ambulacral system at the abactinal pole, the flat actinostome with its internal rudiments of supports for teeth still existing, are all features which we do not associate with the group of Spatangoids. I have already called attention to the general similarity of this genus with *Galerites;* in the latter we still find teeth, smaller ambulacral plates, the same actinostome, however, only more Clypeastroid; and the arrangement of the tubercles (primary, secondary, and miliary) is very similar in *Galerites* to that of the tubercles of the present group.

The outline of the test of this species when seen from the apical pole on the actinal surface is elliptical, the anterior and posterior extremities equally rounded (Pl. XXXV. figs. 1, 3). The actinostome is placed somewhat in advance of the centre, the apical system and apex are coincident, slightly posterior. The actinal surface is flat, slightly sunken from near the ambitus; the ambitus forms a sharp curve between the actinal surface and the sides of the test (Pl. XXXV. fig. 2); owing to the extreme tenuity of the test, it is difficult to see its outline when seen in profile, the mere weight of the test forming large folds extending from the apex to the ambitus (Pl. XXXV. figs. 1, 2, 4). The outline when fully expanded, probably resembled that of *Cystechinus wyvillii*, only at the ambitus the test is less gibbous, the posterior extremity more rounded and sloping more vertically, and the anterior extremity sloping quite uniformly with but a slight re-entering angle from the rounded apex to the ambitus.

It is difficult in the ill-shaped test, looking like an old felt hat, figured on Plate XXXV. fig. 4, to recognise the outline of a graceful test such as this species undoubtedly had, judging from that of the allied *Cystechinus wyvillii.*

The anal system in this species is placed well above the actinal surface flush with the test (Pl. XXXV. fig. 2), and there is no trace of a hood or rudimentary abactinal beak as in *Cystechinus wyvillii.*

This is the only Spatangoid thus far known, which can evidently expand or contract its test. This was known in the Diadematidæ (*Astropyga*) among the regular Echinids, previous to the discovery of the Echinothuridæ among the recent forms; in these the test is, as I have said, capable of very great expansion and contraction and extensive change of shape. The lapping of the coronal plates of some Spatangoids, to which Ludwig[1] has called attention, is undoubtedly an apparatus adapted within narrower limits for the same purpose.

Station 153. February 14, 1874. Lat. 65° 42′ S., long. 79° 49′ E.; 1675 fathoms; mud.

Station 298. November 17, 1875. Lat. 34° 7′ S., long. 73° 56′ W.; 2225 fathoms; bottom temperature, 1·3° C.; grey mud.

Station 299. December 14, 1875. Lat. 33° 31′ S., long. 74° 43′ W.; 2160 fathoms; bottom temperature, 1·1° C.; grey mud.

[1] H. Ludwig, Morphologie der Echinodermen, 1877–79, vol. iii. pp. 131–140.