other hand the individual points of difference between the Chilian and the Northern forms are small and trifling, but when taken as a whole may be regarded as sufficient to differentiate them specifically, especially when the constancy of the characters in question and the widely separated geographical position of the two forms are taken into account.

Colour in alcohol, a bleached yellowish white.

Localities.—Station 303. Off the western coast of South America, off the Chonos Archipelago. December 30, 1875. Lat. 45° 31′ 0″ S., long. 78° 9′ 0″ W. Depth 1325 fathoms. Blue mud. Bottom temperature 36°·0 Fahr.; surface temperature 54°·8 Fahr.

Station 306. In the Messier Channel, between Wellington Island and the west coast of Chili. January 2, 1876. Lat. 48° 17′ 0″ S., long. 74° 33′ 0″ W. Depth 565 fathoms. Blue mud. Surface temperature 57°·0 Fahr.

Station 307. Between Wellington Island and the west coast of Chili, off Port Grappler. January 4, 1876. Lat. 49° 24′ 30″ S., long. 74° 23′ 30″ W. Depth 140 fathoms. Blue mud. Surface temperature 53°·0 Fahr.

Station 309. Off Puerto Buono. January 8, 1876. Lat. 50° 56′ 0″ S., long. 74° 15′ 0″ W. Depth 40 fathoms. Blue mud. Bottom temperature 47°·0 Fahr.; surface temperature 50°·5 Fahr.

Station 311. Off the entrance to Smyth Channel. January 11, 1876. Lat. 52° 45′ 30″ S., long. 73° 46′ 0″ W. Depth 245 fathoms. Blue mud. Bottom temperature 46°·0 Fahr.; surface temperature 50°·0 Fahr.

Family ASTROPECTINIDÆ (Gray, 1840), *emend.*

Several of the forms included in this family have previously been ranked in the genus *Archaster*, as shown in the list of species erroneously referred to that type, given on p. 122. This circumstance may be attributed in a large measure to the great similarity in general facies that exists between many of the Asterids belonging to the two families Archasteridæ and Astropectinidæ, as well as to the want of an exact limitation of the generic scope of *Archaster*.

On the basis of the structural characters indicated in these pages, I consider that the Astropectinidæ are a well-defined family, and that the genera which I have now classed together constitute a natural group distinguished by special morphological features.

Luidia, on account of its structural peculiarities, is in my opinion a very divergent member of the family. The relationship of this genus is in many respects so isolated that I have placed it in a distinct subfamily, in recognition of this fact; and I have associated with it, on structural grounds, the remarkable genus *Platasterias* of Gray, which has latterly been merged in the genus *Astropecten*.

The genus *Ilyaster* of Danielssen and Koren appears to me to belong to this family; and its affinities are probably near to *Phoxaster*.