1·5 cm. in greatest breadth. The short colony is nearly cylindrical, with the closed end rounded. The common cloacal aperture is very small. The processes on the outside of the colony are still very short, and are simply conical or hemispherical. The Ascidiozooids are small, a large number of them appearing to be still immature.

(4.) A small colony obtained at Station 204, off the Philippine Islands, November 2, 1874, lat. 12° 43′ 0″ N., long. 122° 10′ 0″ E.; depth, 100–115 fathoms; surf. temp. 84°, is very probably referable to *Pyrosoma giganteum*, but has not the cylindrical shape usual in that species. It is a little over 3 cm. in length and 1·5 cm. in breadth at the broadest point, which is near the middle; from this point it tapers towards both ends. The common cloacal aperture is large. The processes on the outside of the test are prominent, some of them being especially large. These have the flattened lanceolate extremities characteristic of the species.

(5.) One specimen and half a dozen fragments of *Pyrosoma* colonies were found at Station 160, March 13, 1874, lat. 42° 42′ 0″ S., long. 134° 10′ 0″ E.; surf. temp. 55°, bottom temp. 33°·9, in the trawl, which had come up from a depth of 2600 fathoms. The complete colony is 27 cm. in length and 2 cm. in breadth. It scarcely tapers, and has a well-marked sphincter. It may possibly belong to *Pyrosoma giganteum;* but it is in such a decayed condition, the whole surface of the colony being ragged, and the Ascidiozooids indistinguishable, that the species cannot be determined with certainty. The fragments found at the same locality are in an equally bad state, and none of them even indicate the size and shape of the colonies they belonged to. Probably all of these were dead and decayed specimens when they were captured.

(6.) Two small colonies obtained on September 10, 1873; Station 122; off the coast of Brazil; lat. 9° 10′ 0″ S., long. 34° 49′ 0″ W.; surf. temp. 77°·5, may possibly belong to *Pyrosoma giganteum*, Lesueur, but the characters are not well marked. They measure respectively 2·5 and 1·8 cm. in length, and are both 1 cm. in breadth. The Ascidiozooids in both are rather large, and the processes on the outside of the colony are rather prominent in the larger specimen.

(7.) Four small colonies collected on the surface of the West Pacific Ocean, north of the Admiralty Islands, on March 16, 1875; Station 222; lat. 2° 15′ 0″ N., long. 146° 16′ 0″ E.; surf. temp. 82°·8, may possibly be *Pyrosoma elegans*, Lesueur, but are not fully enough developed to be referred with certainty to their species; they present some points of interest. Their dimensions are as follows:—

	A.	B.	C.	D.
Length, ...	1·3 cm.	1·5 cm.	1·7 cm.	1·8 cm.
Greatest breadth, . . .	1·0 cm.	1·0 cm.	0·7 cm.	0·9 cm.

In all of them the Ascidiozooids are large and conspicuous, and in one (specimen B) they project from the surface of the colony in the form of short truncated cones, from 1 to nearly 2 mm. in length (Pl. II. fig. 8). There are no projections from the surface of the test beyond those formed by the Ascidiozooids. At the closed end of this