

The descriptions are only outlined, and, as I have not seen either illustrations or specimens, I wait until Dr. Bornemann publishes his illustrated memoir before comparing or criticising the species.

The principal papers published by Dr. Bornemann, known to me at present, are:

Sur la Classification des Formations Stratifiées Anciennes de l'Île de Sardaigne. (Compte-Rendu du 2me Congrès géol. internat., Bologne, 1881, pp. 1-12, pls. i, ii.)

Palaeontologisches aus dem cambrischen Gebiete von Canalgrande in Sardinien. (Zeits. deutsch. geol. Gesellsch., xxxv., 2, 1883, s. 270-274.)

Cambrische Fossilien von der Insel Sardinien. (Zeits. deutsch. geol. Gesellsch., xxxvi., 3, 1884, s. 399-400.)

Untersuchungen cambrischer Archæocyathus-Formen und verwandter Organismen von der Insel Sardinien. (Zeits. deutsch. geol. Gesellsch., xxxvi., 3, 1884, s. 702-706.)

ETHMOPHYLLUM WHITNEYI Meek.

Plate iv, figs. 1, 1a-h.

Ethmophyllum Whitneyi Meek, 1868. Amer. Jour. Sci. and Arts, 2d ser., vol. xlv, p. 62.

Ethmophyllum gracile Meek, 1868. *Idem*.

Archæocyathus Whitneyi Meek, 1868. Amer. Jour. Sci. and Arts, 2d ser., vol. xlvi, p. 144.

Archæocyathus gracilis Meek, 1868. *Idem*.

Original description.—"The specimens of this fossil contained in the collection are slender, slightly flexuous, arched or nearly straight, and subcylindrical, excepting near the lower end, where they taper to a point, by which they were probably attached. They may have grown in tufts or groups, but all the specimens yet seen are single and show no evidences of growing in contact.

"To the unassisted eye the external surface of these corallites, with the exception of obscure annular swellings and constrictions of growth and faintly marked linear septal costæ, seems to be nearly or quite smooth. When examined under a strong lens, however, it is seen to be beautifully punctate, the punctures being minute, of exactly uniform size, and arranged with mathematical regularity in quincunx, and so closely crowded that the little divisions between them are scarcely equal in breadth to the punctures themselves, and form, as it were, an extremely delicate kind of net work. So remarkable is the appearance of this punctured outer wall that the first question that suggests itself, on examining it under a magnifier, is, whether or not it may be merely an exceedingly delicate Polyzoön incrusting the whole surface. A clear examination, however, especially in carefully prepared transverse sections, shows that the punctures actually pass entirely through the wall, which is very thin, and that they are not due to the growth of the Polyzoön, nor to surface ornamentation.