

“ The absence of the Clypeastroids from the deeper waters is interesting, indicating that they probably developed rapidly during the Tertiary period, and have always been (as they are to-day) inhabitants only of shallow seas.

“ By far the most interesting Echini collected by the Challenger belong to the strictly deep-sea types, the Pourtalesia and Ananchytidæ, families of which the nearest allies were known only as fossils before the days of deep-sea dredging. The first family, Pourtalesia, was discovered by the late Count Pourtalès in the trough of the Gulf Stream, between Key West and Havana. The Challenger has added no less than twelve new species to this family. Some of the genera are of the most extraordinary shape, and, like the original Pourtalesia, seem to have little in common with the normal Spatangoids as we know them from their living and fossil representatives. The slipper-shaped *Echinocrepis*, and the *Galerites*-like *Urechinus* remind us of types which flourished in the Cretaceous Seas. One of the species of *Cystechinus*, with its thin flexible test, looks in alcohol more like a

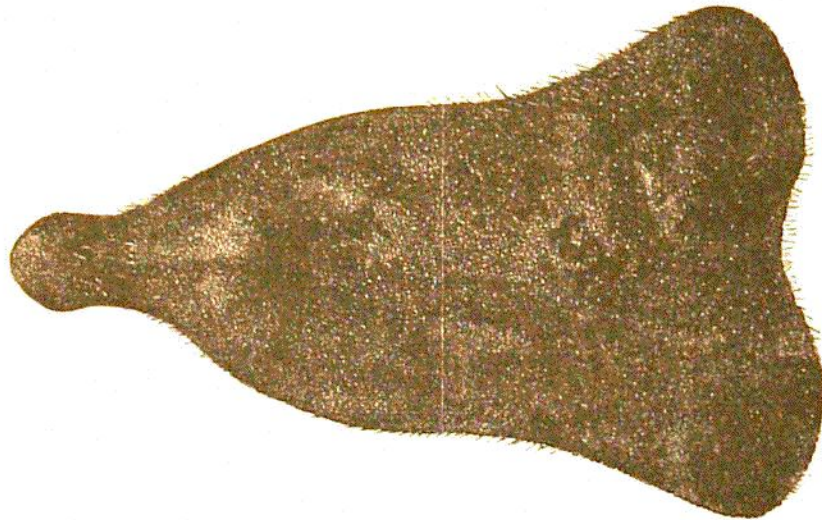


FIG. 85.—*Pourtalesia ceratopygia*, A. Ag. Seen from the abactinal side, covered with spines; natural size.

diminutive battered felt hat than the graceful sea-urchin it must have been judging from its hard-tested congener.

“ No less than five new species of Ananchytidæ were brought home, a family once numerous in the time of the Chalk, and remarkable, like the Pourtalesia, for their imperfectly developed and simple ambulacra, and for the uniform size of the plates composing the ambulacral and interambulacral areas of the test. These two families are also noted for the absence or slight development of the fascioles, so characteristic of nearly all recent Spatangoids, but absent in many of the more recent fossil types and in all the other forms of extinct Spatangoids.

“ Interesting from an embryological point of view are such novel and strange forms as *Aërope* and *Aceste*, which have assumed a facies absolutely identical with that passed through by the young of the *Brissina* of to-day. In these two genera the odd anterior