Article III.—ZEBRASOMA DEANI, A FOSSIL SURGEON-FISH FROM THE WEST INDIES.

By L. Hussakof.

PLATE VII.

The following description is based on an exceptionally fine specimen of a fossil teuthid from Antigua Island, West Indies, recently acquired by the American Museum (May 1905; Cat. No. 7483). The fossil was found in a quarry belonging to Mr. Oliver Nugent of that place. Its exact horizon is not known, but it was stated to be of Tertiary age and to have come from a level of about 200 feet above sea. Considering that the fossils of this family are most frequently found in Eocene formations, notably at Monte Bolca, and that rocks of similar age are extensively developed in the West Indies, it may well be that the fish in question is from an Eocene horizon.

There are two facts concerning this specimen which endow it with an unusual interest. (1), It is the first instance of a fossil of the family Teuthididae found in America, all the hitherto recorded species, about a dozen in number, and representing four genera, having come from Europe. And (2), it is the first fossil species known that is referable to the genus Zebrasoma Swainson.

Plate VII gives an excellent idea of the fish. It was evidently an adult individual, measuring 290 mm. in length. It is imbedded in a fine-grained buff-colored limestone. The substance of the fish is almost entirely gone having, perhaps, adhered to the counterpart; but nearly all the skeletal elements have left a clear imprint in the matrix which reproduces excellently all the skeletal characters. Unfortunately, in the abdominal region where the viscera were extruded in the post-mortem changes, the fish is injured, the ventrals as well as the anterior portion of the anal being lost. But despite the absence of these structures which would have helped in classification, it is apparent from the undoubted teuthid characters of the fish and from its small number of dorsal spines, that it belongs to the genus Zebrasoma of Swainson.

It is worthy of note, in passing, that some features of the fish bring to mind the Balistidae, e. g., the abbreviation of the vertebral column—to 19 vertebrae (8+11)—the number in the Teuthididae being typically 22 (9+13). Secondly, the first dorsal spine is notably strong and well developed suggesting an incipient ‘trigger.’ These characters, it seems to me, go to support the view of Jordan and Evermann that “There can be no doubt of the common origin of Balistidae and Teuthididae and that the divergence is comparatively recent.”

The species is named for my esteemed teacher in ichthyology, Professor Bashford Dean.

Genus Zebrasoma Swainson.


Distinguished from Teuthis (Acanthurus) chiefly in having a reduced number (3 to 5) of dorsal spines. Living forms confined to the Indian and Pacific Oceans.

Zebrasoma deani sp. nov.

Head in total length, 4 times; depth, 2½. Abdominal vertebrae 9; caudal 11. Dorsal fin, IV, 28; rather low, extending from immediately back of supraoccipital crest to over the ninth caudal vertebra; first spiny ray rather stout, 16 mm. high, which is about ½ height of the articulated rays over middle of body; fourth dorsal spine as high as articulated rays following. Anal fin not completely preserved, only the posterior portion with about 16 rays present; 14th ray from posterior end has its interhemal overlapping hemal of 5th caudal vertebra. Caudal but little emarginate, with lobes subequal; its height equal to maximum depth of body; caudal pedicle very narrow, 9 mm. Caudal spines not preserved. Lateral line continuous. Profile of head inclined about 45 degrees to axis of body; very gently convex. Jaw and suspensorium, as in typical species of this family. Teeth setiform, dilated at extremities, crowded and probably movable; about 16 in one half of upper jaw, about 10 in half of lower. Body covered with minute shagreen-like scales.

Formation and locality: Tertiary, Antigua Island, West Indies.

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