

LXIV.—*Venus's Flower-basket* (*Euplectella speciosa*).

By Dr. J. E. GRAY, F.R.S.

THE British Museum has lately received a very beautiful specimen of this interesting siliceous Sponge. There are several other specimens in London; they were obtained from the Philippine Islands. The specimens are subcylindrical, varying a little in the extent to which they are dilated upwards, and in the width of the fringe round the upper aperture of the tube; they are all more or less curved on one side near the base. The base is evidently attached to some marine body, perhaps small shingle, as it is more or less dilated into a swollen oblong bag, formed of interwoven siliceous spicula, similar to but closer together than the longitudinal spicula of the body of the vase: this bag encloses a number of fragments of shells, small stones, and some sand; and in the fresh specimens it may be an expanded base attached to the mud and sand. The broad end of the tube is covered with a reticulated convex lid, which is also to be found in a sponge from Malacca, described by me under the name of *Aphrocallistes Beatrice* (Proc. Zool. Soc. 1858, p. 115, t. 11).

Like all showy and beautiful natural productions, it has had many describers; and there is a confusion in its history which, it is to be hoped, is not shared by that of many others.

This sponge was first described and figured, in 1833, by MM. Quoy and Gaimard, in the 'Voyage of the *Astrolabe*,' p. 302, Zoophytes, t. 26. f. 3, under the name of *Alcyoncellum speciosum*, from a very imperfect specimen which had lost the netted lid, the fringes on the outside, and a considerable portion of the smaller, lower end of the tubes. It was given to the travellers by M. Merkus, the Governor of Molucca. They observe: "En voyant l'élégante blancheur et la régularité d'un tel tissu on a de la peine à se persuader, qu'il est le produit d'une réunion d'animaux. On aime mieux en voir un seul au fond de la mer travailler à se faire ce logement pour un but quelconque, en tirant de sa propre substance, comme le font certaines chenilles, la matière qui se pétrifie aussitôt qu'elle est en contact avec l'eau" (p. 303).

There can be no doubt of the imperfect state of this sponge, from a comparison with a worn and crushed specimen in the British Museum, that was obtained by Capt. Sir Edward Belcher, and purchased at the sale of his shells.

MM. Quoy and Gaimard refer the sponge to the genus *Alcyoncellum* of De Blainville, and quote at length the generic character given by that author. A very cursory reading of that character shows how little it fits their specimen; and it is very difficult

to understand how and why they referred it to that genus, which seems to have been established on another sponge which they brought home, and which is not noticed in the 'Zoology' of their 'Voyage;' hence we can only suppose that it was overlooked.

In 1836, M. Milne-Edwards, in the second edition of Lamarck's 'Histoire Naturelle des Animaux sans Vertèbres,' vol. ii. p. 588, adds, at the end of the Sponges, a note on the genus *Alcyoncellum*, obviously compiled from Quoy and Gaimard's imperfect figure: he refers to *Alcyoncellum speciosum* of the 'Voyage of the Astrolabe' as the type, evidently overlooking the original description of the genus in Blainville's 'Zoophytes,' quoted in Quoy and Gaimard's work.

In 1841 Professor Owen, in the Transactions of the Zoological Society (vol. iii. p. 203, t. 13), described and figured a nearly perfect specimen, under the name of *Euplectella aspergillum*, which was obtained by Mr. Cuming in the Philippines, and is now in the British Museum; and in the Transactions of the Linnean Society (vol. xxii. p. 117, t. 21) he describes and figures a very nearly allied species, under the name of *Euplectella cucumer*, from a specimen (in the collection of Dr. Farre) which was obtained from the Seychelle Islands.

The genus *Alcyoncellum* was established by De Blainville, in 1832, in the 'Dictionnaire des Sciences Naturelles,' and again in his 'Manuel d'Actinologie,' p. 529, on a marine specimen brought to Paris by MM. Quoy and Gaimard, with the following characters:—"Body fixed, soft, gelatinous, solidified by tricuspid spicules, tree-like, with few branches, cylindrical, fistulous, with a terminal orifice; the substance thick, composed of regular granules, polygonal, alveoliform, pierced with an exterior and internal pore." The type is *Alcyoncellum gelatinosum*, figured at t. 92. f. 5 of the Atlas of plates to the Manual. It is clear from the above description that it has nothing in common with *A. speciosum*; and *A. gelatinosum* seems to be most probably a calcareous sponge nearly allied to the genus *Grantia* of Fleming.

Professor Owen's description and figure of *Euplectella aspergillum* leave little to be desired. The cornucopia is put on the plate with the broad end downwards. Perhaps the artist was deceived by the name "*Aspergillum*," and thought that, like the shell so named, the sponge lived with its broader, fringed, and perforated end sunk in the sand. In the figure of *E. cucumer* the sponge is represented erect and attached. Professor Owen, by a slip of the pen, writes Quoy and Gaimard's *Alcyoncellum* as *Alcyonellum*, and then says the name cannot be used for the sponge, because Lamarck has applied the name *Alcyonella* to a genus "of freshwater Polypes."

Professor Owen, from the manner he quotes *Alcyoncellum gelatinosum* of De Blainville and *A. speciosum* of Quoy and Gaimard, evidently considers that they are synonyms of the same species instead of two genera belonging to different families of sponges. He gave a new name to the genus because the specimen figured by Quoy and Gaimard had neither a netted lid to the tube nor fringes; but this only arose from the imperfect state of their specimen; the new name, however, was required in consequence of their mistake in referring it to the genus *Alcyoncellum* of De Blainville.

Dr. Bowerbank, in the 'Introduction to the British Sponges,' which is chiefly a reprint of his papers in the 'Philosophical Transactions,' makes some observations on this beautiful sponge, and is very severe on Professor Owen, accusing him of a mistake he did not make, because he called the widest part of a cone its base. As usual, when he leaves his microscope and goes to the book, he is in confusion. He at once sets aside Professor Owen's generic name, and adopts that used by MM. Quoy and Gaimard; but it is easy to see how this mistake arose. In consulting their work he entirely overlooked the generic character quoted from De Blainville. He evidently does not know, or at least quote, the 'Manuel' of M. de Blainville; nor does he recognize the figure of the sponge on which the genus *Alcyoncellum* is established, either under the name of *Euplectella* or *Grantia*. Dr. Bowerbank quotes the generic character of *Alcyoncellum* given in Lamarck as "the generic description of Quoy and Gaimard." He gives, as the type of the genus *Euplectella*, "*E. corbicula*, Quoy and Gaimard," a name not to be found in their work; he goes on to regard *E. corbicula* and *E. speciosa* as two species, and he thinks that *Euplectella* is a parasitic sponge, and clings to other marine bodies. But it is useless to continue to quote "the singular number of errors into which he has fallen in the description of this beautiful sponge," as he says of Professor Owen.

A crab is generally found in the cavity of the sponges. The Spaniards in Manilla regard them as formed by the crabs for their protection, and they do not consider the specimens perfect unless a crab is contained therein. I have, within the last few days, had a pair offered to me for an extravagant sum (£200), because they contained the crab that formed them. The crab must take up its place in the tube before the network in the upper end of it is formed, as, when that part is added, it becomes imprisoned in the tube.

The synonyms of the genus and species are as follows :—

Alcyoncellum, sp., Quoy & Gaimard; not Blainville, 'Zoophytes,' 1832, nor 'Manuel,' 1834.

Alcyoncellum, Milne-Edw., Lam. An. s. Vert. ed. 2. ii. 389 (1836); Bowerbank, British Sponges, i. 174.

Alcyonellum, Owen (misprint).

Euplectella, Owen, Trans. Zool. Soc. iii, 203 (1841); Trans. Linn. Soc. xxii. 117.

1. *Euplectella speciosa* (Venus's Flower-basket).

Alcyoncellum speciosum, Quoy & Gaimard, Voy. Astrolabe, iv. 302 (Zoophytes, t. 26. f. 5); Lam. Anim. s. Vert. ii. 389.

Euplectella aspergillum, Owen, Trans. Zool. Soc. iii. 203, t. 13.

Alcyoncellum aspergillum, Bowerbank, Brit. Sponges, i. 177.

Alcyoncellum corbicula, Valenciennes, Mus. Paris; Bowerbank, British Sponges, i. 176.

Hab. Philippines.

2. *Euplectella cucumer*, Owen, Trans. Linn. Soc. xxii. 117, t. 21.

Hab. Seychelles.

BIBLIOGRAPHICAL NOTICE.

The Record of Zoological Literature. 1865. Vol. II. Edited by ALBERT C. L. G. GÜNTHER, M.A., M.D., Ph.D., F.Z.S., &c., Van Voorst, 1866.

OUR readers, from the review which we last year gave of the first volume of this work, will know that the "the object of the 'Record' is to give, in an annual volume, reports on, abstracts of, and an index to, the various zoological publications which have appeared in the preceding year; to acquaint zoologists with the progress of every branch of their science in all parts of the globe; and to form a repertory which will retain its value for the student of future years." In all these respects the second volume fully bears out the promise of the first. The 'Record' is, in fact, invaluable; and zoologists owe a debt of gratitude to Dr. Günther and his coadjutors for the able way in which they carry out the task which they have proposed to themselves, and for the benefit which they thus confer upon their brother naturalists. The volume now before us contains a brief (necessarily very brief) summary of all that has been written in 1865—the cream, in fact, of no less than 35000 pages of zoological literature. It consists of a bulky octavo of 800 pages, and thus exceeds in size the 'Record' for 1864 by nearly one fourth. The reports on the Cœlenterata and Protozoa, which were omitted in the first volume, are now supplied for the year 1864 as well as for 1865. A slight change has been made in the list of Recorders: Dr. Cobbold and Mr. J. Reay Greene have ceased to take part in the work; and the cooperation of Dr. E. P. Wright has been secured, who has taken in hand