

of the test, the genital organs are well developed, the long genital glands (Pl. XXII.^a fig. 14) branch into fine ramifications extending far towards the anal extremity.

In alcohol the colour of the test of this species is light violet or ash coloured, becoming quite dark towards the abactinal keel and along the anal plastron, as well as at the anterior extremity.

The younger specimens of this species show considerable variation in the outline (Pl. XXXI. figs. 7-9). They are more triangular when seen from above, less bottle-shaped, the anal snout more pointed, and when seen in profile (Pl. XXXI. figs. 10, 11) the snout is not yet separated from the test by the deep re-entering angle so marked in older stages. The actinal groove is also proportionally much wider and larger. Seen from the actinal or anal end (Pl. XXXI. figs. 5, 6), the outline is much less heart-shaped than in *Pourtalesia miranda*, the rounded outline of the actinal surface projecting further beyond the general level of the test than in *Pourtalesia miranda*. The younger stages of *Pourtalesia laguncula* resemble somewhat *Pourtalesia phiale*, in which the anal snout is remarkable on account of its closer connection with the anal part of the test, compare Plate XXXI. figs. 7-9 with Plate XXII.^a figs. 1, 2.

In *Pourtalesia hispida* we have also a somewhat pointed anal snout, but much shorter than in the young specimens of *Pourtalesia laguncula*, the proportions of the anal snout and its mode of connection with the posterior extremity of the test seem subject to very considerable variations; some of the specimens with narrow anal snout characteristic of the smaller specimens measuring from 12-16 mm. were nearly 19 mm. in length. This is quite a small species, the largest specimen measuring only from 22-25 mm.

Station 191. September 23, 1874. Lat. 5° 41' S., long. 134° 4' E.; 800 fathoms; bottom temperature, 3.9° C.; mud.

Station 168. July 8, 1874. Lat. 40° 28' S., long. 177° 43' E.; 1100 fathoms; bottom temperature, 2.0° C.; grey ooze.

Station 169. July 10, 1874. Lat. 37° 34' S., long. 179° 22' E.; 700 fathoms; bottom temperature, 4.2° C.; grey ooze.

Station 232. May 12, 1875. Lat. 35° 11' N., long. 139° 28' E.; 345 fathoms; bottom temperature, 5.0° C.; sandy mud.

Station 244. June 28, 1875. Lat. 35° 22' N., long. 169° 53' E.; 2900 fathoms; bottom temperature, 1.2° C.; red clay.

Pourtalesia phiale (Pl. XXII. figs. 1-5; Pl. XXII.^a figs. 1, 2).

Pourtalesia phiale, Wy. Thomson, 1873, Depths of the Sea, p. 90; Trans. Roy. Soc., 1874, vol. clxiv., part 2, p. 749, pl. lxx. fig. 11.

Thomson has only given a very short description of this species in the Echinoidea of the "Porcupine" Expedition.¹ I have given on Plate XXI.^a figs. 1, 2, two figures of this

¹ Wyville Thomson, 1874, Trans. Roy. Soc., vol. clxiv., part 2, p. 749.