

supporting a wider hexagonal piece which is twice as wide as high and rests on the flat upper side of the tetragonal piece and on one of the sloping sides of each adjoining radial. The two outer radials of the anterior side are hexagonal, are larger than the middle one, extend mid-height of the second middle radial piece and are proportionately wider than the first middle piece. At the upper end of each of these outer radials is a wide middle face which supports the first arm piece of that ray, and two sloping sides, one partly supporting the second middle radial piece of the anterior side and the other a plate of the posterior side. The radial series of the posterior side are somewhat obscure; but four plates forming two radial (or a radial and an anal) series can readily be made out. The lower plates do not extend quite as low as the anterior radial series, and are subtrigonal with the angle adjoining the base of the anterior series truncated, which truncation with the free portion of the adjoining anterior radial forms a notch in which the corner of the united basals plays in doubling itself back on the posterior surface of the cup. The upper plates of the posterior radial (and anal) series are hexagonal; one side resting upon its fellow, one on the sloping side of the adjoining radial of the anterior side, one abutting on the first arm piece of the adjoining anterior arm, one carrying a plate of the next series (arm or ventral tube), one abutting its twin posterior radial (or anal), and one whose relations are not made out. I do not find any line of junction between these plates and the basals nor any collection of small plates there although such may exist. Prof. Ulrich calls the posterior radial and anal plates the ventral arch in which he finds three plates in his *Cremacrinus punctatus* and eight in his proposed genus *Halysicrinus*, but in both the species of *Calceocrinus*, herein described, there are four plates arranged as above stated.

Each of the arms consists of a primary and a secondary series of plates. The primary series consists in the middle arm of the anterior side of three plates, and in the others of two; the uppermost in all cases being an axillary piece. The secondary series of each arm is composed of rounded pieces, longer than wide, bearing pinnules or armlets on alternate sides, beginning on the outside. The pinnules are slender, but their joints are equal in length to the corresponding arm-joints.