

seen. The anus already opens in the centre of the abactinal part of the test (Pl. II. fig. 10). The spines at this stage (Pl. II. figs. 9, 10) have already assumed much more the general appearance of those of the adult than is usually the case among young Echinids. In the next stage (Pl. II. fig. 12) the tentacles are contracted, the spines are much longer, the tubercles well formed, the papillæ commence to be formed on the abactinal system, and the plates composing the ambulacral and interambulacral areas can readily be distinguished (Pl. II. fig. 8). Judging from the proportion of the spines to the test, this is probably the young of a long-spined specimen. One of the short-stemmed pedicellariæ of the abactinal region of the test (from a full grown specimen) is figured on Plate II. fig. 15, one from the test (fig. 17), and the same kind in different stages of development (fig. 16).

In *Goniocidaris canaliculata* the long-stemmed ambulacral pedicellariæ (Pl. XLIV. fig. 1) have an elongated triangular head, supported upon a comparatively stout rod (Pl. XLIV. fig. 3).

Station 149, Royal Sound, Kerguelen. January 17, 1874. Lat. 49° 40' S., long. 70° 20' E.; 25 fathoms.

Balfour Bay, Kerguelen; 20 to 60 fathoms.

Station 315. January 26, 1876. Lat. 51° 40' S., long. 57° 50' W.; 5 to 12 fathoms; sand and gravel.

Kerguelen Island. January 19, 1874.

Station 151. February 7, 1874. Off Heard Island; 75 fathoms; mud.

Station 313. January 20, 1876. Lat. 52° 20' S., long. 68° 0' W.; 55 fathoms; bottom temperature, 8.8° C.; sand.

Off Christmas Harbour, Kerguelen Island; 120 fathoms.

Stanley, Falkland Islands; 5 to 10 fathoms.

Station 150. February 2, 1874. Lat. 52° 4' S., long. 71° 22' E.; 150 fathoms; bottom temperature, 1.8° C.; rock.

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

Station 156. February 26, 1874. Lat. 62° 26' S., long. 95° 44' E.; 1975 fathoms; diatom ooze.

Station 147. December 30, 1873. Lat. 46° 16' S., long. 48° 27' E.; 1600 fathoms; bottom temperature, 0.8° C.; globigerina ooze.

**Goniocidaris florigera* (Pl. I. figs. 7-20; Pl. XXXVIII. fig. 11; Pl. XLII. figs. 2, 3; Pl. XLIV. figs. 4, 5).

Goniocidaris florigera, A. Agassiz, 1879, Proc. Am. Acad., vol. xiv. p. 198.

In no species of the family (excepting *Dorocidaris blakii*) do I know so great a difference between the primary radioles of different parts of the test. In one of the