

First Record of Late-Pleistocene Turtles from Chiapas, Mexico

Josué R. Luna-Espinosa and Gerardo Carbot-Chanona

► **Keywords:** Turtles, Rancholabrean, Chiapas

The record of fossil turtles in Mexico is scarce. Taxonomic and biogeographic data are difficult to obtain because of scarce and badly preserved material. In this paper, fossil remains of turtles from the late Pleistocene of Chiapas are reported for the first time, and their biogeographic importance is discussed. Fossils were collected from the La Simpatía locality, municipality of Villa Corzo, and include carapace scutes of three different species, *Kinosternon scorpioides*, *Trachemys scripta*, and cf. *Staurotypus* sp. In addition, *Bison* sp., *Mammuthus columbi* and *Equus conversidens* were also collected from this locality; based on these species a Rancholabrean age is assigned to the fauna (Carbot-Chanona and Vázquez-Bautista 2006).

K. scorpioides is represented by five peripheral plates of two individuals of different sizes (Figure 1). *Trachemys scripta* is represented by two well-preserved peripheral plates and one modestly preserved coracoid; these remains belong also to two individuals of different sizes, probably a juvenile and adult. One peripheral plate is tentatively assigned to *Staurotypus* sp. based on a plate morphology that corresponds to this genus, but it is too incomplete to make a trustworthy determination.

The only fossil record of *Kinosternon scorpioides* in Mexico is from the Fauna Cedazo (late Pleistocene) in Aguascalientes (Mooser 1980). Material from other late-Pleistocene localities in north and central Mexico has been reported only at the generic level as *Kinosternon* sp. (Barrios-Rivera 1985; Castillo-Cerón et al. 1997; Guzmán and Polaco 2000; Tovar et al. 2007).

Josué R. Luna-Espinosa, Facultad de Ciencias Biológicas, Universidad de Ciencias y Artes de Chiapas, Libramiento Norte s/n Col. Lajas Maciel, 29000, Tuxtla Gutiérrez, Chiapas, Mexico; e-mail: josueatroxs@hotmail.com

Gerardo Carbot-Chanona, Museo de Paleontología "Eliseo Palacios Aguilera," Instituto de Historia Natural, Calzada de Los Hombres Ilustres s/n., Tuxtla Gutiérrez, Chiapas, México; e-mail: carbotsaurus@yahoo.com

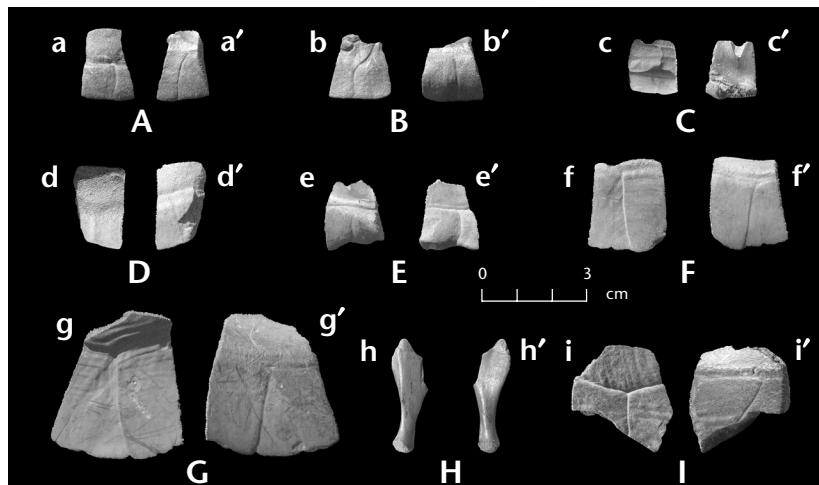


Figure 1. A–E, *Kinosternon scorpioides*: A, IHNFG-0508, second right peripheral plate; B, IHNFG-0507, ninth left peripheral plate; C, IHNFG-0510, sixth right peripheral plate; D, IHNFG-0520, quarter right peripheral plate; E, IHNFG-0509, second left peripheral plate. F–H, *Trachemys scripta*: F, IHNFG-0505, ninth right peripheral plate; G, IHNFG-0504, eleventh right peripheral plate; H, IHNFG-0506, right coracoid. I, cf. *Staurotypus*: IHNFG-0511, eighth right peripheral plate. (A–I, dorsal view; A'–I', ventral view.)

Trachemys scripta has been reported in late-Pleistocene localities of Jalisco, Tabasco and Veracruz (Barrios-Rivera 1985; Peña-Serrano 2006), and *Trachemys* sp. is also reported from the same age in Zacatecas (Guzmán and Polaco 2000). *Staurotypus* is a genus with no fossil records from Mexico. The present distribution of this genus includes most of the area of Tehuantepec Isthmus, Gulf of Mexico, and Yucatan Peninsula to the west of Honduras (Ernest and Barbour 1989).

In Chiapas, extant *K. scorpioides* and *T. scripta* are present in the central part of the state. The presence of cf. *Staurotypus* would represent a different paleodistribution for the genus during the late Pleistocene in southern Mexico, since the genus is living today in wetlands in the north and Pacific Coast of Chiapas, suggesting that environmental conditions in the central part of the state during the late Pleistocene were similar to those currently shown in these regions. These records allow us to extend the historic biogeographic range of the taxa mentioned and define their more southern records for Mexico as well.

References Cited

- Barrios-Rivera, H. 1985 Estudio Analítico del Registro Paleovertebradológico de México. Unpublished Bachelor's thesis, Facultad de Ciencias, Universidad Nacional Autónoma de México, México D.F.
- Carbot-Chanona, G., and D. Vázquez-Bautista 2006 Presencia de *Bison* en Chiapas, México. Paper presented at the X Congreso Nacional de Paleontología, Mexico D.F.
- Castillo-Cerón, J., M. A. Cabral-Perdomo, and O. Carranza-Castañeda 1997 *Vertebrados fósiles del Estado de Hidalgo*. Universidad Autónoma del Estado de Hidalgo.

Ernest, C. H., and R. W. Barbour 1989 *Turtles of the World*. Smithsonian Institution Press, Washington, D.C.

Guzmán, A. F., and O. J. Polaco 2000 Vertebrados Pleistocénicos de Los Tanques, Zacatecas. Paper presented at the VII Congreso Nacional de Paleontología y Primer Simposio Geológico del Noreste de México, Linares, N.L.

Mooser, O. 1980 Pleistocene fossil turtles from Aguascalientes, state of Aguascalientes. *Universidad Nacional Autónoma de México, Instituto de Geología* 4(1):63–66.

Peña-Serrano J. 2006 Hallazgo de un Perezoso Gigante y Fauna Asociada del Pleistoceno Tardío en el Municipio de Atoyac, Veracruz, México. Paper presented at the X Congreso Nacional de Paleontología, Mexico D.F

Tovar, R. E., M. Montellano-Ballesteros, and E. Corona-M 2007 Fauna Pleistocénica de Santa Cruz Nuevo, Puebla, México. Paper presented at the 4th European Meeting on the Palaeontology and Stratigraphy of Latin America. Cuadernos del Museo Geominero, nº 8. Instituto Geológico y Minero de España, Madrid