

ENCRINUS, Blumenbach, 1779.

- (1) *asteria*.
- (2) *mylii* (or *radiatus*) (type of *Umbellularia*, Lamarck, 1801).
- (3) *boltenii* (or *ouifer*) (type of *Boltenia*, Savigny, 1816).

It may, perhaps, be mentioned that Oken's use of *Encrinus* ('Lehrbuch der Naturgeschichte,' 1815, iii. p. 110) for Blumenbach's second species only does not enter into the question at all, for that species had, fourteen years before, become the type of Lamarck's *Umbellularia*.

Since the type of *Encrinus* is the *Isis asteria* of Linnæus, this involves considerable change in the nomenclature of the recent stalked Crinoids. The species of *Metacrinus*, *Eudoxocrinus*, and *Hypalocrinus* remain as previously understood (see Proc. Biol. Soc. Washington, xxi. pp. 151, 152); the other species of the recent Pentacrinitidæ, *asteria*, *decorus*, and *blakei*, falling into two groups which cannot be separated more than subgenerically, must be treated as follows:—

Genus ENCRINUS, Blumenbach, 1779.

(Genotype.—*Isis asteria*, Linnæus, 1766.)

Subgenus ENCRINUS, Blumenbach.

Encrinus (*Encrinus*) *asteria* (Linnæus).

Subgenus ISOCRINUS, L. Agassiz, 1836.

(Genotype.—*Isocrinus pendulus*, von Meyer, 1837.)

Encrinus (*Isocrinus*) *blakei* (P. H. Carpenter).

Encrinus (*Isocrinus*) *decorus* (Wyville Thomson).

XL.—Note on a rare Plumularian Hydroid, *Cladocarpus formosus*. By JAMES RITCHIE, M.A., B.Sc., Natural History Department, the Royal Scottish Museum.

IN 1874 Allman described, under the name *Cladocarpus formosus*, several hydroid specimens obtained by the

'Porcupine' in the deep water to the south of the Faroe Islands*. Four colonies of this rare and beautiful species occur amongst material collected by Dr. A. Bowman, of the North Sea International Investigations, during the autumn of 1908, and handed to me for examination through the kindness of Prof. D'Arcy W. Thompson, C.B. They were dredged in the Faroe Channel (Station 19a, lat. 60° 36' N., long. 4° 46' W.) at a depth of 1030 metres, in the immediate neighbourhood of the places from which the type specimens were obtained.

The colonies vary in height from 4 to 7.5 cm., and in general agree with Allman's description, but as regards their minute structure these additions and corrections have to be made. The colonies are fascicled for the greater part of their length, but only the anterior tube is divided into internodes, upon each of which a single hydroclade is borne. Allman's figure (pl. lxxviii. fig. 1 A) errs in indicating that the hydroclades arise from different components of the fascicle. The hydroclades are alternate and rest on short processes from the stem. The hydrothecæ are deep and cylindrical, with a straight profile, an aperture lying at right angles to the long axis of the stem and in line with a hydrocladial node, and a margin bearing an anterior prominent tooth accompanied by a smaller tooth on each side. About five indefinite sinuations also occur on each lateral margin.

Within the hydrocladial internode are several well-defined ridges, five generally springing from behind the hydrotheca, and a number, varying from two to four, from its base. One or two shorter ridges project into the proximal portion of the internode from its anterior wall. A prominent septum, perforated by a minute opening, traverses the mesial nematophore near the point where it becomes free, and from about the same level a strong anterior intrathecal ridge extends horizontally backwards almost to the posterior wall of the hydrotheca. But there is no definite relationship between the position of the intrathecal ridge and that of the nematophore septum, the former being sometimes at exactly the same level as the latter, sometimes above it or below it. The mesial nematophore reaches halfway up the hydrotheca and is free for about half its length, except on the proximal internode of each hydroclade,

* Allman, J. G., 1874, "Report on the Hydroids collected during the Expeditions of H.M.S. 'Porcupine,'" *Trans. Zool. Soc. London*, vol. viii. p. 478.

where it is much shorter and lies altogether free from the hydrotheca. Neither it nor the supracalycine nematophores are completely tubular; their margins are serrate. Each stem-internode bears three nematophores: one posterior, in the angle between internode-process and stem; the others anterior, one beside the stem-process, the other proximal to it. The supporting tubes of the fascicle bear somewhat smaller nematophores, arranged on each tube in opposite pairs at regular intervals.

Fig. 1.

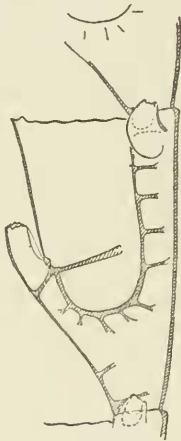
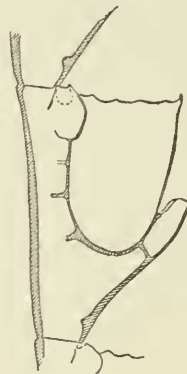


Fig. 2.

Fig. 1.—Hydrotheca of *Cladocarpus formosus*. $\times 45$.Fig. 2.—Hydrotheca of *Cladocarpus crenatus*, var. *allmani*. $\times 45$.

Viewed from the anterior the gonangia are obovate, but in lateral aspect the posterior wall is seen to be arched over the termino-lateral aperture (suggesting the overcurling tip of an oriental slipper), as in the case of *C. ventricosus* (Allman) *.

"*Cladocarpus formosus*" of the 'Challenger' Report.—Comparison of the characters above described with those of the solitary specimen obtained by the 'Challenger'—for the opportunity of examining which I am indebted to Mr. Edgar A. Smith, I.S.O., of the British Museum—shows that Allman's identification is mistaken. For the 'Challenger' specimen differs in lacking an intrathecal ridge, in possessing

* See Nutting, C. C., "American Hydroids: I. The Plumularidæ," Smithsonian Institution, Special Bulletin, Washington, 1900, pl. xxvi. fig. 8.

a more globular, less deep hydrotheca, with fewer and more definite marginal sinuations, in possessing two, seldom three, internodal ridges, and in having the nematophore septum much nearer the base of the hydrotheca. The serrations on the margins of the nematophores, noticed by Billard*, are less distinct than in *C. formosus*, although, as there, the mesial nematophore on the proximal internode of each hydroclade lies below the hydrotheca and is free from it. The presence of this nematophore, the existence of which Allman denies, shows that the phylactogonium cannot be "its morphological representative." On the hydroclade-bearing tube five nematophores usually accompany each hydroclade: one posterior, in the angle between internode-process and internode; one anterior, distal to the process, and three, almost in a whorl, proximal to it.

The 'Challenger' specimen I regard as a variety of *Cladocarpus crenatus* (Fewkes) described by Fewkes, in absence of the gonosome, as *Aglaophenia crenata* †. *Cladocarpus crenatus*, var. *allmani*, nov. nom., differs from the type of the species in possessing only two instead of eight internodal ridges and in having three anterior teeth much more prominent than the lateral sinuations. The free portion of the mesial nematophore, too, is scoop-shaped, open towards the hydrotheca; but while Nutting describes that of *C. crenatus* as "tubular" ‡, one of his figures (pl. xxiii. fig. 9, uppermost hydrotheca) represents it as open on the side facing inwards. This variety was obtained by the 'Challenger' in lat. 34° 58' N., long. 139° 30' E., in the neighbourhood of Yokohama.

The following measurements indicate, in mm., the sizes of the species discussed above:—

	<i>C. formosus</i> .	<i>C. crenatus</i> , var. <i>allmani</i> .
Stem internodes, length	0·91–0·98	Not discernible.
Hydroclade internodes, length . .	0·84	0·77
Hydrotheca, depth	0·57	0·42–0·45
„ diameter at mouth . .	0·35	0·32
Gonotheca, length	1·23	1·08
„ greatest diameter	0·70	0·59

* Billard, A., 1908, "Sur les Plumulariidae de la collection du 'Challenger,'" *Comptes Rendus de l'Acad. des Sc.*, 16th Nov., 1908, p. 3.

† Fewkes, J. W., 1881, "Report of the Acalephæ, Hydroida, 'Blake' Expedition," *Bull. Mus. Comp. Zool. Harvard*, vol. viii. no. 7, p. 132.

‡ Nutting, C. C., *op. cit.* p. 104.

The description and figures of *Cladocarpus crenulatus*, Levinsen *, recorded from Davis Strait, clearly indicate that that form is specifically identical with *C. formosus*, of which therefore Levinsen's name should be regarded as a synonym.

XLI.—*Diagnosis of Soletellina dautzenbergi*, *sp. n.*, from
New Caledonia. By G. B. SOWERBY, F.L.S.

Testa transverse subelongata, subæquilateralis, crassiuscula, purpurea, lineis atro-purpureis plerumque duplicatis radiata, epidermide olivacea induta; umbones minuti, fere conjuncti, vix elevati, leviter post medium locati; margo dorsalis anticus subelongatus, leviter convexus, mediocriter declivis; posticus brevior, rectiusculus, paulo declivis, rotunde angulatus; margo ventralis leviter arcuatus; latera antica rotundata, postica convexe truncata. Ligamentum crassum, breviter truncatum. Pagina interna purpurascens, atro-purpureo duplicatim radiata et postice suffusa; impressio musculari postica cordiformis; antica linguæformis; sinus pallii magnus, late ovatus. Dentes cardinales valvæ dextræ duo: valvæ sinistræ una vel tres. Margo cardinalis anticus tenuis, haud dentatus; posticus crassus, lævigatus.
Long. (umbone ad marg. ventralem) 12, lat. 19 mm.



Soletellina dautzenbergi.

Hab. New Caledonia.

I am indebted to the able and zealous conchologist Mr. Ph. Dautzenberg for information concerning this species, which I have pleasure in naming after him.

* Levinsen, G. M. R., 1893, "Meduser, Ctenophorer og Hydroider fra Grønlands Vestkyst," Vidensk. Meddel. fra den naturh. Foren., Kjøbenhavn.