

SMITHSONIAN MISCELLANEOUS COLLECTIONS  
VOLUME 91, NUMBER 13

## Johnson Fund

REPORTS ON THE COLLECTIONS OBTAINED BY THE FIRST  
JOHNSON-SMITHSONIAN DEEP-SEA EXPEDITION  
TO THE PUERTO RICAN DEEP

# A NEW GENUS OF BRITTLESTARS FROM PUERTO RICO

(WITH ONE PLATE)

BY

AUSTIN H. CLARK

Curator, Division of Echinoderms,  
U.S. National Museum



(PUBLICATION 3248)

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### A NEW GENUS OF BRITTLESTARS FROM PUERTO RICO

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One of the most interesting of the echinoderms obtained by the First Johnson-Smithsonian Deep-Sea Expedition was a curious ophiuran representing a new genus of the family Hemieryalidae.

The family Hemieryalidae as at present understood includes ten genera, of which six occur in the West Indies. Of these six West Indian genera, four are known only from the Caribbean region, one is found also in other parts of the tropical Atlantic, and one is represented also in the Galápagos Islands.

The new genus may be known as—

#### QUIRONIA, n. gen.

*Diagnosis.*—Resembling *Sigsbeia*, but with a single large genital slit in each interbrachial space that passes between the arm bases just beyond the mouth shields; with the arms narrower and shorter and more abruptly separated from the disk, and six instead of five in number; and with the plates on the disk more numerous, smooth, and less regularly arranged.

*Genotype.*—*Quironia johnsoni*, n. sp.

#### QUIRONIA JOHNSONI, n. sp.

*Locality.*—Caroline station 45; west of Puerto Rico (lat.  $18^{\circ}13'10''$  N., long.  $67^{\circ}25'30''$  W.—lat.  $18^{\circ}14'30''$  N., long.  $67^{\circ}25'30''$  W.); 20 to 40 fathoms; February 13, 1933. One specimen (U.S.N.M. no. E.3265 [type]).

*Description.*—The disk is 6.8 mm in diameter between the bases of opposite arms, rather high, with the portion within the inner ends of the radial shields flattened. The central portion of the disk is covered by a considerable number of plates of very different sizes, of which six, situated at the inner ends of the pairs of radial shields,

are larger than the others, with broadly rounded outer edges and with the outer portion somewhat swollen. The radial shields are rounded triangular and are about twice as long as broad. The shields of each pair are separated by a column of usually four plates, of which the innermost is trapezoidal and much longer and broader than the others. Interradially, the radial shields are separated by a column of two or three more or less oblong plates.

The six arms are 18 mm long and 1.8 mm wide at the base. They are narrow, about 2.6 times the diameter of the disk in length, and taper evenly from the base to the tip. Their bases are separated by a distance of 1.1 mm, the interbrachial margins of the disk being straight, so that the arms and the disk are rather abruptly differentiated.

The earliest upper arm plates are fan-shaped with broadly truncated lateral angles; they are about half again as broad as long and are in contact by their proximal angles. After the sixth or seventh they gradually become separated and reduced in size, so that at the arm tip they are very small and are separated for about their own length. In the earlier portion of the arm they are slightly swollen.

The supplementary arm plates resemble those in *Sigsbeia murrhina*. They decrease in size distally and at the arm tips are simply minute plates attached to the lateral angles of the upper arm plates.

The side arm plates are large, slightly swollen, and in contact dorsally.

The under arm plates resemble those in *Sigsbeia murrhina*.

The single tentacle scale is subcircular.

On the second pore there is a single short and very broad arm spine that resembles the tentacle scale. At the second, third, and fourth pores there are two very short and broad spines, which are only slightly, and sometimes not at all, longer than broad. From this point onward the upper arm spine very slowly diminishes in size, the lower remaining the same, until near the arm tip the upper spine disappears, the lower concurrently becoming somewhat longer and slightly recurved and acquiring several stout, glassy spinules on the lower side of the tip.

The jaws are triangular with the outer apex more or less blunted and are about half again as long as broad at the base.

There are three mouth papillae on each side, which form a continuous narrow line along the jaws. The first mouth papilla is the longest and broadest and tapers somewhat distally. The second mouth papilla is narrower, and the outermost is broader again, but

smaller than the first. There are four thick and stout teeth, which have more or less rounded ends; the uppermost tooth is sunken well below the level of the jaws. There are no tooth papillae.

The adoral shields resemble those of *Sigsbeia murrhina*.

The mouth shields are smaller than are those of *S. murrhina*, owing to the absence of an aboral lobe, the shields being bordered aborally by a straight line bordering the genital slit.

In each interbrachial space there is a single conspicuous genital slit, which passes between the arm bases just beyond the mouth shield.

The color abactinally is a very pale ecru drab with an irregular central patch of white, becoming darker beyond the arm bases. The seventh upper arm plate, and every fifth one beyond, is white. The color actinally is white.

#### EXPLANATION OF PLATE

##### PLATE I

FIG. 1. *Quiroonia johnsoni*, n. gen., n. sp., the type specimen (U.S.N.M. no. E.3265) from *Caroline* station 45, abactinal view.  $\times 3$ .

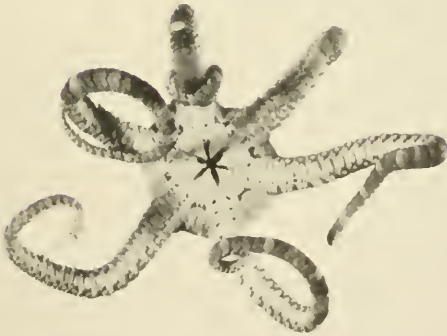
FIG. 2. *Quiroonia johnsoni*, n. gen., n. sp., the type specimen (U.S.N.M. no. E.3265) from *Caroline* station 45, actinal view.  $\times 3$ .







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QUIRONIA JOHNSONI  
(For explanation, see page 3.)