

Spicules tables with cross-shaped disk with slender arms with few perforation in the ends and a tapering spire composed of four rods, usually smooth, and with few cross-beams. Color in alcohol white.

Type. — M. C. Z.

Type locality. — Off St. Kitts, B. W. I.

Distribution. — Widespread in the West Indian seas, also reported from the eastern Atlantic (as *B. bipartius* Hérouard).

Depth. — 202-838 fathoms.

Specimens examined. — The following material from the "Atlantis" cruises.

Station 3366	20° 46' N., 74° 59' W., 625 fathoms.	2 fragments.
" 3370	20° 47' N., 75° 11' W., 450 "	2 "

Bathyplotes bigelowi spec. nov.

(Plate 31, figs 1-2)

Diagnosis. — Large form (up to 25 cm.) with strongly flattened body and a continuous lateral brim of papillae interrupted only at the posterior end. Mouth ventral with 20 tentacles surrounded by a strong sphincter; anus terminal or subventral. Ventral side with cylindrical tube feet scattered without order, most numerous on the posterior part of the ventrum; a varying number of small "fungiform" papillae are present, forming two longitudinal rows. Dorsal side with two median rows of papillae, often completely retracted, and besides a few smaller papillae irregularly distributed. Skin rough to the touch on account of the large number of spicules.

Spicules a crowded layer of large tables with delicate lace-like disks with four large central holes and several smaller marginal holes; spire tall with four rods, several cross-beams and spines on the sides. Ventral tube feet with small end plate and curved supporting rods. Dorsal papillae lacking end plate. Color in alcohol white or grey, in some individuals finely dotted with brownish pigment.

Type. — M. C. Z.

Type locality. — Near Bahía de Cochinos, Sta. Clara province (Station 2323).

Distribution. — The waters around Cuba.

Depth. — From 220-320 fathoms.

Specimens examined. — The type and the following specimens, all from the "Atlantis" cruises around Cuba.

Station			Fathoms		
2963E	22° 07'	N., 81° 08'	W.,	220-235	Fragments
2987	23° 22'	N., 79° 53'	W.,	280-300	1 good, several fragments
2323	22° 00'	N., 81° 09' 30"	W.,	290-320	Type
3432	23° 05'	N., 79° 29'	W.,	250	1 poorly preserved
3434	23° 10'	N., 79° 35'	W.,	260	1 good, several fragments
3436	-23° 05'	N., 79° 28'	W.,	255	Fragments
3483	23° 12' 30"	N., 81° 22'	W.,	300	"

Remarks. — The type measures 22 cm. in length; one of the other, less perfect specimen reaches however, a length of 25 cm. The species resembles somewhat the type species, *B. natans* (Sars), which also occurs in the West Indians seas. It is, however, more flattened with a narrow body cavity and a wide marginal brim which is interrupted at the hind end; furthermore the anus is terminal or subventral, often placed in an indistinct furrow. The inner anatomy is typical; the calcareous ring is low with broad radials which are deeply incised posteriorly. Traces of tentacle ampullae are present as indistinct lobes. A single ventral Polian vesicle is present in the type and a delicate stone canal, embedded in the dorsal mesentery; its head being attached to the dorsal wall of the body cavity. The mud-filled intestine runs straight backward, almost reaching the cloaca, bends forward for a short distance and then runs backward; the third mesentery attaches to the right ventral interambulacrum. The respiratory trees have short lateral branches; the musclebands are thick, fleshy, the dorsal ones are much wider than the ventral ones. Most of the bodywall is covered by the musclebands except a narrow band on the sides. The musclebands appear superficially to be divided but actual examinations shows they are merely furrowed. The gonads form two clusters of dichotomously divided tubes, attached closely behind the ring canal and opening dorsally near the attachment for the stone canal. In the type, collected March 4, the tubes were filled by large eggs.

The species differ from both *B. natans* (Sars) and *B. pourtalesi* (Théel) in its terminal or subventral anus and its crowded layer of spicules which consist of tables with a completed lace-like disk. Its greatest affinities seems to lie with *Bathyherpystikes punctatus* Sluiter from the East Indies. (1901, p. 37, pl. 7, figs. 12-13). The latter genus differs so slightly from *Bathyplotes* that it seems natural to withdraw it as a synonym. Whether the present species is identical with Sluiter's species cannot be decided without careful comparison.

of the types. The spicules figured by Sluiter are at least distinctly different from those observed in *B. bigelowi*.

AMPHIGYMNAS BAHAMENSIS Deichmann

(Plate 32, figs. 1-10)

Amphigymnas bahamensis Deichmann, 1930, p. 107, pl. 9, fig. 9; pl. 10, figs. 1-6.

Diagnosis. — Large form (30 cm.); body elongate, synallactid-like, with four rows of large dorsal papillae, a lateral row of still larger papillae and an midventral double row of small tube feet. Tentacles 20, mouth ventrally placed, anteriorly overhung by the dorsal papillae; anus terminal. Skin thin, parchmentlike or more thick and gelatinous, according to the degree of contraction; rough to the touch. Inner anatomy similar to that of *Synallactes*, but the longitudinal musclebands are undivided.

Spicules large tables with well developed disk, mostly with four large central holes and a varying number of smaller marginal holes. Spire mostly four-pillared and of varying height often partly reduced. Besides a number of smooth perforated plates is present with holes of approximately uniform size. Feet with or without an end plate and with numerous supporting rods, often with dentate edge, and smaller tables with 3-4 short pillars in the spire. In the dorsal papillae tables of varying size and curved supporting rods but apparently no end plate. Color in alcohol white.

Type. — U. S. N. M.

Type locality. — Between Bahamas and Cape Fear, 262 fathoms.

Distribution. — Known from the waters around Florida and Cuba, possibly more widespread.

Depth. — Between 240-320 fathoms.

Specimens examined. — The following material from the "Atlantis" cruises.

Station 3324 22° 08' N., 81° 09' 30" W., 320 fathoms. 1 large specimen.

Remarks. — The single specimens measures about 30 cm. in length but is strongly contorted; it is about twice as large as the types.

The spicules differ considerably from those observed in the two types. There are fewer of the simple plates with holes of approximately uniform size while large tables with four central holes and stout four-pillared spire are numerous. Also the ventral feet were discovered to possess an end plate but these may merely have been missed in the types. It is possible that the perforated plates represent a juvenile character which gradually disappears (the types