

structure. Two colonies of about the same size were obtained near Marion Island, between the Cape of Good Hope and Kerguelen Island, in from 50 to 75 fathoms of water.

There is no peduncle, the pale grey rounded mass being simply attached by a small portion of its surface (Pl. XXV. fig. 4). The colour may become darker in places from the presence of small patches of minute sand-grains adhering to the surface. The systems are clearly visible on the upper part of the colony, as the anterior ends of the Ascidiozooids show through the transparent test very distinctly. The bodies are unusually elongated. A specimen 9 mm. in length has the thorax 2.5 mm. in length, the abdomen 2.5 mm., and the post-abdomen 4 mm. The thorax is the widest part (Pl. XXV. fig. 6, *th.*).

The outer layer of the test is rather firmer than the inner part. The test cells are mostly of rounded form, though some are stellate or branched. The protoplasm of these cells is generally coarsely granular.

The muscle bands in the mantle are all delicate, and on the abdomen and post-abdomen they are particularly narrow. The branchial siphon is short, and the sphincter muscle is not well developed. The branchial aperture is obscurely six-lobed. The atrial aperture is placed at the end of a siphon and is six-lobed. No atrial languet is present.

The branchial sac is rather like that of *Morchellium giardi* (compare figs. 2 and 5 on Pl. XXV.). The transverse vessels are moderately wide (Pl. XXV. fig. 5, *tr.*), and are provided with muscle bands having the arrangement around the rows of stigmata at the dorsal and ventral edges which is described on p. 182 (see Pl. XXV. fig. 2, *m.f.*). The stigmata are equal in width to the fine longitudinal vessels. The dorsal languets are broader and very much shorter than those of *Morchellium giardi*. The endostyle is conspicuous, its course is undulating.

The oesophagus is a long narrow curved tube with the convexity dorsal (Pl. XXV. fig. 6, *æ.*). It enters the stomach on its outer or dorsal edge about half way down. The stomach is nearly globular in shape, and has its wall thickened irregularly so as to form a number of short cæcal processes like those seen in the case of *Morchellioides affinis* and *Morchellium giardi*. The cæca are not arranged in rows (Pl. XXV. fig. 6, *st.*). The intestine is at first a wide tube. It runs directly backwards from the posterior end of the stomach for a short distance, and then turns ventrally and towards the right hand side to become the rectum; the intestinal loop is very narrow, and the most posterior part of the intestine is of small calibre. The rectum is a large thin-walled tube. It runs forward on the ventral and right hand edge of the stomach, and then turns dorsally, crossing on the right hand side of the oesophagus. It runs for a short distance along the dorsal edge of the thorax, and then terminates by opening into the peribranchial cavity.

The post-abdomen is separated from the rest of the body by a slight constriction. The reproductive organs in all the Ascidiozooids examined occupied only a small portion