*Brissopsis lyrifera* except by such indifferent characters as a somewhat more compact test with a slight keel from the apex to the anal system, a closer tuberculation, and a slightly sharper peripetalous fasciole; characters which are found in specimens coming from such distant localities as the coast of Norway and the western shore of Spain. The great bathymetrical and geographical range of this species has already been noticed.

Station 141. December 17, 1873. Lat. 34° 41′ S., long. 18° 36′ E.; 98 fathoms; bottom temperature, 9·7° C.; sand and gravel.

Station 142. December 18, 1873. Lat. 35° 4′ S., long. 18° 37′ E.; 150 fathoms; bottom temperature, 8·3° C.; sand.

Simon's Bay; 5 to 18 fathoms. Agulhas Bank; 150 fathoms.

## **Aërope.*

*Aërope*, Wy. Thomson, Proc. Roy. Soc., vol. xxv. p. 211.

The genera *Aërope* and *Aceste*, first described by Thomson in the Voyage of the Challenger (vol. ii. p. 28, fig. 99, and p. 376, figs. 95, 96), are interesting as showing the passage of the *Pourtalesia* group to the Brissina among the Spatangoids, and the affinities of those genera to such forms as *Cionobrissus*, *Brissopsis*, and the Schizasteridæ; while having a simple circular actinostome, they have already a well-developed actinal plastron and rudimentary petals at the abactinal extremity of the lateral ambulacra, while the odd anterior ambulacral petal takes in *Aceste* an extraordinary development, and forms on the abactinal surface of the test a long broad sunken petaloid ambulacrum (as deeply sunken as in *Schizaster*) occupying nearly the whole of the abactinal surface. The peripetalous fasciole is quite similar in shape to that of young specimens of *Brissopsis* and *Hemiaster*, in which the petals are also reduced much to the same condition as we find them in these genera, simply double rows of pores on each side of the median line within the rudimentary peripetalous fasciole; one of these genera, *Aërope*, retaining something of the cylindrical shape of the Pourtalesiæ. On the other hand the Pourtalesiæ, through such genera as *Palæotropus*, *Genicopatagus*, and *Homolampas*, pass to the Spatangina, and through such types as *Urechinus* and *Cystechinus* to the Galeritidæ and Echinolampadæ.

The striking resemblance of the young *Brissopsis* with its gigantic suckers in the odd anterior ambulacrum (figured on plate xix. figs. 1, 2 of the Revision of the Echini) to the full-grown *Aërope*, plainly shows the Brissoid affinities of the genus.

The deeply-sunken odd anterior ambulacrum of *Aceste* shows the relationship of the genus to *Schizaster*, of which it also has to a certain extent the outline when seen in profile, without having any trace, however, of the petaloid lateral ambulacra of that genus; the only ambulacrum with double pores being the odd anterior one. The other ambulacra within the peripetalous fasciole have only simple ambulacral pores, as we find in *Echinocardium*, *Breynia*, and *Lovenia*, within the internal fasciole. The course of the