## PART II.—ON HELIOPORIDÆ AND THEIR ALLIES.

## INTRODUCTION.

This Part is mainly a reprint of a memoir on the same subject which was published in the Philosophical Transactions for 1876 as a Preliminary Report on part of the results of the Challenger Expedition. The matter has been, however, rearranged; some new terms have been introduced, and the discussion of the results attained has been modified in order to be in accordance with the facts concerning the Hydrocorallinæ which were ascertained by me since the paper was published. Certain parts of the original paper relating to the structure of Millepora, Stylaster, and Pocillopora have been omitted.

I obtained specimens of the coral Heliopora cærulea in the living state at Samboangan, in the Island of Mindanao of the Philippine group, in January 1875. I examined the structure of the coral to some extent whilst in the fresh condition, and made a further detailed investigation of its anatomy during subsequent voyages. For comparison I studied the anatomy of a species of Sarcophyton dredged in shallow water amongst the reefs of the Admiralty Islands, and an account of the structure of this Alcyonarian is given here at some length.

Very little had been written on the structure of Heliopora carulea before the first appearance of the present paper, and nothing further containing new information has been added since. The previous accounts referred only to the structure of the corallum or to the appearance of the living polyps, the latter being very imperfect and unsatisfactory. They are referred to as occasion requires in the body of the text.

<sup>&</sup>lt;sup>1</sup> On the Structure and Relations of the Alcyonarian Heliopora carulea, with some Account of the Anatomy of a Species of Sarcophyton; Notes on the Structure of Species of the Genera Millepora, Pocillopora, and Stylaster; and Remarks on the Affinities of certain Palæozoic Corale. By H. N. Moseley, M.A., Oxon., Naturalist to the Challenger Expedition (Phil. Trans. Roy. Soc., vol. clavi. p. 91, part 1, 1876).