

**HOUSSAYELLA IGUAZUENSIS BONETTO AND DE DRAGO,
1966 (PORIFERA-SPONGILLIDAE) IN ITÚ RIVER, RIO
GRANDE DO SUL, BRAZIL. (*)**

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S U M M A R Y

A new occurrence of *Houssayella iguazuensis* BONETTO & de DRAGO, 1966, this time in Itú river, RGS, Brazil, enabled the author to confirm the original description and extend distribution of the genus. The genus is also shown to resist the recent revision proposed by PENNEY & RACEK (1968) for the Spongillidae.

S U M A R I O

A ocorrência de *Houssayella iguazuensis* BONETTO & de DRAGO, 1966, no RGS, Brasil, veio propiciar um renovado estudo do gênero. Este vem confirmar a descrição original e demonstrar que o status deste gênero deve ser mantido frente à recente revisão sistemática dos espongiídeos realizada por PENNEY & RACEK (1968).

INTRODUCTION

In 1966 BONETTO & de DRAGO erected *Houssayella*, a new genus of fresh-water sponges and described its type and sole species, *H. iguazuensis*. In 1968 PENNEY & RACEK published their comprehensive revision on the gemmulliferous spongillids. This revision could not obviously deal with the new genus but rendered further study of material belonging to it imperative. *H. iguazuensis* had no other notice of occurrence after the original description. The species was then found in Iguazú Falls of Paraná River and in Uruguay River, in Argentine.

In 1969 *H. iguazuensis* was collected by the author from Itú River, RGS, Brazil. One small though complete specimen and several spare gemmules were found on the under side of a stone bearing a specimen of *Uruguaya repens*. In spite of the few material available the preparations allowed full comparison with original description.

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Results drawn from this comparison are reported having in mind to situate this genus in the revised systematics of the group. We regret that in spite of our efforts type material could not be secured for comparison.

M A T E R I A L

Data on collection same as in VOLKMER-RIBEIRO (1969). Specimen deposited in MRCN (Catalog n.º 123).

HOUSSAYELLA IGUAZUENSIS BONETTO & de DRAGO, 1966:129.

Sponge 0,5 cm large, bearing two gemmules and conforming aspect reported in original description. Close to this specimen several gemmules forming a pavement layer protected by the brown covering of typical megascleres. Skeleton as described by BONETTO & de DRAGO, 1966 i. e., consisting mainly of a dense, random arrangement of microscleres with a few megascleres mingled in.

Original description which is extensive and well illustrated applies to our specimen in almost every particular. For this reason only the characteristics which seem particular to our specimen or which deserve enlarging of description will be dealt with.

Gemmoscleres: Birotulates showing all variations listed in original description. In our specimen however, margins of most umbonate rotules are so thick that incisions in these margins give way to lobes instead of teeth. Such lobes bear also minute spines. (Figs. 1 and 2).

Gemmules: The quite large, flattened and subspherical gemmules are "rooted" to the substratum by a number of typical megascleres which randomly pack at the base of the gemmule. When larger numbers of gemmules are present these megascleres surround the gemmule up to its summit and fuse with those of the gemmules which are next forming so the brown covering reported in original description and leaving only the foraminal tubules free. Pneumatic coat thin with few minute air spaces. Birotulates single layered, side by side embedded in pneumatic coat, the lower rotule deeply seating in inner gemmular membrane. Only spines of the upper rotule protrude from the coat. (Fig. 3)

Megascleres surrounding the gemmules. Strongly, completely spined tornotes with spines gathering at the extremities where they are sometimes turned inwards. Differing from skeletal tornotes also in having shorter lengths and stronger curvatures. Some of these capsular megascleres approach and reach the amphistrongylous shape, others show exceedingly variable shapes. (Figs. 1, 4 and 5).

Dimensions of spicules:

Skeletal megascleres:	189 to 219 micra
Capsular megascleres:	33 to 183 micra
Microscleres :	43 to 56 micra
Gemmoscleres :	16 to 23 micra (total length of shaft)
	19 to 23 micra (diameter of rotules)

D I S C U S S I O N

The microphotographs rend it evident that our specimen almost completely conforms the original description. We think that minor differences presented by this specimen do not recommend description of a new species. The specimen is evidently young as can be inferred from the small size of the sponge and the few gemmules in it. Also details now described which are missing in original description will have to be checked for in type material.

BONETTO & de DRAGO (1966) when erecting the genus realized the relationship existing among *Houssayella*, *Dosilia* Gray and *Asteromevenia* Annandale. With redefinition of genus *Dosilia* by PENNEY & RACEK in 1968 for the inclusion of all species with stellate microscleres (what caused *Asteromevenia* to fall in the synonymy of *Dosilia*) a renewed study of material belonging to *Houssayella* was highly desirable.

In spite of PENNEY's & RACEK (1968) attempt to gather in one genus all those evidently related species with stellate microscleres *Houssayella* fully escapes the scheme and seems entitled to keep its status as a genus apart from, though closely related to *Dosilia*. Distinguishing features for *Houssayella* are:

- Megascleres which are tornotes with spines gathering at middle portion and at extremities while in *Dosilia* spines never gather at extremities (PENNEY & RACEK, 1968 p. 126).

- b) Gemmoscleres that present extreme shortening and variations in shape but that belong to one length group, the longer ones representing but 1% of the total (BONETTO & de DRAGO 1966 p. 133). This figure could be confirmed by us.
- c) Gemmules characteristically rooted to the substratum by typical, strongly spined megascleres.
- d) Skeleton structure as well as size of the sponge differing from anything already described for *Dosilia*.
- e) A large series of highly variable amphioxeous microscleres where some stellate forms may be present.

This genus though possessing microscleres that evidence a close relationship to *Dosilia* shows also some affinities do *Uruguaya* in gemmular structure, protecting cover of special megascleres and situation of gemmules in close contact with the substratum. Gemmoscleres in *Houssayella* resemble also the thick margined, short birotulates of *Uruguaya* with a characteristic point of shaft piercing an also thin pneumatic coat.

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REFERENCES

- BONETTO, A. A. & de DRAGO, I. E. (1966) — Nuevos aportes al conocimiento de las esponjas argentinas. — *Physis*, B. Ayres, v. 26 n. 71, p. 129-140.
- PENNEY, J. T. & RACEK, A. A. (1968) — Comprehensive revision of a world-wide collection of freshwater sponges (Porifera-Spongillidae). — *Bull. U. S. nat. Mus.*, n. 272, p. 1-184.
- VOLKMER-RIBEIRO, C. (1969) — New occurrence of *Uruguaya repens* Hinde, 1888 (Porifera-Spongillidae) with redescription of the species. — *Iheringia*, Zool. n. 33, p. 119-123, 2 f.

EXPLANATION OF PLATES

- Fig. 1 — Thick margined gemmoscleres and capsular megascleres. This is the most common type of gemmosclere. x 450.
- Fig. 2 — Gemmosclere with rotules not umbonate and a piercing point of shaft. x 450.
- Fig. 3 — Transverse section of gemmular wall. At bottom profiles of some rotules. x 450.
- Fig. 4 — Capsular megascleres. At focus point of a strongly spined tornote and an amphistrongylous spicule. x 450.
- Fig. 5 — One of the extreme variations in shape reached by a capsular megasclere. x 1.000.
- Fig. 6 — One of the numerous variations in shape displayed by microscleres of *H. ignazuensis*. These spined and microspined amphioxeous largely overcome in number stellate forms. x 1.000.

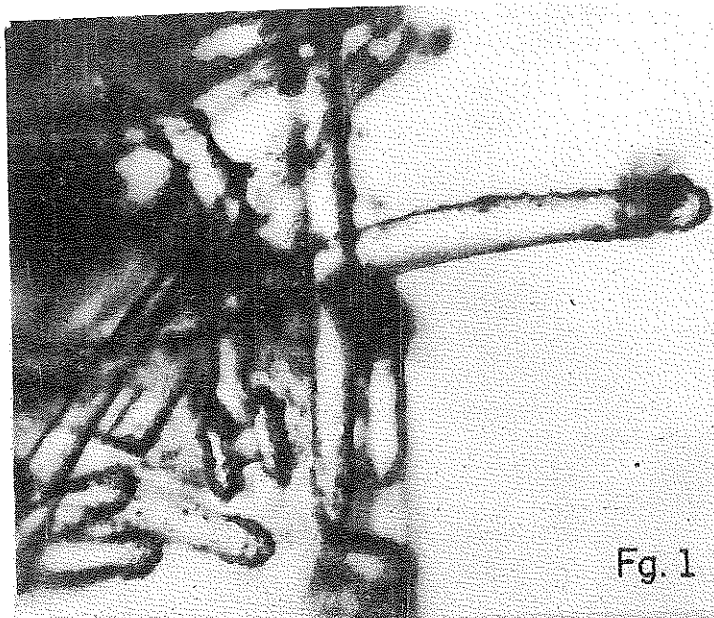


Fig. 1

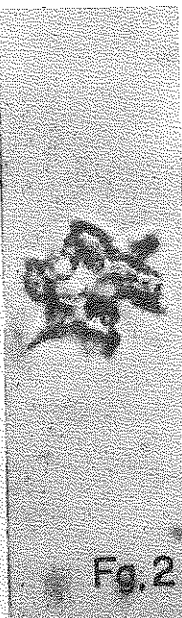


Fig. 2



Fig. 5

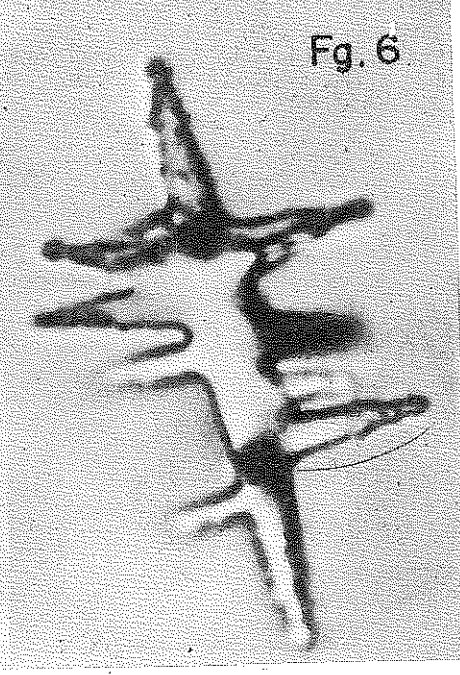


Fig. 6

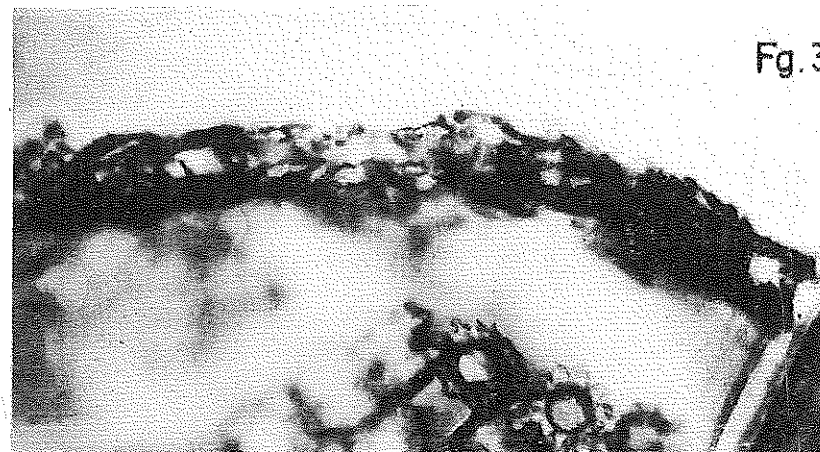


Fig. 3

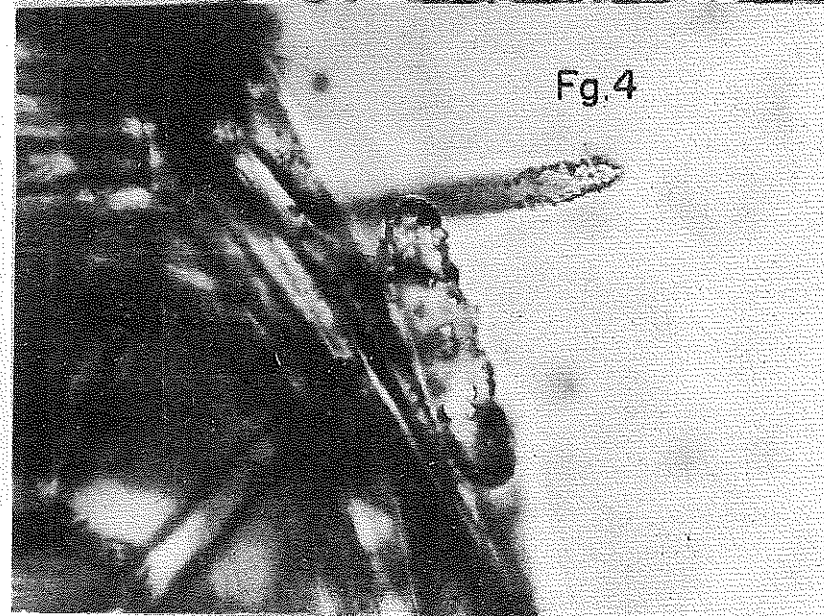


Fig. 4