

long. $144^{\circ} 4' 0''$ E; depth, 1070 fathoms; surf. temp. 84° , bottom temp. $36^{\circ} \cdot 4$. The single specimen was considerably injured when obtained, but was dissected while fresh by Professor Moseley. The remains were then preserved in spirit.

A second specimen of probably the same species was also obtained during the Challenger Expedition, on December 14, 1875, at Station 299, off the west coast of South America; lat. $33^{\circ} 31' 0''$ S., long. $74^{\circ} 43' 0''$ W.; from a depth of 2160 fathoms; surf. temp. 62° , bottom temp. $35^{\circ} \cdot 2$. This specimen is likewise much injured, having evidently had its delicate tissues torn by the trawl. The material which came into my hands was therefore in such a fragmentary condition that I have been able to do little more than confirm the results obtained by Moseley in his examination of the first specimen, and add a few histological details. Under these circumstances I shall commence by quoting Moseley's description,¹ and shall then add my own observations and remarks:—

“*Octacnemus bythius*, gen. et spec. nov.

“This stellate Ascidian was trawled March 1, 1875, in 1070 fathoms; lat. $2^{\circ} 33'$ S., long. $144^{\circ} 04'$ E., about forty miles north of Rossy Island, Schouten Islands. From its peculiar appearance, due to the presence of the eight long radiating conical processes of the test, the animal was at first supposed to be a Medusa. The single specimen was considerably injured, the muscular networks maintaining their attachments in only three of the conical processes, but the test was entire.

“The test of the animal is gelatinous and hyaline. On the under surface the body presents a flat area of a nearly oval form (Pl. X. fig. 1). The border of this base is thickened into a slightly prominent, rounded ridge, running round the periphery of the entire basal area; and, further, is indented slightly opposite the interspaces between the long conical processes, so as to have an undulating outline. Towards one end of the base (which end of the animal will be termed anterior, since it is that in which the nerve ganglion lies), and in the middle line, is a prominence, also oval in outline (Pl. X. fig. 1, *ad.*). This prominence is formed of a process of the basal part of the test. It terminates outwardly in a tangled mass of rootlets, massed amongst which was found much sand and shell-particles from the bottom. The Ascidian was evidently attached by this process or pedicle.

“Above the margin of the base the body of the animal is somewhat contracted, but its walls then again spread outwards, and extend into eight wide conical processes. The processes terminate in abruptly narrowed tentacular-like tips (Pl. X. fig. 1), which are imperforate, and in which no sense organ or any special structure could be discovered.

“On the upper aspect of the body the eight conical processes are directly continuous with the upper surface, which is somewhat hollowed or saucer-shaped.

¹ I am indebted to Professor Moseley for having kindly given me the use of his original drawings to illustrate this description of his species (see Pl. X. figs. 1-5). I have made the necessary changes in the references to the figures which occur in the text.