

reasons the present part of the Report, though including only the Compound Ascidiæ, has taken longer to prepare and has reached a larger size than was expected. A description of the pelagic forms (the Pyrosomidæ, the Appendiculariidæ, and the Thaliacea), forming the third and concluding part of the Report, will probably appear during the next year.

The large collection of Ascidiæ Compositæ, which was for the most part found to be in good condition for histological examination, represents one hundred and two species and well-marked varieties, arranged in twenty-five genera. Eighty-eight of the species and ten of the genera are new to science. As no preliminary report upon the Compound Ascidiæ was published, these new genera and species are described here for the first time. I have found it necessary to form two new families, the Cœlocormidæ and the Polystyelidæ.

The Compound Ascidiæ collected during the cruises of H.M.S.S. "Lightning" and "Porcupine" in the summers of 1868-70 were sent to me by Mr. Murray for examination. They have been incorporated in the Challenger collection, and the descriptions of them will be found in the Systematic Part of this Report.¹

Since the publication of the first part of the Report, several specimens of Simple Ascidiæ belonging to the Challenger collection, which had previously been overlooked, have been sent to me for examination. I have placed the description of these forms as an Appendix at the conclusion of this part of the Report.

¹ The Simple Ascidiæ of the "Porcupine" and "Lightning" expeditions were described in a paper read in January 1884, before the Royal Society of Edinburgh, and published in its Transactions (*Trans. Roy. Soc. Edin.*, vol. xxxii. part ii. p. 219).