

There are two species in the genus, *Ascopera gigantea* with a large body and a short peduncle, and *Ascopera pedunculata* with a small body and a much longer peduncle.

*Ascopera gigantea*, Herdman (Pl. I., Pl. II. figs. 1-4, and Pl. III. figs. 3-5).

*Ascopera gigantea*, Herdman, Prelim. Rep., Proc. Roy. Soc. Edin., 1880-81, p. 238.

*External Appearance.*—The shape is somewhat pyriform, and not compressed laterally. The anterior end is wide, truncated, slightly cleft in the centre, and ends in a siphon at each extremity. Behind the siphons the body swells out into a globular form, attaining its greatest width at about two-fifths of its length from the anterior extremity; it then narrows to become the wide peduncle constituted by the posterior two-fifths. The edges are both convex, but the dorsal is more so than the ventral, especially towards its posterior end. The animal is attached by the lower (posterior) end of the stalk.

The apertures are both at the anterior end; they are distant, conspicuous, tubular, and prominent. The branchial is at the end of a projection from the ventral edge of the anterior end, in the form of a wide tube bent round posteriorly so as to present a convex surface anteriorly and an open mouth posteriorly. The aperture is large and funnel-shaped, and is bounded by six wide, low, undulated lobes separated by slight clefts. The atrial aperture is placed at the summit of a projection from the dorsal edge of the anterior end. This projection is larger than that on which the branchial aperture is placed, and extends further forwards, thus rendering the atrial aperture more anterior than the branchial. The aperture is wide, quadrangular, and directed anteriorly. It is bounded by four lips with slightly undulated edges.

The surface of the body is even, there being no projections or marked irregularities. It is not, however, perfectly smooth, being finely roughened all over.

The colour is a pale yellowish grey-green, with a slight tinge of brown towards the lower end of the peduncle.

Entire length (antero-posterior), 30 cm. ; length of peduncle, 10 cm. ; greatest breadth (across apertures), 15 cm. ; breadth in middle of body (dorso-ventral), 12 cm.

*The Test* is thin and almost membranous, but tough. It is semi-transparent, and is slightly roughened externally, but quite smooth on the inner surface.

*The Mantle* is delicate and membranous, with a few distant rather strong muscle bands running transversely over about the anterior half of the right side and the left side; they are only absent on the dorsal part of the left side and the posterior end. At the posterior end of the body, where the peduncle commences, the mantle is firmly united to the test, even after immersion in alcohol.

*The Branchial Sac* is extremely thin and delicate, and has seven folds on each side; those next the endostyle are rather slighter than the others. The internal longitudinal bars are wide but delicate. The transverse vessels are also wide, and all of one size. The