

THE
VOYAGE OF H.M.S. CHALLENGER.

ZOOLOGY.

REPORT on certain HYDROID, ALCYONARIAN, and MADREPORARIAN CORALS procured during the Voyage of H.M.S. Challenger, in the Years 1873-1876. By H. N. MOSELEY, M.A., F.R.S., Fellow of Exeter College, Oxford, late Member of the Civilian Scientific Staff of the Challenger Expedition.

GENERAL INTRODUCTION.

AT the time when the Challenger Expedition set sail, very few investigations concerning the anatomy of the soft tissues of stony corals had been made for a considerable number of years. A large number of naturalists had failed to accept as conclusive the late Professor Agassiz's results as to the hydroid nature of the MILLEPORIDÆ; the STYLASTERIDÆ were universally considered to belong to the MADREPORARIA, although Gray had formed them into a special family, and Pourtalès and Verrill had recognised some of the remarkable peculiarities of these corals. The presence of "tabulæ" in *Heliopora* had led to the association of that form with *Millepora*, and no one suspected that it was an Alcyonarian allied to *Corallium*, *Tubipora*, and *Alcyonium*.

When I undertook the investigation of the deep-sea MADREPORARIA dredged during the voyage, I naturally became anxious to examine the structure of *Millepora*, and early in the expedition attempted to make out the anatomy of *Millepora alcicornis* at Bermuda, but without much success, the problem proving too difficult. I did not succeed with *Millepora* until near the end of the voyage. The discovery which I made at the Philippine Islands, that *Heliopora* is an Alcyonarian, led me to examine the structure of all corals which were not most evidently Madreporarian, and hence I studied *Stylaster*,