the homogeneous matrix is seen to be occupied by very numerous cells of small size and various shapes. No large bladder cells or pigment cells are present.

The Mantle is fairly strong. The musculature is well developed. The bands are somewhat irregular in their course, but are mostly transverse.

The Branchial Sac is rather short and wide. The stigmata are few but very large; they are long and narrow, with parallel sides and rounded ends. The cells bearing the cilia are short and prominent.

The Endostyle is conspicuous. It has a very irregular course, taking a number of undulations dorso-ventrally.

The Tentacles are numerous and closely placed. There are at least sixteen large ones and the same number of smaller ones placed alternately.

Locality.—Port Jackson, Sydney, Australia; depth, 30 fathoms.

This species is founded for the reception of a single damaged specimen obtained in Port Jackson from a depth of 30 fathoms. Probably the colony was attached by a stalk (whether long or short there is no means of determining) springing from its lower and wider end. What remains of the colony is an irregularly conical body, tapering upwards from a point a little way above the base (Pl. XVI. fig. 1). This is the widest part; below it the body rapidly narrows to the place where it has been torn from its stalk. The breadth and the thickness are in most parts of the colony very much the same. The general shape is more like that of *Colella thomsoni* than of *Colella pedunculata*, but is narrower and more elongated than either of them. The upper part is narrow and tapering. Its end is rounded (Pl. XVI. fig. 1). The surface is smooth and glistening at the top, but becomes more irregular and rougher towards the base of the colony.

The Ascidiozooids are visible on the surface as small light grey opaque marks about 0·5 mm. in diameter. They seem to be scattered quite irregularly over the surface (Pl. XVI. fig. 1). They are equally abundant all over, except on the lower one-fourth or so of the colony, where they are fewer in number than elsewhere. In a transverse section across the middle of the colony (Pl. XVI. figs. 2, 3), the Ascidiozooids are seen to occupy a zone about 1·5 mm. in depth round the outside, while the central part is formed by the colonial test penetrated by the very conspicuous vascular appendages.

The breadth of the Ascidiozooid varies from half to two-thirds of its length. The branchial region (thorax) is generally rather larger than the visceral (abdomen). The anterior extremity is much broader than the posterior (Pl. XVI. fig. 5). The branchial aperture is placed near its middle, while the atrial siphon extends outwards from its dorsal end. The vascular appendage, which springs from the posterior end of the abdomen, is very long, and nearly as wide as the intestine (Pl. XVI. fig. 3). After leaving the body it runs for a short distance towards the centre of the colony, but very soon turns downwards in the direction of the stalk, so that in any section through the