

ambulacra as in some of the fossil species, but longer than the posterior lateral ones. There are two indistinct genital openings in the posterior lateral ambulacra.

Seen in profile the abactinal outline of the test is nearly parallel to the actinal surface from the posterior extremity to the apical system; from there, however, it slopes rapidly towards the rounded anterior extremity forming the ambitus. The tuberculation of the actinal surface is most prominent towards the actinostome in the interambulacral areas, diminishing gradually in size towards the ambitus, where it runs into the granulation of the abactinal surface and sides of the test.

The beak formed by the posterior extremity of the actinal plastron is fully as much developed as in some species of *Echinocardium*; the lateral fasciole is sharply defined, and its course well marked as it passes under the anal system about halfway from the ambitus on the posterior extremity. This species recalls more in its outline some of the Tertiary species which have like it a somewhat prominent beak, such as *Schizaster archiacii* and *Schizaster vicinalis*, and the like, in spite of the great difference in the course of the peripetalous fasciole.

This species is also interesting as it shows how in *Schizaster* proper the sunken anterior ambulacrum is related on the one side to such genera as *Brissus* and the like in which the odd anterior ambulacrum is not petaloid, and on the other with genera such as *Moira* in which the ambulacra are all deeply pouched, while the equal development of the odd anterior petal with the others, is on the contrary a feature characteristic of genera not in the least closely allied to the Schizasteridæ such as *Spatangus* and the like. The sunken petals and the lateral fasciole of this species show its affinities to *Tripylus* in which we have, however, only the four lateral petals deeply sunken, the odd anterior one, on the contrary, being flush with the test as in *Faorina* and *Linthia*. This combination of the lateral and peripetalous fasciole with either more or less sunken lateral and odd ambulacral petals shows unsuspected affinities between such very widely differing genera as *Agassizia* on the one side, and *Moira* on the other, which are readily understood when we use as terms of comparison allied forms to either extreme, such as *Brissus*, *Faorina*, *Brissopsis*, *Hemiaster*, *Rhinobrissus*, *Linthia*, and *Schizaster* on the one side, and *Moira*, *Moiropsis*, *Tripylus*, *Hemiaster*, *Faorina*, and the like on the other.

Station 192. September 26, 1874. Lat. 5° 42' S., long. 132° 25' E.; 129 fathoms; mud.

The preceding enumeration includes 139 species of Echinids, of which 87 were known before and 52 are new species. The species collected are distributed as follows:—11 Cidaridæ (of which 3 are new species), 2 Salenidæ (1 new species), 6 Arbaciadæ (1 new species), 7 Diadematidæ (3 new species), 12 Echinothuridæ all of which are new to science, 10 Echinometradæ (no new species), 16 Temnopleuridæ (3 new species), 11 Triplechinidæ