

**Ischnochiton mexicanus, a new abyssal chiton from the Gulf of Mexico  
(Polyplacophora, Ischnochitonidae)**

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*Ischnochiton (Stenosemus) mexicanus* sp. n. is described from a depth of 665 m in the Gulf of Mexico. It is characterized by tegmental sculpture and radula features.

Key words: Polyplacophora, Ischnochitonidae, *Ischnochiton*, Gulf of Mexico, abyssal species.

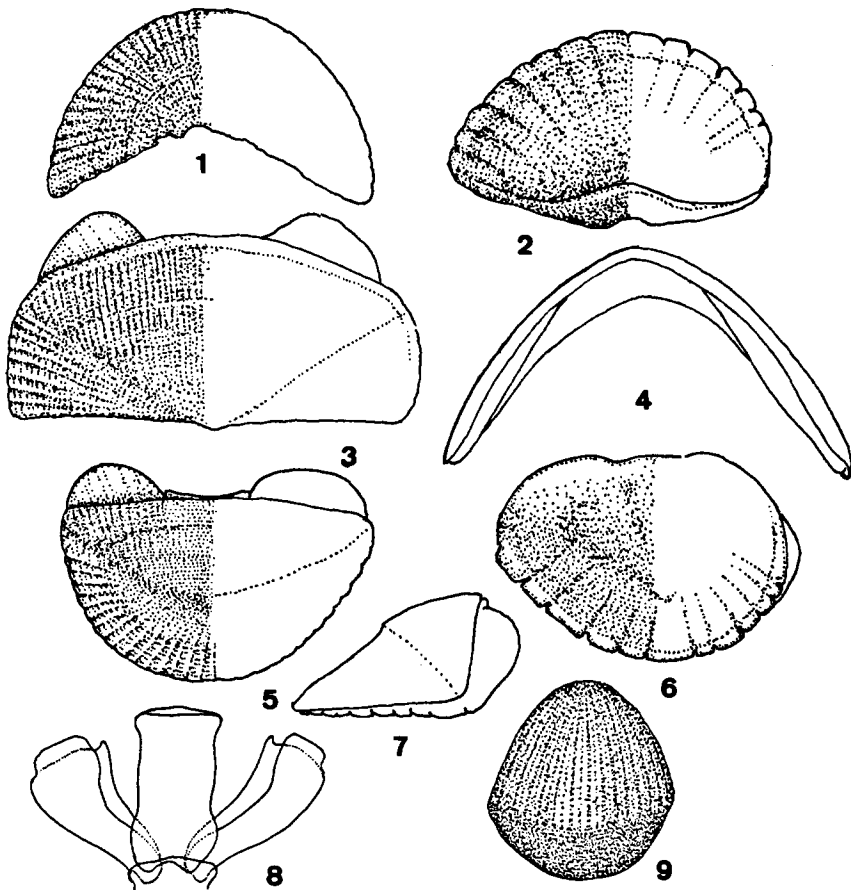
Twelve specimens of an abyssal chiton were hauled in from the Louisiana hydrocarbon seeps in the Gulf of Mexico, S. of New Orleans, Louisiana, U.S.A., at a depth of 665 m. All specimens appear to belong to a new species of *Ischnochiton* (*Stenosemus* Von Middendorf, 1847), to be described hereafter as *Ischnochiton (S.) mexicanus* sp. nov. The chitons were sent to me for identification by Dr. Anders Warén, Swedish Museum of Natural History (Stockholm), Department of Invertebrate Zoology.

***Ischnochiton (Stenosemus) mexicanus* sp. nov., figs. 1-9**

Material. — Twelve specimens, apparently dried before being put in 70% ethanol, slightly curled up, collected by Dr. R.S. Carney, director of the Coastal Ecology Institute (Louisiana State University), from the submersible 'Johnson Sea Link', Dive 3145, 27°43.38'N 91°16.63'W, 2183 ft (= 665 m), 24. IX. 1991. The holotype and seven paratypes are kept in the National Museum of Natural History, Washington (D.C.), two paratypes in the Muséum National d'Histoire Naturelle, Paris, and two in the National Museum of Natural History, Leiden, reg. no. 9367.

Diagnosis. — Medium-sized chiton, elongate oval, rather elevated, carinate, side slopes convex, valves hardly beaked, tegmentum weakly sculptured, radially finely grooved on end valves and hardly raised lateral areas, longitudinally on central areas. Mucro median, small, pointed. Colour of tegmentum yellowish to roseate, one paratype white. Girdle with imbricating scales.

Description. — Animal up to 24 x 11 mm (holotype 22 x 9 mm), elongate oval, more than twice as long as wide, the valves elevated (dorsal elevation 0.53). Head valve semicircular, front slope steep, little convex, posterior margin widely V-shaped, with a small, rounded apical notch. Tegmentum very finely radially ribbed, the more than 40 riblets not reaching the apex, intersected by concentric striation, and separated by narrow, shallow grooves. Intermediate valves transversely rectangular, highly elevated, carinate, the side slopes smoothly rounded, side margins evenly rounded, anterior margin convex, posterior margin almost straight at both sides of the small, hardly protruding, pointed apex. Lateral areas not, or only very slightly, raised, clearly separated from the central area by differently orientated sculpture: about eight radial riblets on the lateral areas, c. 50 longitudinal riblets on the central area, identical to those on head valve. Tail valve as large as head valve, semicircular, the mucro about central,



Figs. 1-9. Paratype of *Ischnochiton (Stenosemus) mexicanus* sp. n. 1, valve I, dorsal view; 2, do., ventral view; 3, valve V, dorsal view; 4, do., rostral view; 5, valve VIII, dorsal view; 6, do., ventral view; do., lateral view; 8, central and first lateral radula teeth; 9, dorsal scale from mid-girdle. Figs. 1-7: x 6; figs. 8-9: x 175.

little elevated, pointed, antemucronal area sculptured like central areas, postmucronal area like head valve. Growth marks hardly discernible.

Articulamentum well-developed, white, with a transverse callus from the apex to the anterolateral corners of the valve. Insertion plates short, sharp, slit formula 14/1-(2)/11, slits shallow, not thickened at the edges, slit rays distinct towards the margin of the valves. The disarticulated paratype shows two slits on one side of the valves II, III and VI. Apophyses evenly rounded, leaving a rather wide, smooth jugal sinus, about one third the width of the valve, only the tail valve with a narrow jugal plate.

Girdle rather narrow, yellowish to light orange, dorsally regularly covered with roundish, imbricating scales, c. 150  $\mu$ m wide, 190  $\mu$ m high, apparently smooth, but

under high magnification a weak striation becomes visible. There is no marginal fringe. Ventral side of perinotum covered with transverse rows of smooth, white, rectangular scales, up to 80  $\mu\text{m}$  long, 16  $\mu\text{m}$  wide on mid-girdle.

Central tooth of radula about rectangular, with a very narrow, almost straight blade, minor laterals weakly curved, apically truncate, with a narrow wing on the inside, bearing a small, pointed, terminal projection, major lateral with a unicuspid cap, the cusp sharply pointed.

Gills merobranchial, between the suture of valves III/VI and the anus, c. 30 ctenidia in a row.

Observations. — *I. (S.) mexicanus* is closely related to *I. (S.) exaratus* (Sars, 1878), from which it differs by the relatively longer tail valve, by the less numerous riblets on the lateral areas and by the shape and arrangement of the dorsal girdle scales. The possession of two slits in the insertion plate on one side of one or more intermediate valves is also seen in other species of the subgenus *Stenosemus*.

Etymology. — The specific name *mexicanus* refers to the Gulf of Mexico, where the types of *I. (S.) mexicanus* have been collected.