

XLIV.—*Report on a Collection made by Mr. T. Conry in Ascension Island.*

Fishes. By A. GÜNTHER.

Mollusca. By E. A. SMITH.

Crustacea. By E. J. MIERS.

Myriopoda and Insecta. By C. O. WATERHOUSE.

Echinodermata. By F. J. BELL.

Madreporaria. By S. O. RIDLEY.

STAFF-SURGEON T. CONRY, who at present is stationed in the Island of Ascension, has kindly forwarded a small collection of zoological specimens to the British Museum. And as it is always of interest to record the occurrence of animals in an oceanic island, the fauna of which must be ever changing from physical causes as well as owing to the agency of man, we have thought it useful to prepare a list of the specimens collected, and to give the result of our examination in a collective form.

FISHES.

The species were four in number, three of which are additional to the list of Ascension-Island fishes given in the 'Challenger' Reports (Shore-fishes, p. 4), viz. *Scorpæna Plumieri*, *Ostracion quadricornis*, and *Salarias vomerinus* (= *S. textilis*). The last-named species is said to make jumps twenty times its own length.

MOLLUSCA.

The specimens collected belong to the following species:—
1. *Purpura ascensionis*, Quoy & Gaimard; 2. *P. hæmastoma*, Lamarck; 3. *Nerita ascensionis*, Gmelin; 4. *Cypræa lurida*, Linn.; 5. *C. spurca*, Linn.; 6. *Hipponyx antiquata*, Linn.; 7. *Malleus regula*, Forskål, ? jun.; 8. *Helix similaris*, Férussac.

Of these species it is interesting to note that nos. 2, 4, and 5 are extensively distributed throughout the Mediterranean and down the west side of Africa as far as St. Helena. The *Hipponyx* extends along the same African region, but does not enter the Mediterranean. This, *Purpura hæmastoma*, and *Cypræa spurca* also inhabit the shores of the West Indies. Although it is possible that their range will eventually prove still more extensive, (as far as I can ascertain) neither of them has as yet been met with further south than St. Helena. This distribution may be attributable, as suggested by Dr. Gwyn Jeffreys, to the action and influence of the great

Agulhas current, which issues from the Indian Ocean and flows round the Cape of Good Hope northwards towards St. Helena, and thence past Ascension to the West Indies; and to the Guinea current, as well as to a passage which formerly existed across Africa in the line of the Sahara, may be owing the partial correspondence between the Mollusca of the Indian Ocean and of the Mediterranean. Yet, if these ocean currents be the cause of such distribution (and doubtless they must influence it considerably), we should expect to find these same species in the Indian Ocean or at the Cape. We do not; and are we therefore to consider St. Helena the starting-point of these species? Unfortunately the *Hipponyx* is found on the west side of both North and South America, a fact eminently perplexing; and *Purpura hæmastoma* has yet to be proved distinct from *P. biserialis* of the Californian and Panama coasts.

Purpura ascensionis appears to be peculiar to the island, and, although living under the same conditions as the other species, has not been similarly affected by these oceanic currents, unless the *P. neritoidea* found at the Cape-Verd Islands and Benguela (*Dunker*) is to be considered a modified form of it, or *vice versâ*.

Nerita ascensionis is also limited in range; and the only other locality known to me whence it has been obtained is the island of Trinidad, off the Brazilian coast, about 20° south of the equator. In this instance also to the ocean currents may be attributable such distribution; for, according to certain maps which I have consulted, a branch of the great Indian-Ocean current passing Ascension sweeps southward along the Brazilian coast past the island of Trinidad. But whether such speculations respecting the range of these mollusks possess any real value is very questionable, seeing how extremely imperfect up to the present time has been the investigation of both the east and west shores of the South Atlantic or even of the whole of the Caribbean Islands.

The species of *Malleus* is very closely represented in the West Indies by *M. candeana* of D'Orbigny, which, however, may be specifically distinct. The only land-snail, *Helix similis*, is, with regard to distribution, quite an anomaly among terrestrial gastropods, being met with in Brazil, Cuba, Natal, Mauritius, Madagascar, Seychelles, Rodriguez, Bourbon, Bengal, China, Java, Philippines, Australia, Sandwich Islands, and other places. Monsieur Morelet thinks that it probably originated in the eastern parts of Asia, whence it has spread on the one hand to Polynesia, and on the other to America.

CRUSTACEA.

The crabs are few and unimportant. They include a very small male specimen that I refer to *Xanthodes melanodactylus*, A. M.-Edw., whose occurrence at Ascension I have already recorded*, three specimens of *Pachygrapsus transversus*, Gibbes, three of *Leiolophus planissimus* (Herbst), a small specimen of the anomorous genus *Petrolisthes* that is very probably referable to the West-Indian *P. armatus*, Gibbes, since it agrees with Gibbes's description in nearly all particulars, having, however, the spines on the upper margin of the third joints of the ambulatory legs very small and almost concealed by the stiff setæ and slenderer pinnated hairs with which the margins are clothed; the carapace and legs are covered with a close, thick, whitish pubescence; but there are scarcely any traces of its disposition in transverse lines except on the merus joints of the chelipedes; the carapace and legs are very prettily mottled with pink. Length of carapace nearly $2\frac{1}{2}$ lines (5 millim.).

Besides the above there are in the collection two small specimens of a crab in a larval (*Megalops*) stage of development, which cannot be certainly identified with any known species.

To render this brief account of the Crustacean fauna of this isolated rock the more complete, I subjoin the description of a species in the British-Museum collection which is apparently undescribed.

Pseudozius Mellissi, sp. n.

In this handsome species the carapace is transverse, much broader than long, its surface punctulated, the punctulations numerous and crowded in front, sparser posteriorly, and nearly obsolete near the postero-lateral and posterior margins. Some larger pits occur here and there near the antero-lateral margins; and the upper margins of the carpus and hand of the chelipedes are also punctulated. The front is four-lobed; the two median lobes are prominent and rounded and separated by a well-defined median notch; the outer lobes (or inner orbital angles) very little prominent, and separated from the median lobes only by a rather shallow sinus. The antero-lateral margins are longer than the postero-lateral margins, and are defined along the greater part of their length by an obliquely striated entire line or crest, after which follow, at the broadest part of the carapace, two small but distinctly-defined teeth. All the joints of the postabdomen are distinct in both sexes. The

* *Vide* Ann. & Mag. Nat. Hist. (ser. 5) viii. p. 213 (1881).

anterior legs (or chelipedes) in both specimens are very large and robust; arm or merus joint short, trigonous, with the margins unarmed; carpus or wrist large, with its inner margin produced into a broad squarely truncated lobe; both carpus and palm (as already noted) are punctulated above, the palm has its upper margin rounded, the lower margin straight, thin-edged, and entire; there is a rounded prominence on the inner surface; the fingers are black, dentated on their inner margins, with acute apices, the coloration not extending along the inner or outer surface of the palm. The ambulatory legs are slender, smooth, and nearly naked, with the penultimate and terminal joints longitudinally canaliculated, the longitudinal channels in the penultimate joints not always extending along the whole length of the joints. Length of the specimen from Ascension Island about 1 inch (25 millim.), breadth about $1\frac{1}{2}$ inch (38 millim.). This specimen is a female (preserved in spirit); it is of a flesh-coloured tint, and bears numerous ova. It was received with the collection of fishes of H.M.S. 'Challenger.' There is also a larger male specimen (preserved dry) in the British-Museum collection from St. Helena (*J. C. Melliss, Esq.*): length nearly 1 inch 5 lines ($35\frac{1}{2}$ millim.), breadth a little over 2 inches 3 lines (nearly 59 millim.). This specimen is of a more bluish pink hue.

The smooth but rather convex and very transverse carapace, which is marked neither with tubercles nor *sulci*, and the absence of the three anterior teeth of the antero-lateral margins, suffice to distinguish this species from all with which I am at present acquainted. *Xantho Bouvieri*, A. M.-Edwards*, from the Cape-Verd Islands (St. Vincent), if one may judge from the brief description, bears some slight resemblance to this species; but the carapace is much narrower, the front less deeply notched, and the antero-lateral margins have but a single obscure tooth near their posterior angles.

It *may* be identical with the small bright orange-red-coloured crab, figured on a reduced scale, but not determined, by Mr. C. S. Bate, in the work of the late Mr. J. C. Melliss on St. Helena ('Crustacea,' p. 206, pl. xxii. fig. 3, 1875). Mr. Melliss notes that it is very rare; but one specimen was brought to him from Break-neck Valley, on the leeward side of the island. The crab figured by Mr. Bate differs from the species now described in being much narrower in proportion to its length. I designate this species *P. Mellissi*, after its original discoverer†.

* Rev. et Mag. Zool. xxi. p. 377 (1869).

† Whether the Museum specimen received from Mr. Melliss is that referred to by Mr. Bate is uncertain. It was received from Mr. Melliss

In regard to the distribution of the species, I have already (*l. c.*) noted the occurrence of *X. melanodactylus* at Madeira and Cape St. Vincent, in the Cape-Verd Islands. *Pachygrapsus transversus*, Gibbes, is a very common and widely distributed form, occurring on the coast of Brazil, on the shores of the West-Indian islands, at Nicaragua, Vera Cruz, on the coast of Florida, &c.; also on the west coast of Central America (*Capt. Dow, in coll. Brit. Mus.*), California (*Kingsley*), Vancouver Island (var. *socius*, *Stm., J. K. Lord, Esq., in coll. Brit. Mus.*), at Madeira (*Rev. R. B. Watson*), &c. Mr. Kingsley, in his recently published and very useful synopsis of the Grapsidæ*, mentions specimens (identified by himself) occurring at Tahiti, New Zealand, and Australia.

Leiolophus planissimus also occurs at various localities on the eastern and western coasts of America, and at Madeira, and is widely distributed throughout the Oriental region †.

MYRIOPODA.

Scolopendra Leachii, Newport.

From West and South Africa.

COLEOPTERA.

1. *Dermestes vulpinus*, Fabr.

Cosmopolitan.

2. *Dermestes felinus*, Fabr.

This species was described from Tasmania. A specimen in the Banksian collection is marked "Kerguelen I." It is a species which might be found anywhere, but is not nearly so frequently met with as *D. vulpinus*.

3. *Alphitobius piceus*, Oliv.

A warehouse insect.

4. *Anthicus floralis*, Linn.

A European species.

5. *Phlyctinus callosus*, Bohem.

From the Cape of Good Hope.

with some specimens of *Plagusia depressa*; and no species of *Plagusia* is mentioned by Mr. Spence Bate in his report.

* Proc. Acad. Nat. Sci. Philad. p. 200 (1880).

† Vide Ann. & Mag. Nat. Hist. (ser. 5) i. p. 153 (1878).

6. *Naupactus longimanus*, Fabr.

Siderodactylus ornatus, Pascoe.

A Brazilian species. Mr. Pascoe, misled by the reception of this species from Ascension, described it as a new species of the old-world genus *Siderodactylus* (Ent. Mo. Mag. xv. 1879, p. 185). This insect formed the subject of a communication from the Lords of the Admiralty to the Director of the Royal Gardens, Kew. It is stated to have done much damage to grape-vines by eating the leaves, and is said also to attack the plants of kohlrabi.

7. *Orthoperus punctum*, Marsham.

A European species, described originally from England. The late Mr. T. V. Wollaston met with it in Madeira.

HYMENOPTERA.

Evania laevigata, L.

In the British Museum, from Mexico, Congo, Rodriguez, Ceylon, Sandwich Islands, Port Essington, &c.

LEPIDOPTERA.

1. *Leucania Loreyi*, Dup.

Occurs in Europe, and there are in the British Museum examples from Brazil and Java.

2. *Prodenia retina*, Herrich-Schäffer.

Has been received from Crete, European Turkey, Asia Minor, Madagascar, Mauritius, Madeira, Congo, and Nepal.

3. *Laphygma caradrinoides*, Walker.

Port Natal.

4. *Cosmophila indica*, Guenée.

Received from Mauritius, Sierra Leone, Congo, Ceylon, North India, Moreton Bay, and Tasmania.

5. *Plusia aurifera*, Hübner.

Has been received also from Teneriffe.

6. *Plusia ni*, Hübner.

Europe, New York, &c.

7. *Hymenia fascialis*, Cramer.

West Indies, Venezuela, Santarem, Sierra Leone, Congo, Bagdad, Ceylon, North India, China, Australia, New Zealand.

8. *Scopariaalconalis*, Walker.

In the British Museum only from Ceylon.

DIPTERA.

1. *Sarcophaga hæmorrhoidalis*, Fall.

A European species.

2. *Musca cæsar*, Linn.

A European species.

NEUROPTERA.

1. *Oligotoma Saundersii*, Westw.

Originally described from Bengal. Mr. Conry states that it is doing much mischief in Ascension.

2. *Chrysopa vulgaris*, Schneider.

A European species.

ORTHOPTERA.

1. *Bacteria trophinus*, Westw.

From Port Natal.

2. *Gryllus capensis*, Fabr.

Found almost everywhere.

3. *Meroncidius specularis*, Fabr.

Brazil and Mexico.

4. *Pachytes*, spp.?

Specimens of two species of this genus, which do not agree satisfactorily with any in the British Museum.

ECHINODERMATA.

1. *Cidaris metularia*, Lamk.

Three specimens, with and without spines.

2. *Diadema setosum*, Gray.

Three specimens, with and without spines.

3. *Tripneustes angulosus*, Leske.

One specimen, without spines; abactinal area complete.

4. *Echinometra subangularis*, Leske.

One specimen, of moderate size; no spines.

This is doubtless the "small Warded Barbadoes Sea Egg" which was collected by James Cuninghame at Ascension about 1699*.

5. *Echinoneus cyclostomus*, Leske.

Five specimens, all in good condition, and three quite richly covered with spines.

6. *Rotula dentata*, Leske.

Two specimens, without spines—one only slightly injured and still pale green in parts, the other bleached and more broken.

7. *Linckia diplax*, M. & Tr.

A large specimen, with four long and two very short arms, which I am unable to distinguish from a specimen of *L. diplax* that was determined by Prof. Perrier.

All the above specimens arrived dry; an Ophiurid in spirit is not in a condition to be certainly determined.

The species enumerated are all forms with a wide distribution; and none of them are at all specially characteristic of the eastern coast of the American continent; indeed *Diadema setosum* and *Echinometra subangularis* (with the possible, though very doubtful†, case of *Tripneustes angulosus*) are the only forms that seem as yet to have been found in that region. On the other hand, *D. setosum*, *E. subangularis*, and *Rotula dentata* have all been found on the eastern shores of the Atlantic; the last-mentioned would appear to be the only species in this collection which is confined to the western side of the African continent. The other species (*Cidaris metularia*, *Tripneustes angulosus*, *Echinoneus cyclostomus*, and *Linckia diplax*) are only to be found when we touch the Cape of Good Hope or pass from it into the great ocean on the eastern side; from this statement the island of St. Helena will probably have to be excluded.

As compared with the Mollusca, it is of interest to note

* See Phil. Trans. vol. xxi. p. 298.

† P. Z. S. 1879, p. 661.

that no Mediterranean species is represented in this collection; and the "great Agulhas current" to which Dr. Gwyn Jeffreys has directed attention is not only an efficient, but also, so far as the problem is raised by the characters of the Echinoderm-fauna, a sufficient cause for the presence of the same species on both sides of the southern peninsula of the Old World.

It may be of interest to add that *Salenia varispina* and *Echinus acutus* have been taken in deep water off Ascension.

MADREPORARIA.

Platygyra ascensionis, sp. n.

The specimen which I venture thus to designate is unfortunately but a portion of what was probably a globose colony. It is somewhat worn, the summits of many of the intercalicular walls being rather rubbed and the septa of many of the calicles considerably broken. Enough, however, remains of its characters to leave little doubt as to what they originally were. The species is decidedly fissiparous. The calicles are polygonal, generally either pentagonal or hexagonal, generally rather longer than they are broad, especially when about to divide; greatest diameter from 3 millim. to 5 millim., least diameter from 2 to 3 millim., depth about 2 millim. The calicles are absolutely united by their walls, which are barely 1 millim. thick at bottom of calicle, and end somewhat bluntly above, the septa being slightly indicated as low teeth on the summit of the wall. There are no traces of dissepiments or traverses, and seldom of lateral union between the septa. Septa in three cycles, the rudimentary third cycle frequently wanting, generally about three primaries to a millimetre; the primaries project horizontally about 1.5 millim. from the wall, and then slope gradually to the columella, to which they are intimately united; secondaries only about half as wide as the primaries; tertiaries, where present, mere ridges on the wall. Septa thin, but strongly roughened by lateral tubercles; edges of primaries decidedly dentate, those of inferior cycles slightly so. Columella distinct, normally spongy, but drawn out into a linear form in calicles about to divide. Tissue of walls and of the part subjacent to the calicles dense and non-cellular.

This species is a very interesting one, as showing a marked divergence from the ordinary type of the genus (*Platygyra*, Ehrb., = *Cæloria* + *Astroria*, M.-Edw. & Haime) to which I have assigned it; it appears to fall into the *Astroria* division

of that genus, but differs from any species hitherto assigned to it in the small size and very slight depth of the calices. It differs further in its spongy columella so much from the typical forms that it is excluded from the genus as limited

Fig. 1.

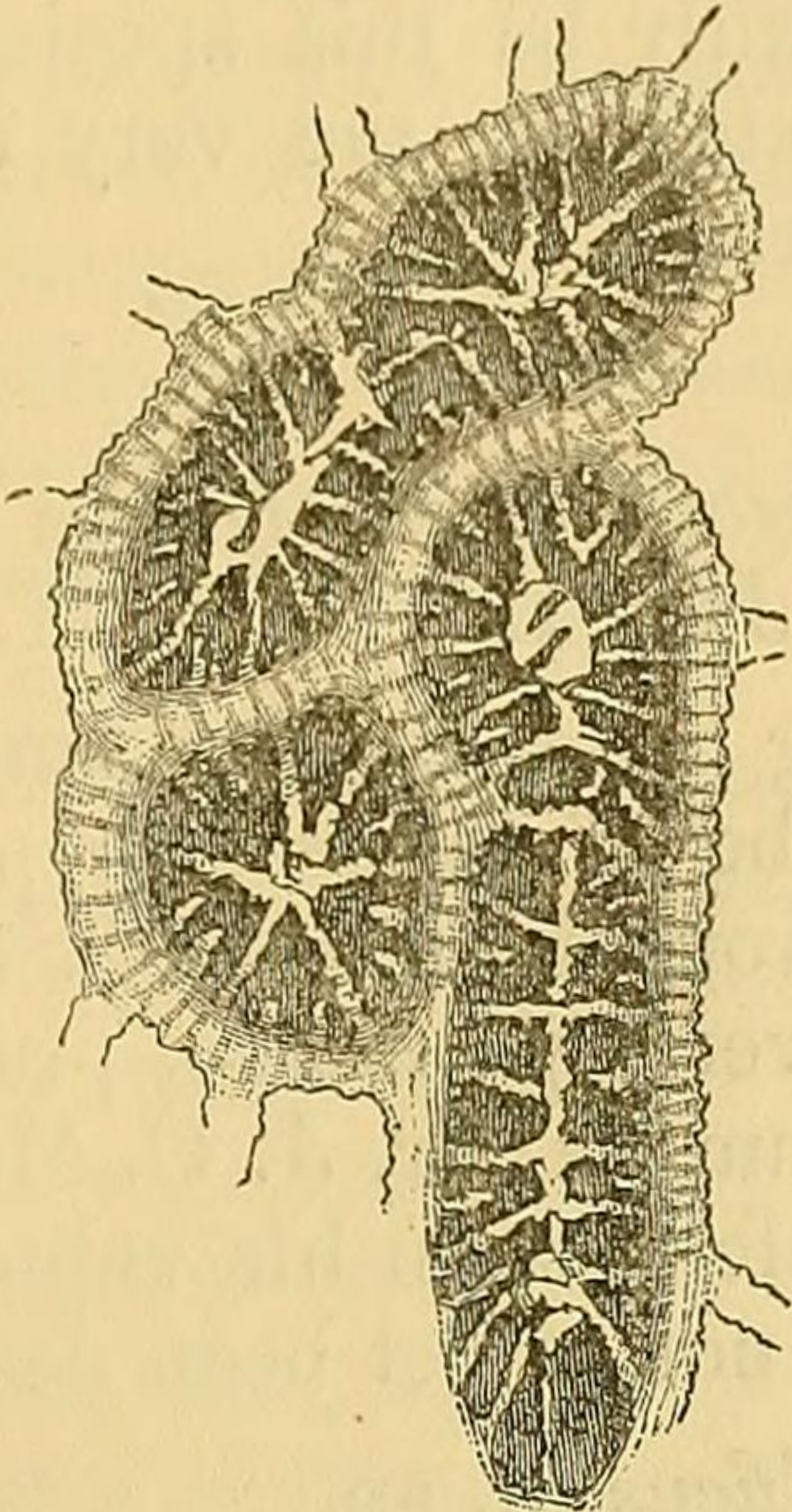


Fig. 2.

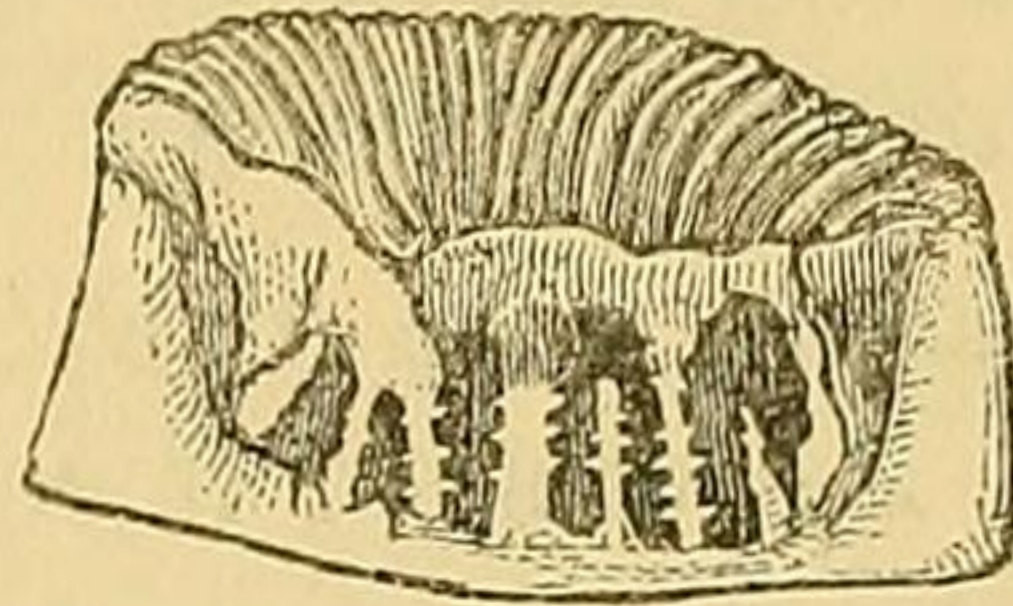


Fig. 1. *Platyggyra ascensionis*. A few calices, as seen from above, $\times 4$.
Fig. 2. Ditto. A wide calice in vertical section, made outside the columella, which is seen beyond line of section, $\times 4$.

(under the appellation *Cæloria*) by Milne-Edwards & Haime (Hist. Cor. ii. p. 411); but Dr. Brüggemann has given reasons ("Corals of Rodriguez," Phil. Trans. vol. clxviii. p. 571) for considering the character, whether vertical or spongy, of this part not to be even of specific importance, having been obliged to unite under the name *Platyggyra Esperi* forms which have both vertical and spongy columellæ. This species has the calices much more individualized than is usual in that species, and in this respect appears to approach the Faviaceæ, and may perhaps mark a transition to that group; but it is very decidedly distinct in other points from the genera of that group as at present known and under their present limitations.

Of the species referred doubtfully to *Prionastræa* by Milne-Edwards & Haime (Hist. Cor. ii. pp. 522-525), I believe both *Astræa rigida* and *A. varia*, Dana, to be referable to this section of *Platyggyra*: the former, coming from the East Indies, seems to be the nearest known ally of this form out of the Atlantic area; and the latter (*A. varia*), from the West Indies, the nearest from the Atlantic region. Some forms of *P. Esperi* from Rodriguez Island also approach it, but not closely.

It differs from *A. rigida* in the small proportions of the calices, from *A. varia* in the non-cellularity of the corallum and the shallowness of the calices, from *P. Esperi* in the small size of the calices and of their parts and in the slight denticulation of the mural ridge by the septa.

The only coral alluded to in the paper on Ascension in the Phil. Trans. for 1699 could hardly be this species, though some Astræid is possibly indicated by the very vague and unscientific description there given.

XLV.—*Description of a new Species of the Genus Archaster from St. Helena.* By F. JEFFREY BELL, M.A.

IN connexion with the foregoing notes on the fauna of the island of Ascension it seems to be of interest to present an account of a magnificent species from the island of St. Helena, two specimens of which were, several years ago, presented to the Trustees of the British Museum by Mr. J. C. Melliss, but to which the donor makes no reference in his valuable work on that island*, and which have not as yet been described.

Archaster magnificus, n. sp.

Rays five. $R=207, 138$; $r=50, 37$. Breadth of arms at base 57, 36; at middle 36, 20; breadth of paxillar area at middle 17, 10.5.

Disk rather flat, the median portion of the arms elevated, and the paxillæ along the middle line arranged in longitudinal, and not, as at the sides, transverse rows. Anus obscure.

The tips of the paxillæ consist of a tuft of about fifteen cylindrical spinules, closely appressed together, and not forming any kind of fringing crown. There are, in one specimen, about seventy-four, and in the other about sixty-four, supero-marginal plates; these are covered with granular scales, which may become elongated, or converted at the lower edge into flattened spatulate spines, which do not appear to stand erect, but to lie along the side of the arm. The plates themselves are placed altogether at the margin of the arm, and are somewhat higher than broad. Near the tip of the arm the spines on these plates may disappear, while the plates themselves take a more dorsal position. The infero-marginal plates are thickly covered with stout flattened spines, which are much better developed than in *A. angulatus*. The spines are frequently cut off square at their tips, and are so closely packed as to destroy any distinct appearance of regularity of distribution; here and there, however, it is possible to detect

* J. C. Melliss, 'St. Helena' (London, 1875).