



VIII.—Description of a new species of Spatangidæ

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To cite this article: Edgar A. Smith F.Z.S. (1878) VIII.—Description of a new species of Spatangidæ, *Annals and Magazine of Natural History*, 1:1, 67-70, DOI: [10.1080/00222937808682290](https://doi.org/10.1080/00222937808682290)

To link to this article: <http://dx.doi.org/10.1080/00222937808682290>



Published online: 15 Oct 2009.



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- Figs. 12, and 13, slender acuate spicules; fig. 14, a variety of figs. 12 and 13.*
Fig. 15, flesh-spicules in various stages of growth, a, b, c, d, and e.
Figs. 16-25. Varieties of the ensiform spicule.
Fig. 16. Variety with two shafts diverging at an angle of about 60°, and proceeding from a common head.
Fig. 17. Variety in which the shaft has become straight and cylindrical and rounded at the end, so as to resemble mucronate forms of C. mucronata.
Figs. 18-21. Various forms of inflated terminations of the ensiform spicules.
Fig. 22. Extremely curved variety of ensiform spicule.
Fig. 23. Two ensiform spicules joined together, with an angle of divergence of about 150°.
Fig. 24. Variety with a conical spine.
Fig. 25. Variety similar to fig. 17.
Figs. 26-28. Cliona subulata.
Figs. 26 and 27. Skeleton-spicules of Cliona subulata.
Fig. 28. Flesh-spicule of same.

VIII.—*Description of a new Species of Spatangidæ.* By
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 Museum.

THE record of the existence of another species of the genus *Linthia* is very interesting, since up to the present time it comprised but a single recent form. Unfortunately I cannot give the locality whence the specimen was obtained with any degree of certainty; however, there is some evidence which tends to show that it was brought either from the Pacific Islands or from the west coast of South America, since it was found in a collection of shells which consisted almost exclusively of species which are well-known inhabitants of those regions.

Linthia rostrata.

Test, seen from above, cordiform, narrowed posteriorly, viewed laterally much beaked behind through the prominence of the hinder interambulacral region above the anus, and a deep well-marked excavation beneath the beak; lower surface a little convex; viewed endways the sides appear rather flat, converge to an obtuse apex, and gradually round off below, joining the somewhat convex base. Genital openings four, central, very small, equal, subequidistant; posterior pair scarcely wider apart than the anterior ones. Ambulacra very unequal, anterior lateral pair almost double as long as the posterior ones, moderately deeply sunken, inclined considerably towards the anterior end, yet arcuated in the opposite

direction; posterior petals equally deep as the anterior, a little narrower, very short, sinuous, diverging at their extremities; pores rather larger than in the recent type of the genus (*L. australis*), connected by a shallow groove; the narrow ridges separating them bear a few minute tubercles on their outer half. Peripetalous fasciole narrow, very angular and sinuous; in the posterior lateral interambulacrum it passes close to and almost parallel with the hinder furrows for about eight ninths of their length, then descends suddenly, forming an acute angle, and running close to the anterior lateral furrow, with two slight bends in its course, passes round the termination of the furrow in an abrupt curve, and rises in a straight line somewhat obliquely towards the anterior ambulacrum, where it suddenly descends at a right angle and parallel with the furrow, and then, after a short distance, a little above the ambitus, crosses in a curve the shallow groove. The lateral follows a similar course to that of *australis*. Anterior ambulacral groove almost as deep as the others, becoming gradually shallower towards the ambitus, with a series on each side of remote and very minute double pores, alternating with one another on each side, those just above the fasciole being about two millimetres apart. Tuberculation very like that of *L. australis*. Plastron narrowly cordate, convex, not much narrowed towards the mouth, and not reentering at the aboral end. Mouth broad, narrow. Anal opening ovate, acuminate above and below. The colour is that of cork, mottled with a darker hue in the middle of the plates.

Length nearly $1\frac{1}{2}$ inch, width at ambitus $1\frac{1}{8}$, height 1.

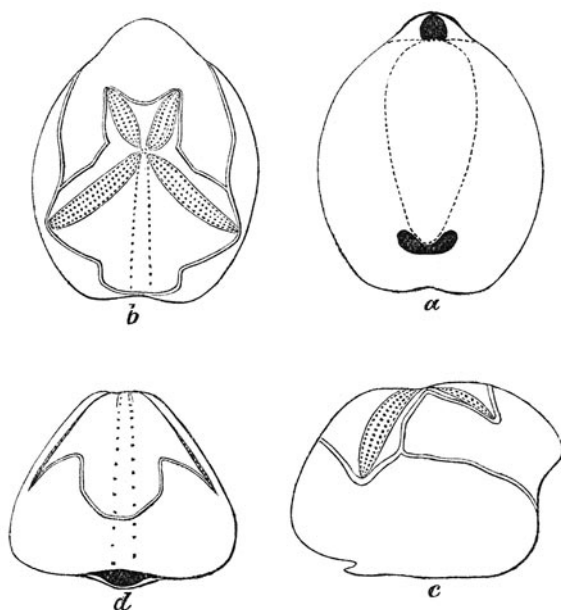
Hab. Pacific Islands (probably).

This species, of which I have only seen a single spineless specimen, has much of the general character of *L. australis* of Gray. Still there are so many differences, which, although perhaps small individually, in the aggregate become of much importance, that I certainly think they point out the specific distinctness of the form above described, and show that it passes the limits of an individual variation.

The position of the apex and genital pores is very different; the form is totally distinct, resembling very considerably that of the fossil *Micraster cor-anguinum*, var. *rostratus*; the proportion and inclination of the ambulacra and the course of the fasciole also show considerable variation. Besides these differences there are others—namely, the greater depth of the anterior ambulacrum and the remoteness and minuteness of the pores on each side of it; and in specimens of equal size of the old species the pores of the other ambulacra are

decidedly smaller and much more numerous, whilst the genital pores are larger. On the lower surface there are differences also: the plastron is conspicuously narrower and the oral aperture is considerably broader transversely.

The course of the peripetalous and lateral fascioles in *L. australis* is subject both to variation in different specimens and also to irregularity in the same individual. In normal specimens the first forms but a single angle some distance within in each interambulacral space; but in others, as is the case in the variety figured by Gray (Cat. Recent Echinida, 1855, pl. vi. fig. 2 a), it becomes biangular at its highest part both in the anterior and lateral interambulacra.



Linthia rostrata.

a, actinal view; b, abactinal; c, lateral; d, anterior.

The lateral fasciole in the same specimen is also irregular. On one side its position is normal; but on the other, from the point of contact with the peripetalous fasciole, it rises obliquely for the distance of nearly three quarters of an inch within the posterior lateral interambulacrum, then forming a sudden bend descends at right angles for half an inch, and, again bending less acutely, pursues the ordinary course, passing under the

anus in a broad curve. Exactly the same irregularity exists in another specimen; only in this instance it occurs on the opposite side of the test.

In other characters *L. australis* does not seem to be a species subject to much variation, judging from the specimens (fourteen in number) which I have seen. The form, direction, and length of the ambulacra and position of the vertex differ but very slightly in any of them; and this constancy of characters strengthens the supposition that the present, which offers such marked differences, is decidedly specifically distinct.

IX.—On *Wagnerella*, a new Genus of Sponge nearly allied to the *Physemaria* of Ernst Hückel. By C. MERESCHKOWSKY*.

[Plate VI.]

I HAVE just received the October number of the 'Annals and Magazine of Natural History,' which contains an article by Mr. Carter, entitled "Remarks on Professor E. Hückel's Observations on *Wyvillethomsonia Wallichii* and *Squamulina scopula*."

M. Hückel, in his monograph on the *Physemaria*, has been very hard upon Mr. Carter, and reproaches him with having imperfectly observed the facts of which he speaks. Mr. Carter, in the article above mentioned, complains bitterly of the want of delicacy on the part of M. Hückel, and brings against him the same charges as to the want of exactitude which his works display, and their bad illustrations, which he regards as "more fitted for a caravan at a fair than for scientific purposes."

It is clear that impartial logic has taken leave of both writers in this matter, and that feeling interferes in the decision of the scientific question. In such cases it becomes more than ever necessary to stand exclusively upon facts, and to allow nothing but reason to say a word. Hence every new fact that may serve to throw light upon the question becomes very desirable.

My opinion is, that we must neither "laugh" nor "be angry," and that, instead, both sides must repeat their observations, criticise them better, and, taking into consideration all the facts acquired, bow to the power of truth, remembering that he alone never deceives himself who never thinks.

* This paper must be considered as a preliminary note of a memoir on White-Sea Sponges.