

Catalogue of American Amphibians and Reptiles.

LAHANAS, PETER N. 1986. *Graptemys nigrinoda*.***Graptemys nigrinoda* Cagle**
Black-knobbed sawback*Graptemys lesueurii*: Agassiz, 1857: plate II (see COMMENT).*Graptemys nigrinoda* Cagle, 1954:173. Type-locality, "Black Warrior River, above lock 9, 17.5 miles SSW of Tuscaloosa, Tuscaloosa County, Alabama." Holotype, juvenile female, Tulane Univ. 14662, collected by a Tulane University field crew in 1952 or 1953 (not examined by author).*Graptemys oculifera nigrinoda*: Mertens and Wermuth, 1955: 356.*Malaclemys nigrinoda*: Cochran and Goin, 1970:151.

- CONTENT. Two subspecies are recognized: *Graptemys nigrinoda nigrinoda* and *G. n. delticola*.

- DEFINITION. *Graptemys nigrinoda* is a moderate-sized, fluviatile species with pronounced sexual dimorphism. Adult females are 170–220 mm in carapace length; adult males from 70–120 mm. Females possess smooth, anteriorly cambered, high-domed, ovate shells, which are widest at the level of the seventh marginal, and markedly serrate posteriorly. A weak dorsal keel is present supporting four widely spaced, knob-like spines that arise from the posterior portion of the first four vertebrae and project backwards. The second and third are more prominent. Carapacial serration and vertebral knobs become obscure or lost in large females. Males possess lower, broadly ovate shells widest at the level of the sixth marginal. Their dorsal keel is more pronounced as are the vertebral knobs. Additionally, males have relatively longer fore-claws and tails, with the vent extending well beyond the carapacial rim. Carapace ground color varies from olive or greenish-grey, to nearly black in old individuals. Each pleural scute and the first vertebral contains a prominent, thin, nearly circular yellow-green, black-bordered ring that may encircle a dark central smudge. Vertebrae 2–4 possess three similarly colored rings which unite to form an irregular chain-like pattern, the center one encircling the vertebral spine. Marginals have posteriorly facing angular marks, rings or irregular figures. The hingeless, pale yellow to yellow-orange plastron has both an anterior and posterior notch, and usually supports an irregular, olive-grey to black, variable seam-following pattern. Soft-parts are cream-yellow, streaked longitudinally with black (northern race), or vice versa (southern race). Head pattern is highly variable but typically a series of three vertical post-orbital marks exist, the anterior most prominent. This heavy, recurved or linear mark angles posteriorly to join one of a pair of longitudinal lines on the nape, and is often united with the opposite post-orbital by a short, transverse line resulting in a Y- or H-shaped pattern.

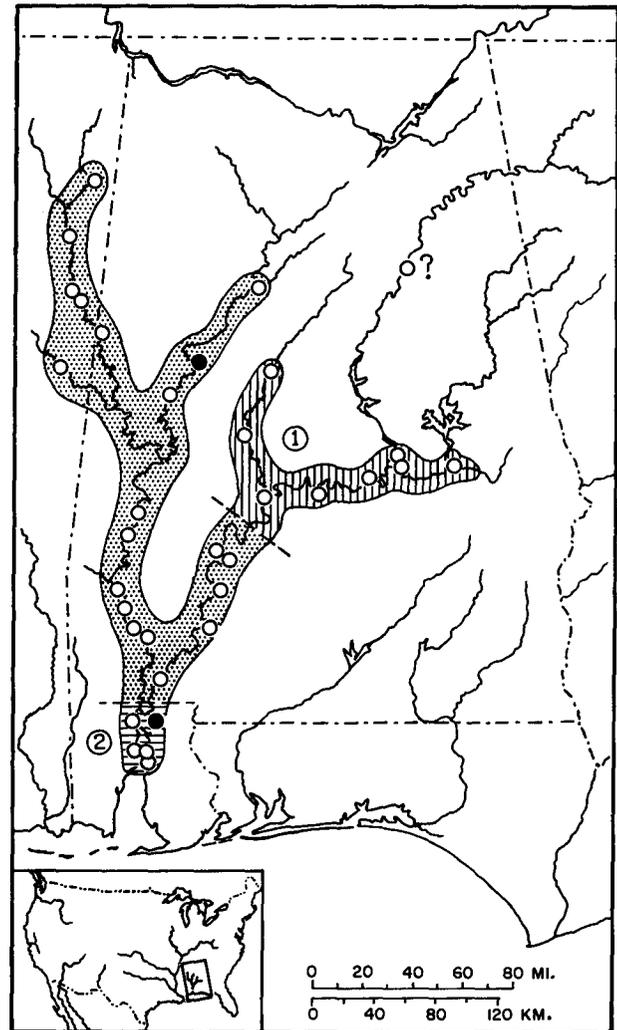
- DESCRIPTIONS. General descriptions are in Cagle (1954), Mount (1975), Pritchard (1979), Ernst and Barbour (1972), and Behler and King (1979). Folkerts and Mount (1969) provide descriptions of subspecies. Descriptions of eggs, hatchlings and nests are in Mount (1975) and Lahanas (1982). Anatomical descriptions include carapacial seam arrangements (Tinkle, 1962), repetitive shield variants (Zangerl, 1969), and choanae (Parsons, 1960, 1968). Killebrew (1977) describes the karyotype.

- ILLUSTRATIONS. Color illustrations of adults appear in Cagle (1954), Ernst and Barbour (1972), Conant (1975), Pritchard (1979), Behler and King (1979), and Smith and Brodie (1982); black and white illustrations are in Cagle (1954), Ernst and Barbour (1972), Folkerts and Mount (1969), and Mount (1975). Eggs and juveniles are shown in Agassiz (1857) and Folkerts and Mount (1969). The shell and skull are illustrated in Ernst and Barbour (1972), Killebrew (1979), and Dobie (1981).

- DISTRIBUTION. *Graptemys nigrinoda* is restricted to the Alabama-Tombigbee river systems of Alabama and Mississippi. The nominant subspecies occurs in the Tallapoosa, Coosa, Cahaba and Alabama rivers from the Fall Line south to near the Wilcox-Monroe county line in Alabama. The southern race is restricted to the Tensaw and Mobile river systems which form the delta of the Mobile Bay drainage.

- FOSSIL RECORD. None.

- PERTINENT LITERATURE. Published general accounts are by



MAP. Solid circles represent type-localities; open circles represent other localities. The stippled area between the dashed lines represents zone of intergradation.

Cagle (1954), Ernst and Barbour (1972), and Mount (1975). Lahanas (1982) reports details on reproductive cycles, nesting, growth, sexual dimorphism, diet, predation, and parasites. Additional references include: taxonomy: Leviton and Banta (1956), Folkerts and Mount (1970), Freeman (1970), Mertens and Wermuth (1977); osteology: Bertl and Killebrew (1983); evolution: Tinkle (1958a), McKown (1972), Wood (1977); zoogeography and distribution: Tinkle (1958a, 1959), Shoop (1967), Wahlquist (1970), Cliburn (1971), Wood (1977), McCoy and Vogt (1980); populations: Tinkle (1958b, 1959), McCoy and Vogt (1980); diet: Wahlquist (1970); reproduction: Shoop (1967); activity patterns and basking: Waters (1974), McCoy and Vogt (1980).

- ETYMOLOGY. The specific epithet, *nigrinoda*, is from the Latin *niger* meaning black, and the Latin *nodus* meaning knot, or node, and refers to the conspicuous, black, knob-like vertebral spines. The subspecific epithet, *delticola*, is a hybrid derived from the Greek *delta* meaning triangle which, due to their shape, has been associated with river-mouth deposits, and from the Latin *colere* meaning to inhabit, alluding to the delta region of Mobile Bay to which this race is restricted.

1. *Graptemys nigrinoda nigrinoda* Cagle*Graptemys nigrinoda* Cagle, 1954:173. See species account.*Graptemys oculifera nigrinoda*: Mertens and Wermuth, 1955: 356.*Graptemys nigrinoda nigrinoda*: Folkerts and Mount, 1969:679.

• DEFINITION. This race is distinguished by having soft parts which are predominantly light colored, a dark plastral pattern occupying less than 30% of the plastron, and by the presence of a crescent shaped, strongly recurved post-orbital mark.

2. *Graptemys nigrinoda delticola* Folkerts and Mount

Graptemys lesueurii. Agassiz, 1857: plate II. See species account.
Graptemys nigrinoda delticola Folkerts and Mount, 1969:677.

Type-locality, "Hubbard's Landing on Tensaw Lake, 2.6 air miles SW of Latham, Baldwin County, Alabama." Holotype, an adult male, Florida St. Mus. Biol. Sci. 26238, collected by James Byford on 4 May 1968 (not examined by author).

• DEFINITION. This race is distinguished by having soft parts which are predominantly dark, a dark plastral pattern occupying 60% or more of the plastron, and the presence of a linear to angular post-orbital mark.

COMMENT

Although not formally described until 1954, drawings of *G. nigrinoda* appear in the literature nearly a century earlier. Agassiz (1857) illustrates hatchlings in plate II, figs. 10, 11, 12, and 12a, of volume II. The animal depicted in these lithographs is readily referable to the subspecies, *G. n. delticola*, based on the presence of an extensive plastral pattern and predominantly dark soft parts (Folkerts and Mount, 1969). Agassiz apparently did not distinguish hatchlings of *G. nigrinoda* from *G. kohni* (plate V, figs. 5-7), and placed both taxa together under the same name, *G. lesueurii*.

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