

including the apex, is imbedded in the rock. Of the remainder a considerable portion is in a badly-damaged condition, the outer wall, with the greater part of its underlying septa, having been partially torn away. Such portion as remains uninjured, however, is in an excellent state of preservation and shows the leading features of structure in a very perfect manner. There remains, notwithstanding, much yet to be desired in order to completely characterize the species; and I have deferred any special notice of it hitherto in the hope of being able to obtain other, and possibly more perfect, specimens; but, failing in this, I have thought it advisable to carry the description as far at this time as the material at hand will permit. The species may be described for the present as follows:

“Elongate, conical, straight, gradually expanding from the base upward. Cup moderately large, depth unknown. Outer wall thick and strong, inner wall apparently much thinner. Radiating septa thin, numerous, not far from forty, judging from the number seen, sometimes a little irregular in their spacing. Dissepiments slender, occasionally absent, at other times dividing the interseptal spaces or loculi for a short distance into several compartments. Surface faintly annulated and longitudinally marked by numerous low, rounded ridges, with shallow intervening furrows, the ridges and furrows of about equal width. The ridges mark the position of the loculi, while the middle of each furrow indicates the place of one of the septa. Along each furrow and running its entire length are two straight rows of minute, closely-arranged circular pores, opening into the loculi. The rows of pores of any given furrow are separated from each other by a thin strip or plate of the outer wall, corresponding in position and thickness to the septa; and it is a singular fact that the pores of either row are arranged alternately not only with respect to the other, but also with respect to those of the succeeding row in the next nearest furrow. The pores all communicate with the interior close to the septa where these latter join the outer wall; and, as the rows of pores along any given furrow lead into distinct though adjacent loculi, it follows that all of the loculi were connected with the general surface by means of a double set of apertures. Whether the inner wall and radiating septa are perforate has not yet been made out. Color of the fossil, in gray limestone, when a little weathered, light brown.

“The above are the characters, so far as known, of this interesting and beautiful species, embracing only such as are displayed by the specimen mentioned at the beginning. These characters taken together are quite sufficient to distinguish it readily from any described species while in respect to several of them, such as its straight form, longitudinally-ribbed exterior, and remarkable poriferous system, the species appears to me at present sufficiently distinct from *Archæocyathus* to constitute a new though closely allied genus. Should a further study.