

III, fig. 1). The proximal ends of each pair of these plates were cut to form a half circle and they could be drawn either aborad to the ridge, or some distance orad. We here have another ring of sliding joints aiding in food capture. The distal ends of these epineurals seem to have retained a primitive central angle that enabled them the better to hold their prey or to break the shells of small mollusca, molluscoidea or crustacea. These plates could be raised or lowered and each pair could open and close like a pair of pliers. The shifting of the position of their proximal ends allowed them to assist in the capture of eggs, young, or adult organisms up to 4 mm. in diameter and enabled them also to press food into the space where the secondary jaws could act upon it.

The epineurals marked (2) were directed orad and their attachments were along a diagonal edge which also rested in a somewhat elevated socket on the oral edges of the interradiial marginals. The oral faces of these marginals also show the fields of origin of the abductors of these more specialized first and second epineurals.

The remaining epineurals could function somewhat after the manner of a duck's bill, for they could grub in the ooze and press the mud out between the plates. When the epineurals were all closed the captured and separated food contents could be moved orad by a progressive wave movement (trough and crest) of the ambulacral floor. The ability to shift the free ends of the epineurals orad or aborad and to move either half of an ambulacral floor would assist in the process. The evidence for this manner of food getting is abundant and should be conclusive.

THE HOMOLOGY OF THE PERISTOMIAL PLATES.

We must note that to carry the alternate arrangement between epineurals and adambulacrals to the interradiial mouth angles and complete the paired series of epineural adductors would require the presence of either a single unpaired epineural or adambulacral in each interradius. If the primitive circlet of peristomial covering pieces were five in number the "torus?" may represent this primitive unpaired epineural. Figs. 3 and 5 of plate III (interradius 2) suggest such a derivation. If on the other hand the odd plate was an adambulacral our "torus?" might represent that plate. In the figures, however, it seems too far removed from the adambulacrals to belong to the series. What we have called the oral might be an odd adambulacral and in this case we should consider the interradiial marginal to be the true oral. If the oral surface (left uppermost after death) sank into contact with the ossicles of an aboral circlet then our "torus?" might be an aborad interradiial and the plate uncovered