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(With One Plate)

BY
AUSTIN H. CLARK
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Among the starfishes obtained by the First Johnson-Smithsonian Deep-Sea Expedition on the 1933 cruise are two specimens of a new species of *Odinia*. The discovery of a species of *Odinia* in the West Indian region is especially interesting, as the family Brisingidae, to which it belongs, although well represented on the Atlantic coasts of Africa and of Europe, is known from the Caribbean region only from the single somewhat problematical genus *Hymenodiscus*, which was described from a single species represented by two evidently young individuals.

This new species of *Odinia* may be known as—

ODINIA ANTILLENSIS, n. sp.

Locality.—Caroline station 47; west of Puerto Rico (lat. 18°17′20″ N., long. 67°25′ W.—lat. 18°17′05″ N., long. 67°24′45″ W.); 280 to 340 fathoms; February 13, 1933. One specimen (U.S.N.M. no. E.3266 [type]).

Description.—The disk is 27 mm in diameter; the border, which is 5 mm high, rises abruptly at an angle of about 65° from the arm bases to the flat abactinal surface. The abactinal surface is entirely covered with small polygonal plates elevated in the center, which become larger and more solid toward the margin. There are long and conspicuous papulae in practically all the interstices between these plates. Each plate bears on its elevated irregular central portion a group of 2 to 16 (usually 4 to 10) short spines of various lengths, the longest of which seldom exceeds in height half the length of the plate, and also several to many pedicellariae. Narrow bare channels run down the beveled border of the disk between the arm bases and are continued outward between the arm bases as much broader and more conspicuous bare channels 2 mm in width for a distance of about 8 mm over eight or nine apposed pairs of marginal plates.

The madreporite is situated on the sloping side of the disk just at the edge of the abactinal surface. It is 2.5 mm in diameter and about 1 mm high, with almost vertical sides.

The rays are 15 in number (in both specimens) and are about 250 mm in length from the edge of the disk. The thickest and highest portion, at the sixth or seventh adambulacral from the last marginal, is 8 mm high and 8 mm broad, the ray here being evenly convex abactinally. Just beyond the genital region the rays are 7 mm broad and 5 mm high.

The genital region of the rays is about 40 mm long. It is only very moderately swollen and tapers gradually distally. It is completely covered with small, lobed, overlapping plates elevated in the center and bearing a small spine, more rarely two or three, with many pedicellariae, and with papulae in the interstices between the plates. Irregularly interspersed between the plates of the genital region along the sides of the ray are a few larger plates bearing longer spines.

The costae in the proximal half of the genital region are irregular, usually very short, and are scarcely to be distinguished from the general plating of the area. They occur opposite every third adambulacral plate. The few larger spines in this region are seen to be more or less definitely associated with them. In the outer half of the genital region the costae are in the form of narrow bands of slightly elevated plates running across the arms, though scarcely distinguishable in the median line. On either side of the arm they bear from two to four spines, which are much longer than the spines on the adjacent plates. There are nine costae in all in the genital region, of which the first five are incomplete in varying degrees, the first two being scarcely more than indicated above the adambulacrals.

Beyond the genital region the dorsal plates abruptly become smaller and wholly separated; continuing to decrease in size, and also in number, they disappear entirely after about 15 mm. Pedicellariae in this area are excessively abundant, and they remain abundant to the arm tips. Beyond the genital region there are two greatly reduced bands of plates representing costae. Just above every third adambulacral beyond the genital region is a row of four stout plates, each of which bears a long, slender, sharp spine; the lowest of these spines is the longest, 8 to 9 mm in length, the next two are almost as long, and the uppermost, or fourth, is the shortest, much shorter than the others. On the distal portion of the arms these combs of spines become more widely spaced, occurring above every fourth, or

sometimes fifth or even sixth, adambulacral, and the uppermost (fourth) spine decreases in size and disappears. Terminally, the combs consist of two long spines and a very short third.

The mouth plates are large, somewhat longer than the two following adambulacrals taken together, with the portion beneath the first tentacle reaching half the lateral length. They are in close apposition both radially and interradially, and the adjoining radial portions of adjacent plates form a broad band beneath each ambulacral groove. Each plate bears usually five very short spines, none of which is as long as the distance from the proximal edge of the plate to the first tentacle. One or two of these spines are on the midradial edge of the plate at or near the distal end, and the remainder are on the proximal border.

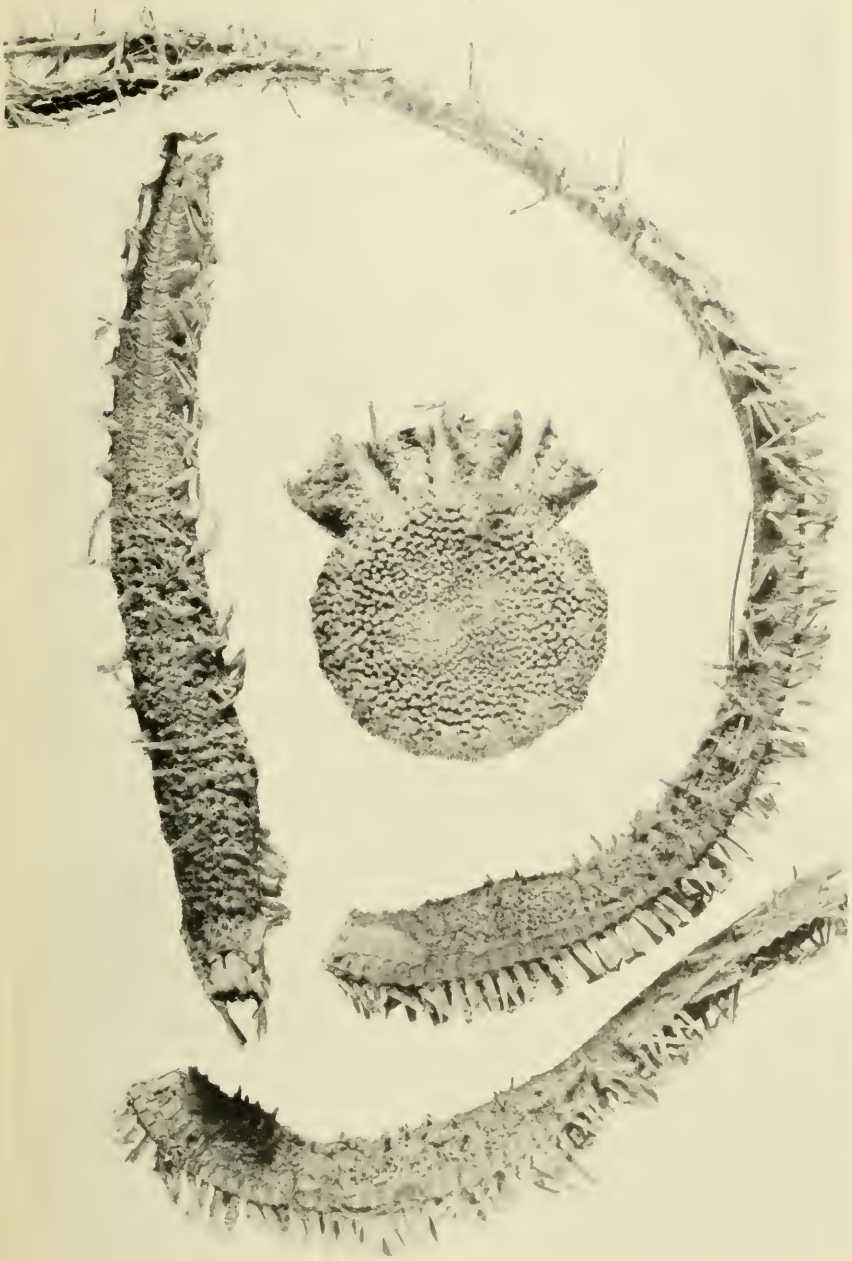
The adambulacral plates are about twice as broad as long, becoming longer in the distal half of the rays. Each bears a prominent furrow spine. These are at first small and pointed, increasing in length to the fifth and following, which are about 4.5 mm long. The sixth and the succeeding 23 to 25 are broadened, widening gradually from the base to the abruptly truncated tip, and chisel-shaped, the tip being strongly curved with the concavity outward. The following spines soon become slender and sharp again. Terminally, the furrow spines become gradually reduced to fine needlelike spines no longer than the plates themselves.

Remarks.—This new species appears to be most closely related to *Odinia semi-coronata* (Perrier), which was dredged by the *Talisman* at station 73, south of the Canary Islands, in 1,056 to 1,435 meters.

EXPLANATION OF PLATE

PLATE 1

Odinia antillensis, n. sp., the type specimen (U.S.N.M. no. E.3266) from *Caroline* station 47; disk and portions of three rays. × 1½.



ODINIA ANTILLENSIS

(For explanation, see page 3.)