

ment of the interbranchials in that species render impossible any confusion with the present form.

*Glyptocrinus circumcarinatus*, *sp. nov.*

*Type specimen*—No. 668 T, University of Toronto Museum.

*Formation*—Trenton.

*Locality*—Kirkfield, Ont.

*Collector*—Joseph Townsend.

### A FOSSIL STARFISH WITH AMBULACRAL COVERING PLATES.

BY GEORGE H. HUDSON.

(Continued from May number).

#### THE COVERING PIECES OR EPINEURALS.

This specimen still retains 23 plates covering the food grooves in such perfectly normal positions that there can be no doubt whatever as to their being strictly homologous with the epineurals of *Edrioasteroidea*.

On the less developed portion of arm I (plate II, figs. 1, 2, 3 and 6) there are 16 of these and on the mature portion of arm IV, next the disc (plates I, figs. 1 and 3; III, figs. 3 and 4) there are seven more. In addition there are 10 other epineurals which are but slightly displaced and whose proper position may be easily recognized—one on radius III, seven on radius IV and two on radius V. Three other displaced and weathered epineurals are also present.

The most distal epineural on arm IV (the eighth of a series) lies flat on the floor of the food groove and clearly reveals the shape of the arm members of a series. They are pentagonal in outline, twice as long as broad, the two long sides parallel; the ends next the marginals have three angles each, the central one of about  $85^\circ$  and well rounded at the apex; each free end is truncate, having two right angles.

Now when we have an ambulacral groove with straight bordering walls we would expect the epineurals to be placed alternately, their truncate ends against the wall and their pointed ends toward the entrant angles between two neighbors of the opposite row as in *Cyathocystis*. We also would expect these inner ends to meet with their marginal faces apposed to each other in close fitting valvate closure and the ridge formed by the plates, when closed, to be low and comparatively smooth (plates flush), to secure additional strength against attack.