

SOME PLEISTOCENE TURTLES FROM ILLINOIS

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ABSTRACT.—Three species of turtles from gravels of the Clear Lake Pleistocene (Wisconsinian) site near Springfield, Sangamon County, Illinois represent forms that occur in the area today.

Techter (1961) summarized the few known fossil turtles of Illinois which are: *Terrapene ornata* (Agassiz), *Pseudemys* sp., and *Chrysemys* (?) sp. Thus, I was pleased to receive for study, through the courtesy of Edward A. Munyer and Paul W. Parmalee of the Illinois State Museum, the remains of turtles from gravels of the Clear Lake Sand and Gravel Company which lies four miles east of Springfield and south of Riverton near the Sangamon River (Sec. 22, T 16 N, R 4 W, Sangamon County, Illinois).

According to the original label the fossils were donated in the early 1940's by Mrs. White who got them from some men who collected the bones from the gravel deposits of Clear Lake. The fossil turtle bones from Clear Lake are well mineralized, and fortunately, some of the elements (Fig. 1) have diagnostic characters. Numbers applied to the fossils are those of the Illinois State Museum, Springfield, Illinois.

Other fossils from this site represent mastodon, mammoth, moose, and a few other mammalian remains of animals that live in the area to-

day (E. A. Munyer, personal communication). These remains indicate that the deposition of these particular gravels at Clear Lake represents a recessional time during the Wisconsinian age of the Pleistocene.

Chelydra serpentina (Linnaeus)

Geologic range.—Hemphillian-Recent.

Material.—Pecoracoid-scapula, CL 416105.

Remarks.—The pecoracoid-scapula of Recent *Chelydra* may be distinguished from those of all other North American Recent turtle genera in that the pecoracoid makes an angle of about 90 degrees with the scapula and in that the distal ends of both bones are deeply striated. I am unable to separate the fossil element from those of Recent *Chelydra serpentina*, a species that lives in a wide variety of aquatic habitats in the area today.

Pseudemys scripta (Schœpff)

Geologic range.—Sangamon-Recent.

Material.—Pronural, two right and three left hyoplastra, one left hypoplastron, CL 416106.

Remarks.—Based on characters discussed in Holman (1963) I have assigned the pronural bone to the species *P. scripta*. The other *Pseudemys* bones are indistinguishable from those of Recent *P. scripta* specimens at hand and thus are also assigned to this species. *Pseudemys scripta*, a form that prefers quiet water with lots of vegetation, has been reported from Springfield, Illinois during Recent times by Cagle (1946).

Trionyx spinifer Le Sueur

Geologic range.—Kansas-Recent.

Material.—Right hyoplastron, left hyoplastron, CL 416105; partial peripheral, CL 416104.



FIGURE 1.—Fossil turtle bones from the Pleistocene (Wisconsinian) of Clear Lake, Sangamon County, Illinois. Numbers are those of the Illinois State Museum, Springfield, Illinois. From left to right: CL 416105 procoracoid-scapula of *Chelydra serpentina*, CL 416106 proneural of *Pseudemys scripta*, CL 416104 hyoplastron of *Trionyx spinifer*.

Remarks.—The fine sculpturing of the shell bones of the genus *Trionyx* immediately distinguishes it from other genera of North American turtles. Webb (1962) points out that the unit formed by the articulated hyoplastron and hypoplastron is shorter and wider in *Trionyx muticus* Le Sueur than in *T. spinifer* and *T. ferox* (Schneider). This condition is reflected in the shape of the hyoplastron bone. Based on two Recent specimens of *T. muticus* and six of Recent *T. spinifer* at hand, the hyoplastron is shorter and wider in the former species than in the latter. The fossil is similar to *T. spinifer* in this character, and since *T. ferox* is presently restricted to Florida, Georgia, and South Carolina

(Conant, 1958, map 34), I have assigned the fossil hyoplastron to the species *T. spinifer*. I have assigned the other *Trionyx* fossils to *T. spinifer* although I am unable to find specific diagnostic characters on these bones.

Although undocumented by records, *T. spinifer* apparently occurs in the area today (Smith, 1961, fig. 140). The other Illinois species of softshell turtle, *T. muticus*, occurs in the Illinois River to the west of Springfield, but it is questionable that it occurs at Springfield (Smith, op. cit., fig. 138). Smith states that "*T. s. spinifer* has a much greater ecological tolerance in Illinois than *T. muticus*, as it can be found in lakes, sloughs, and mud-bottomed streams as

well as in sand-bottomed rivers". *Trionyx muticus* is almost exclusively found in sand-bottomed rivers.

DISCUSSION

Based on the present day distributions of species represented by the Clear Lake fossil turtles, the climate of the area at the time of the accumulation of the bones must not have been much colder than it is today. At present, *Chelydra serpentina* ranges north to Lake Nipigon in Ontario, and *Trionyx spinifer* ranges to about 50 miles south of the Duluth-Superior area of Wisconsin (Conant, op. cit., maps 3 and 35). But *Pseudemys scripta* occurs no farther north than Northern Illinois and Indiana, although there is a colony in southeastern Michigan (Conant, op. cit., map 24).

LITERATURE CITED

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Manuscript received March 10, 1966.