

P O R I F E R A.

By H. J. CARTER, F.R.S.

Dry Specimens.

These were all too much beach-worn for specific distinction.

The Nos. correspond with those on the Specimens.

1. POLYTHESES, *Duchassaing et Mich.**
2. HIRCINIA.
3. CHALINA.—Spicules fine, slender, acerate.
4. HIRCINIA.—Fine structure.
5. EUSPONGIA (“best Turkey Sponge” of commerce).
6. EUSPONGIA.—Bearing *Polytrema miniaceum*.
7. HIRCINIA.—Skeletal structure partially filled with the filaments of *Spongiophaga communis*.

Wet Specimens.

Most of these are too fragmentary for specific distinction, although possessing the natural characters which they presented when taken from their habitat.

8. POLYTHESES.—Two coarse pieces alone; the rest on pieces of a fine *Hircinia*.

9. EUSPONGIA (“best Turkey Sponge” of commerce).—Three or four discoloured pieces.

10. CHONDRILLA NUCULA, *Sdt.*

11. GEODIA.—? *G. Tumulosa*, *Bk.*—Siliceous balls spherical. Zone-spicule trifold; arms simple, undivided, extending upwards, outwards, and lastly horizontally. Bearing *Polytrema*.

12. CHONDROPSIS ARENIFERA, *Cart.* (*Ann. & Mag. Nat. Hist.* 1886, vol. xvii. p. 122).—Acuate spicules, sometimes blunt at each end.

* It should be remembered that “*Polytheses*” is a *Hercinia* in which the soft parts have been replaced by a structure composed of the filaments of *Spongiophaga communis*, *Cart.*, which is of world-wide occurrence, but of which the nature is still unknown.

13. CHALINA ? species.—Dark, dirty; fragments still bearing traces of their natural red-purple colour. Extending horizontally; throwing up thick ridges; scattered over with short, erect, tubular vents of different lengths. Fibre tough, charged abundantly with comparatively large, acerate spicules. Several pieces, some accompanied by a portion of *Chondropsis arenifera*.

14. EUSPONGIA (“fine Turkey sponge” of commerce).—Typically good, but small specimen; presenting the characteristic, crinkled surface. Colour black above, light sponge-yellow below. Bearing *Polytrema*.

15. CHONDRILLA NUCULA, *Sdt.*—Typically good specimen, growing over sand-detritus mixed with *Polytrema*.

16. CHONDRILLA PHYLLODES, *Sdt.*—Antilles. Spicules of two kinds, viz., pin-like skeletal, and spinispirular flesh-spicule. Closely allied in this respect to *Spirastrella cunctatrix*, *Sdt.* Colour grey or violet. Consistence gelatinous, firm. Three typically good specimens growing over sand-detritus mixed with *Polytrema* covered with white *Melobesia*.

17. CHONDROPSIS ARENIFERA.—Black on the surface from a layer of brown pigmental cells. Growing over a black *Stelletta* (? species), also bearing a cortical layer of dark brown-black pigmental cells mixed with small stellates. Zone-spicule trifid. Arms simple, straight, extended upwards and outwards.—Four large pieces.

18. CHONDRILLA NUCULA, *Sdt.*—Small, but typically good specimen.

19. SYNASCIDIA.—Common form. Globular, radiated calcareous spicule. Colour purple-white. Two pieces.

20. CHALINA ? species.—Same as No. 13. One piece bearing a bit of *Hircinia*.

21. EUSPONGIA (“best Turkey sponge” of commerce).—Three small pieces.

22. ? ALCYONIUM OR HYDROID ZOOPHYTE.—Digitate, reptant; colour yellowish; consistence soft.

23. ACTINIA ? sp.—Now lead-colour.

24. *ALCYONIUM*.—Congregated, short, columnar individuals ; constricted circularly throughout the column.

25. *EUSPONGIA* ("Honeycomb sponge" of commerce).—Coarse cavernous structure.

26. *EUSPONGIA*.—Ditto.

27. *GEODIA*, same as No. 11.—Fragments of skin and body-substance only.

28. *DONATIA LYNCURIUM*.—Four specimens ; the largest $\frac{3}{4}$ in. in diameter.

29. *POLYTHERSES*, with skeletal structure of *Hircinia* protruding.

30. *EUSPONGIA* ("Honeycomb sponge" of commerce).—Coarse cavernous structure.

31. *SUBERITES MASSA*, *Sdt.*—Spicule of one form only, simply pin-like, with subglobular head. Eight fragments. Surface warty. Colour yellowish.

32. *AXINELLA* ? species.—Form of specimen globular, about an inch in diameter, composed of radiating, erect, tough fibre, charged throughout with projecting tufts of simply acute curved spicules ; of one form only.

33. *TETHYA CRANIUM*.—Two small, discoloured, black fragments.

34. *CHONDROPSIS ARENIFERA*.—Specimen triangular, elongate ; 4 inches long. Bearing *Polytrema* and *Melobesia*.

35. *EUSPONGIA* ("Honeycomb sponge" of commerce).—Coarse, cavernous structure. Three pieces. Colour black above, light sponge-yellow below.

36. *CHONDROPSIS ARENIFERA*.—Good, but small typical specimen.

37. ? *HYMENIACIDON SANGUINEA*, *Bk.*—Small insignificant specimen. Spicule of one form only, viz. pin-like and slightly curved. Colour now yellowish.

38. *LEUCONIA SACCULATA*, n. sp. (Calcsponge).—Form of specimen sacculated, consisting of four or more inflations

projecting from a common cavity. Colour white. Entire specimen about an inch long, and $\frac{3}{4}$ of an inch in diameter ($1 \times \frac{3}{4} \times \frac{3}{4}$ inch); broken out on one side, if not the point of attachment. The uppermost or principal division ending in a peristomatous mouth, which can only be seen with a microscope, hence to the unassisted eye looks "naked"; $\frac{2}{12}$ in. in diameter. The same on the summit of each inflation, but reduced to the size of a pin's head. Surface of the body smooth, composed of intercrossing arms of quadriradiate spicules *only*, between which are the pores. Vents as just described, leading into a general cloacal cavity corresponding in its inflations with those of the body. Surface of the cloaca scattered over with holes of very different sizes, very irregularly situated in a layer of minute quadriradiates whose fourth arm is much smaller than the rest, curved towards the oral orifice and projecting plentifully above the surface of the cloaca. The spicules of three kinds, viz. 3-radiate, 4-radiate, and linear cylindrical acerate.

Wall of the body about $\frac{1}{16}$ in. in diameter, composed of three layers of spicules, viz.:—1, consisting of comparatively large quadriradiates whose shaft projects inwards and whose other three arms are spread out horizontally over the surface; arm about $\frac{1}{15}$ by $\frac{1}{30}$ in. in its greatest diameters; 2 (the middle substance of the wall), consisting of 3- and 4-radiates mixed irregularly, whose arms are about the same size as that of the quadriradiates of the first or external layer; 3, or internal layer, forming the surface of the cloaca, and consisting of *minute* or infinitely smaller quadriradiates, whose shafts are directed outwards; the other two arms horizontal, and the fourth, or "spine" as it has been called, which is much the smallest, projecting above the surface in the way mentioned. Peristome consisting of palisading spicules about $\frac{1}{30}$ in. long, very fine and straight with abruptly pointed ends, crossed and kept in position by the spreading arms of the quadriradiates of the third, or cloacal, layer, here much enlarged. Wall permeated by branched canals, which commencing on the pores on the surface end in the holes or apertures on that of the cloaca.

Loc. Island of Fernando Noronha.

39. GEODIA.—Fragments of skin and body-substance. Same as No. 11, &c.

*Summary of Specimens, arranged according to the Author's
Classification* (Ann. Mag. N. H. 1875, vol. xvi. p. 43).

Order I. CARNOSA.

Family GUMMINIA.

CHONDRILLA NUCULA, *Sdt.* 10, 15, 18.

CHONDRILLA PHYLLODES, *Sdt.* 16.

Order II. CERATINA.

None.

Order III. PSAMMONEMATATA.

EUSPONGIA ("fine Turkey sponge" of commerce). 5, 6, 9,
14, 21.

EUSPONGIA ("Honeycomb sponge" of commerce). 25, 26,
30, 35.

HIRCINIA. 2, 4, 7.

POLYTHESES. 1, 8, 29.

Order IV. RHAPHIDONEMATATA.

CHALINA. 3, 13, 20.

Order V. ECHINONEMATATA.

AXINELLA. 32.

Order VI. HOLORHAPHIDOTA.

HYMENIACIDON SANGUINEA, *Bk.* 37.

SUBERITES MASSA, *Sdt.* 31.

DONATIA LYNCURIUM. 28.

CHONDROPSIS ARENIFERA, *Cart.* 12, 17, 34, 36.

GEODIA, 11, 27, 39.

TETHYA CRANIUM. 33.

Order VII. HEXACTINELLIDA.

None.

Order VIII. CALCAREA.

LEUCONIA SACCULATA, n. sp. 38.

Remarks.

Of the present collection, it may be stated that the facies is West-Indian. *Chondrilla phyllodes*, Sdt., has as yet only been chronicled by that author, and that, too, from the "Antilles" (Grundzüge Spong.-F. atlantisch. Gebietes, p. 26). "*Polythorses*" was the name given by Duchassaing and Michelotti to this transformed, sponge-like body which they dredged in the Caribbean Sea, and whose constituent parts have been above noticed. Both sorts of the Official Sponge, viz. the "Best Turkey" and the "Honeycomb" of Commerce, are plentiful, as they are in the West Indies generally. The Calcisponge, *Leuconia sacculata*, is a new species.

MADREPORARIA.

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Section MADREPORARIA APOROSA.

Family ASTRÆIDÆ, *Ed. & H.*

Subfamily ASTRÆIDÆ REPTANTES.

ASTRANGIA SOLITARIA, *Lesueur*, sp., *Verrill*, *Bull. Mus. Comp. Zoöl.* No. 3; *Pourtalès*, 1871, *Ill. Cat. Mus. Comp. Zoöl.* p. 79.

A specimen much covered with Nullipores. The corallites smaller than the Florida types, and the so-called "pali" not united before the second and third cycles of septa. The form is allied to *Astrangia Danae* and to *A. Michelini*. It may be considered as a small variety of the Floridan species.

Subfamily ASTRÆIDÆ CÆSPITOSÆ.

MUSSA, sp.—A worn specimen of a species.

Subfamily ASTRÆIDÆ AGGLOMERATÆ FISSIPARANTES.

FAVIA CONFERTA, *Verrill*, 1867, *Trans. Connect. Acad.* vol. i., in *Hartt's Collection of Corals from the Abrolhos Reef, Brazil*, p. 355 (1868).

This species is remarkable for its elongated calices due to fissiparity, and for their closeness. Often a ridge separates the