Zoology Part LXXVI: Report on the TUNICATA. Third Part.-Pelagic Tunicates. By Professor William A. Herdman, Bound in Volume 27,

general length of the one hundred and forty specimens in that gathering, and of the one hundred and fifty specimens collected in the South Atlantic, on March 3–5, 1876, is 1 cm., exclusive of the posterior processes. These processes measure about 5 or 6 mm. in length, relatively as long as in Traustedt's variety *flagellifera*. In many of the specimens obtained March 3–5, 1876, the distal portions of the posterior processes are of an opaque white colour. When examined under the microscope they are seen to have a yellowish tint, and to be nodulated on the surface (Pl. VIII. fig. 1).

Some of the smaller specimens (*e.g.* those obtained in the South Atlantic on February 12, 1876) have no chains of embryos, although in all other respects they resemble the larger specimens; while other still smaller specimens (about 4 mm. in length) have the posterior processes of the body exceedingly short (Pl. VIII. fig. 2). Some of these specimens have serrated ridges at the anterior end of the body.

In these young specimens the proliferation of the ectoderm to form the young test cells is particularly well seen (Pl. VIII. fig. 6). The test cells are most abundant at the growing points of the test processes. The ectoderm cells are mostly stellate (Pl. VIII. fig. 7). In those specimens where the test is slightly echinated in places, a test cell in process of becoming a small bladder cell is seen at the base of each of the small spines (Pl. VIII. fig. 5, *bl.*).

Turning now to the aggregated form, we find that the average length is about 6 mm.; while in the large gathering obtained in the South Atlantic on February 12, 1876, the specimens vary from 3 mm. to 10 mm.

The shape of the aggregated form also varies. The specimens obtained on February 28, 1876, are more angular in shape than usual. The three specimens collected in the Southern Ocean, on December 19, 1873, have bifid ends, recalling the condition found in some specimens of the aggregated form of *Salpa runcinata-fusiformis* (see p. 76 and Pl. VI. fig. 6).

In some other specimens, again, especially in some of those collected off the coast of Australia, on April 2, 1874, the posterior end of the mantle runs out into a tapering process (Pl. VIII. fig. 4), in place of being simply rounded off behind the nucleus, as is shown in Traustedt's figures. In other specimens from the same locality, however, the posterior end of the mantle is in the normal condition.

This is the species described by Professor M'Intosh,[1] under the name *Salpa spinosa*, Otto, as being present along with *Salpa runcinata-fusiformis* in great abundance in some parts of the Hebrides.

Salpa nitida, n. sp. (Pl. VIII. figs. 11–15).

External Appearance.—The body is of an elongated ovate shape, and has no processes. Length 9 mm., breadth 5 mm.

[1] *Journ. Linn. Soc. Lond.* (Zool.), vol. ix. p. 41, 1868.

http://19thcenturyscience.org/HMSC/HMSC-Reports/Zool-76/README.htm