

*Protula*, Risso.

*Protula capensis*, n. sp. (Pl. LIV. fig. 2; Pl. XXXIA. figs. 12, 13).

*Habitat*.—Dredged at Station 142 (off the Cape of Good Hope), December 18, 1873; lat 35° 4' S., long. 18° 37' E.; depth, 150 fathoms; bottom temperature 47°·0, surface temperature 65°·5; sea-bottom, green sand.

In the contracted spirit-specimen the length is 50 mm., and the diameter between the bases of the bristles in the thoracic region 6·5 mm. The transverse diameter of the posterior region at its widest part is 7 mm.

The body is, as usual, divided into three very distinct regions, viz., the branchial, the thoracic, and the abdominal.

The branchiæ form two great fan-shaped processes, which, when viewed internally, seem to spring from each side of a broad, flattened membranous lamella with a neatly rounded terminal margin, the superior or dorsal edge sending a free ridge over the bases of the branchiæ. It is the rounded ventral margin of this lamella that appears to turn in first when the fan is rolled up. The radioles are attached to the edge of the lamella to the number of about fifty-seven, and they are bound together by a web for some distance above the base. Externally the basal region of the fan (the apex being at the inferior or attached point) presents a smooth surface. Each radiole consists of a somewhat flexible axis with a large cavity, and, as usual, there does not appear to be any special development of a cartilaginous kind, at least to any extent, so as to render the radioles stiff. It accordingly shrivels up very much in Farrant's solution, the transverse striation being apparently due to the structure of the hypoderm. Fixed in the tissues of the axis in one specimen, and quite visible under a lens, are many rounded granular bodies like ova, and some present a distinct egg-capsule. Whether these be parasitic ova or otherwise is yet an open question. They certainly do not move in the central canal, but are fixed. The tip of the radiole tapers to a filiform termination, a considerable part being free. The pinnæ are closely set, commencing as short processes at the base, and again diminishing below the filiform tip. They seem to be proportionally stiffer than the main stem. An opaque line runs along the bases of the pinnæ, and probably indicates the position of the vessels.

The margin of the truncated anterior region is bounded laterally by a continuation of the great lamella, which has a break at each side, but forms a continuous collar across the ventral aspect, and in the preparations this is reflected. There is thus a great contrast between the ventral border in this group and that in the Sabellidæ. In the cavity of the branchial fan were fæcal pellets, mud, and Foraminifera.

The only representative of the tentacle is a double fold of the basibranchial lamella at the dorsal edge.