that is usually 50% or less than the scute's length. However, when the bar is greater than 50%, it is distally located from the seam between the 12th marginal scutes. The carapace is olive green with the first 3 pleural scutes sometimes possessing yellow pigmentation (circular markings and vermiculations) on the distal parts. The plastron is pale yellow reaching 250 mm in females and 106 mm in males. Ground color and patterns of the head and limbs are very similar to those of *G. gibbonsi*. However, *G. pearlensis* is more likely to possess a nasal trident, a three-pronged yellow blotch on top of the snout.

Like other members of the *G. pulchra* clade, *G. pearlensis* exhibits sexual dimorphism with mean CL of adult females (247 mm) being larger than mean CL of males (102 mm) (Gibbons and Lovich 1990). In addition, females possess a wider head (36.4 mm, SD = 16.5) and wider alveolar surface (11.2 mm, SD = 5.3) than adult males (head width 15.5 mm, SD = 1.7 mm; alveolar width 3.8 mm, SD = 0.5; Lindeman, unpublished data). Both sexes have relatively flat plastrons.

• **DESCRIPTIONS.** A complete description is given in Ennen et al. (2010) and composite descriptions are given by Ernst et al. (1994), Ernst and Lovich (2009), Lovich and McCoy (1992, 1994), and Lovich et al. (2009). These earlier descriptions are obscured

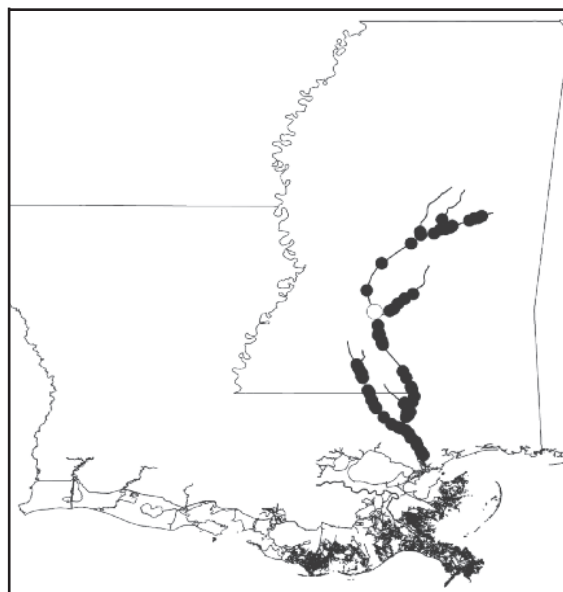


FIGURE 1. A female *Graptemys pearlensis* from the Pearl River in Louisiana, specific locality unknown. Photograph by Cris Hagen.

because *G. pearlensis* was not recognized at the time, and was included within *G. gibbonsi* from the Pascagoula River (Ennen et al. 2010). Detailed descriptions of the differences between the two species are given in Ennen et al. (2010).

• **ILLUSTRATIONS.** Color photographs of *Graptemys pearlensis* are found in Bonin et al (2006), Buhlmann et al. (2008), Ennen et al. (2010), and Mara (1996). Black-and-white illustrations of *G. pearlensis* are in Cagle (1952; as *G. pulchra*) and Powell et al. (2012).

• **DISTRIBUTION.** *Graptemys pearlensis* inhabits large to medium-sized waterways in the Pearl River system, Mississippi and eastern Louisiana, USA (Boyd and Vickers 1963; Iverson 1992; Lovich et al. 2009). Within the Pearl River, individuals occur as far north as Neshoba County, Mississippi (Keiser 2000) and as far south as Hancock County and St. Tam-



MAP. The open circle marks the type-locality for *Graptemys pearlensis*. Other selected localities are from Lindeman (2011).

many Parish, Louisiana approximately 20 river miles north of the Gulf of Mexico (Dickerson and Reine 1996; W. Selman, pers. comm.). *Graptemys pearlensis* also occurs in large tributaries such as Bogue Chitto River in Louisiana (Shively 1999; Lindeman 2010) and smaller tributaries in Mississippi and Louisiana including the Yockanookany River (Lindeman 1998), Pushepatapa Creek (Carr and Messinger 2002), Lobutch Creek, Strong River, and Topisaw Creek (P. Lindeman, pers. comm.). The Tickfaw River record (Dundee and Rossman 1989) was questioned by Lovich and McCoy (1992) because the species is absent in the tributaries between the Tickfaw and Bogue Chitto rivers (i.e., Tangipahoa, Tchefuncte, and Amite rivers: Cagle 1952; Cliburn 1971). A more detailed account of the distribution of *G. pearlensis* is given in Ennen et al. (2010).

• **FOSSIL RECORD.** None.

• **PERTINENT LITERATURE.** Prior to Ennen et al. (2010), literature on *Graptemys pearlensis* was included under that of either *G. pulchra* or *G. gibbonsi*. Lovich (1985) summarized the known literature for *G. pulchra* (*sensu lato*), which included specimens from the Pearl River. Literature including specimens formerly recognized as *G. pulchra* or *G. gibbonsi* from the Pearl River but now recognized as *G. pearlensis* is listed by topic: **scute morphology** (Ennen et al. 2010; Little 1973; Lovich and Ernst 1989; Lovich and McCoy 1992; Tinkle 1962), **collecting techniques** (Chaney and Smith 1950), **hatchling behavior** (Anderson 1958), **natural history data on reproduction, diet, habitat, basking, and conservation** (Buhlmann and Gibbons 1997, 2006; Buhlmann et al. 2009; Cagle 1952; Cheung and Dudgeon 2006; Dundee and Rossman 1989; Ernst and Lovich 2009; Lindeman 1998, 1999, 2000; Lindeman and Sharkey 2001; Lovich and Gibbons 1997; Lovich et al. 2009; Selman and Qualls 2007; U.S. Fish and Wildlife Service 2005; Selman et al. 2009), **sexual size dimorphism** (Gibbons and Lovich 1990), **systematics and taxonomy** (Ennen et al. 2010; Lamb et al. 1994; Lovich and McCoy 1992; Wiens et al. 2010), **hematology** (Perpinán et al. 2008), and **zoogeography** (Walker and Avise 1998).

The species is included in **general works** (e.g., checklists, keys) by Rhodin et al. (2010), van Dijk et al. (2011), and Powell et al. (2012).

• **REMARKS.** *Graptemys pearlensis* is listed as endangered (EN) on the IUCN Red List of Threatened Species (van Dijk 2011) and in CITES Appendix 3 (CITES 2011; UNEP-WCMC 2012).

• **ETYMOLOGY.** The specific epithet *pearlensis* is a toponym referring to the Pearl River drainage, which the species inhabits.

• **COMMENT.** With the recognition of *G. pearlensis* by Ennen et al. (2010), each member of the *G. pulchra* clade (broad headed group) is largely endemic to a single major drainage system of the Gulf coast.

The only exceptions occur in satellite drainages adjacent to the major system (e.g., *G. ernsti* populations in the Escambia, and Choctawhatchee rivers and *G. barbouri* in the Apalachicola, Choctawhatchee, Aucilla, and Ochlockonee rivers). However, the identity of the Choctawhatchee River population is not clearly resolved (J. Godwin pers. comm.), and the Aucilla, Wacissa, and Ochlockonee river populations could have been introduced by humans (Jackson 2003). Each species in the broad headed group is differentiated by mitochondrial DNA, morphology, and pigmentation.

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