

served in two or three places, and are seen to be thin and delicate. The outer wall has been almost wholly removed and the portions of it that remain are much weathered. The material presented for study consists, therefore, of the solid molds of the interseptal spaces, the cup filled with limestone, a small number of the septa, a transverse section of the inner wall, and the impression of a considerable portion of the outer wall. The latter shows that the external surface when perfect was longitudinally furrowed as in *Archæocyathellus*. In that genus, however, so far as known, there are two rows of pores along each of the furrows, one on either side of the septa, whereas in the present genus there appears to have been but one, and that placed directly on the line of the septa. The evidence of this consists of rudely circular holes placed at regular intervals along the middle of each furrow in the cast. These appear to me to argue the existence of funnel-like projections inward of the outer wall at the place of the openings. That they mark the position of orifices leading into the interior appears to me in the highest degree probable. Their position is, however, so remarkable, that I was for a long time unable to understand the meaning of them.

“On one side of the specimen there are a small number of the interseptal molds that project beyond the others, and one of these shows one of its lateral faces for a considerable distance lengthwise, and also nearly down to the outer surface of the inner wall. An examination of this face shows that the cavities observed along the furrows extend but a short distance inward, and that the septa arched around the funnel-like projections which they represent from below, striking the outer wall only at the intervening spaces. * * * * * It is further shown that these cavities are directed slightly upward, or toward the aperture of the cup. These characters serve to distinguish the form at once from *Archæocyathellus*, in which the septa meet the outer wall uninterruptedly.

“If I am right in viewing the cavities along the furrows in the cast as indicating the presence of external orifices at these points, then it follows that these orifices were doubtless functionally equivalent to the double row of orifices along the furrows of the outer wall of *Archæocyathellus*. In proof of this it may be remarked that the size of the cavities indicates that the orifices were, proportionally, considerably larger than those of the only known species of *Archæocyathellus* (*A. Rensselaericus*), while their position is such as to present no obstacle in the way of regarding them as having communicated simultaneously with two of the interseptal spaces.”

As stated under the generic description, the proposed genus *Procyathus* does not appear to be well established. The difference given, the occurrence of a single row of large pores over the septum which is