

pigment corpuscles. Smaller pigmented cells (Pl. XXVII. fig. 2, *p.c.*) are found scattered here and there through the remainder of the test. Bladder cells are present in some places in abundance (Pl. XXVII. fig. 2, *bl.*). They are large and of the usual ellipsoidal form, and are so numerous in places as to reduce the matrix to a reticulum. In other parts of the test they are rare, and in some entirely absent. The surface layer is always free from bladder cells.

A few delicate vascular appendages are present, running downwards from the knob-like upper end, and terminating in elongated slightly swollen bulbs (Pl. XXVII. fig. 2, *v.ap.* and *t.k.*). The ectoderm cells on these vascular appendages are large and distinct.

There can be no doubt that this specimen belongs to the Ascidiæ Compositæ, although there are no Ascidiozooids present, and on account of its club-like form with the terminal knob (Pl. XXVII. fig. 1) I am convinced that it is entire, and not merely a fragment of a large colony. I believe that when obtained it was probably in a hibernating condition, and that all the Ascidiozooids had died and been ejected from the colony. In this case very probably there were some young buds connected with the vascular appendages, and lying in a dormant condition, from which new Ascidiozooids would have developed later on. Giard has shown that some of the Compound Ascidiæ of European seas pass into a dormant condition, accompanied by the development of pigment or calcareous spicules, on the approach of winter, and that at such a time all the old Ascidiozooids die and are ejected from the test. The presence of abundance of pigment upon the upper surface of the specimen under consideration favours the view that it was captured when in this hibernating condition.

From the general shape of the colony, and from the presence and appearance of the vascular appendages (Pl. XXVII. fig. 2, *v.ap.*), I am inclined to regard this specimen as belonging to the Distomidæ,<sup>1</sup> and as being probably allied to the genus *Coella*, but in the absence of Ascidiozooids it is impossible to determine even the family with precision. I believe, however, that I can state with certainty, from what is to be made out in the specimen, that it belongs to a species previously unknown.

————— (?) *pyriformis*, n. sp. (Pl. XVI. fig. 17).

*The Colony* is more or less pyriform, but is rather variable in shape. It is attached by the narrower end, which is usually prolonged to form a short peduncle. The upper extremity is broad and rounded. The colony is usually somewhat compressed laterally. No apertures and no systems are visible. The surface is fairly smooth. The colour is a light yellowish-grey, with a tinge of reddish-brown in some places.

The length is 2.3 cm. (including 8 mm. of peduncle), the breadth is 9 mm., and the thickness 4 mm.

<sup>1</sup> In shape it resembles somewhat *Distoma adriaticum*, von Drasche.