

"Among the specimens in the collection under examination there are apparently two species of this fossil. That considered the type of the genus is larger and more robust than the other, and more conical in form, especially near its smaller end. None of the specimens seen are quite perfect at the larger extremity. One measures 0.37 inch at its imperfect larger end and seems to have been $2\frac{1}{2}$ to 3 inches in length. In this there are sixty septa, while its outer septate zone is 0.07 inches wide. Another fragment, however, measures 1.20 inch in diameter at the larger end, and was probably 5 to 6 inches or more in length, with 112 septa at the larger end. This large fragment shows that the septate outer zone does not increase in thickness or breadth in proportion with the size of the corallites, since it is only 0.15 inch broad in this specimen, the increase in thickness of this corallite being made up by the increased size of the non-septate interior. For this larger species I would propose the name *Ethmophyllum Whitneyi*, in honor of Prof. J. D. Whitney, to whom I am indebted for the use of the specimens.

"Of the other species I have seen but a single specimen, which is imperfect at both extremities, about 2.15 inches in length, and only about 0.20 inch in diameter at the larger end and 0.15 at the smaller, with some 24 to 28 septa. In addition to its much more slender form, it differs from the other species in having its septa so strongly waved laterally as almost to divide the interseptal spaces into cells, nearly to the outer wall. For this, if it should prove to be a distinct species, I would propose the name *Ethmophyllum gracile*."

A few months later Mr. F. B. Meek wrote Prof. Dana respecting the genera *Ethmophyllum* and *Archæocyathus*, and his remarks were printed as follows (Amer. Jour. Sci. and Arts, 2d ser., vol. xlv, p. 144):

"Since preparing my remarks, published in the Journal of Science (Jan. number, p. 62, 1868), on the curious fossil from Nevada, for which I proposed the name *Ethmophyllum*, I have been led, by further comparisons, to think it probably not generically distinct from *Archæocyathus* of Billings. At any rate, it seems to agree *very* closely in internal structure with his *A. Minganensis* and *A. profundus*. The Nevada species differs so widely in form and general appearance as scarcely to suggest a comparison with Mr. Billings's species, and, besides, I had derived my impressions of his genus entirely from his typical species, *A. Atlanticus*, which also differs so materially in internal structure that Mr. Billings suspected it might be generically distinct from his *A. Minganensis*. If these types are generically identical, however, I can scarcely entertain a doubt but that the Nevada fossil will fall into Mr. Billings's genus, which has priority of date. In this case, the names of the Nevada species would become *Archæocyathus Whitneyi* and *A. gracilis*."

The original specimens described by Mr. Meek are in the collection