**Graptemys geographica (Le Sueur)**

**Map Turtle**

*Testudo geographica* Le Sueur, 1817:86. Type-locality, "marsh, on the borders of Lake Erie." Holotype, not designated.

*Emys geographica*: Say, 1825:204.

*Terrapene geographica*: Bonaparte, 1830:156.

*Emys megacephala* Holbrook, 1836:51. Type-locality, "Cumberland River ... neighbourhood of Nashville [Davidson County], Tennessee." Holotype, Acad. Nat. Sci. Philadelphia 255, collected by Prof. Troost (examined by authors).


*Emys macracantha*: Holbrook, 1836:51. Type-locality, *Cumberland River ... neighbourhood of Nashville [Davidson County], Tennessee." Holotype, Acad. Nat. Sci. Philadelphia 255, collected by Prof. Troost (examined by authors).


*Malaclemmys geographica*: Cope, 1875:53.

*Malaclemmys geographica*: Davis and Rice, 1883:32.


**Content.** No subspecies have been described.

**Definition.** *Graptemys geographica* is a large, sexually dimorphic emydid: maximum carapace length in females is 27.3 cm, in males 16 cm. The smooth carapace is oval and elongate in dorsal view. Vertebral spines are present in hatchlings and juveniles, low in adult males and absent in adult females. The medial keel is low, and the posterior marginals are not strongly serrated. The carapace is olive green with a reticulate pattern of light yellow lines. The plastron is light yellow to cream, usually unmarked but sometimes with a pattern of concentric dark rings on the bridges; undersides of marginals are light with concentric dark markings. Head, neck, legs, and tail are dark green to black, with yellow to greenish-yellow stripes. A small, roughly triangular spot lies behind each eye, but is not connected to head stripes, and is separated from the orbit by two or three stripes. Adult males have longer tails, a more oval carapace with more prominent vertebral spines, and a narrower head. Adult females have a lower and smoother carapace. In molluscivorous populations the head may be greatly enlarged, with broadened crushing surfaces on the jaws, especially in older adult females (Iverson et al., 1989).

**Descriptions.** Descriptions of the species are in Cahn (1937), Carr (1952), Smith (1961), Ernst and Barbour (1972, 1989), Minton (1972), and Vogt (1985b). Kilebrew (1977) described the karyotype (2n=50), and Campbell and Turner (1937) serum proteins.

**Illustrations.** Black and white lithographs of a hatchling (dorsal, ventral and lateral views) are in Agassiz (1857). Diagrams of the head pattern are in Carr (1952) and Minton (1972). Cahn (1937) has a drawing of the alveolar aspect of the lower jaw and a photograph of eggs. Black and white photographs of the skull (dorsal, ventral and lateral views, male and female) are in Ernst and Barbour (1972), and of living animals in Carr (1952), Smith (1961), Anderson (1965), Ernst and Barbour (1972, 1989), Minton (1972), Mount (1975), and Collins (1982). Color illustrations are in Babcock (1919), Conant (1975; adult male and female, hatchling in dorsal and ventral views), Ernst and Barbour (1972), Martof, et al. (1980), Vogt (1985b), and Johnson (1987; including nest with eggs).

**Map.** Round symbols mark known Recent localities; square symbols are records from archeological sites; triangular symbols mark fossil (Pleistocene) localities. The imprecise type-locality, "borders of Lake Erie," is not marked. Question marks indicate uncertain range limits or questionable localities.

**Figure.** Drawing of *Testudo geographica* by C. A. Le Sueur, published with the original description of the species (Le Sueur, 1817).


Tinkle, D.

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Surface, H. A.

Smith, P. W.

Stunkard, A.

Strauch, A.

Stitt, J. T., and R. E. Semple.


Say, T.

Rausch, R.

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KLETS of Pennsylvania.

Amer. J. Physiol.

Agric.

abundance of turtles. Copeia

pidogastriae, and
tersbourg by acute changes in body temperatures in turtles. Amer. J. Physiol.

Callum

3(3):1-114.

body temperature on circulating plasma volume of turtles. Amer. J. Physiol.

Reduced by body cooling in turtles. Amer. J. Physiol.

Econ. Geol., Rept. Invest.


river, Dallas and

species native to Ontario.

Hist.

1191.

505-562.


Surface, H. A. 1908. First report on the economic features of the tur-


---. 1981b. Natural history of amphibians and reptiles in Wiscon-


