



H.M.S. "CHALLENGER"
Shortening sail to sound.

CHAPTER I

A BRIEF HISTORICAL REVIEW OF OCEANOGRAPHICAL INVESTIGATIONS

THE phenomena displayed at the surface of the ocean have been the object of observation from the earliest ages,—waves, currents, winds, tides, and the temperature of the water were matters of very great importance and concern to the earliest navigators. It was not, however, till about the time of the famous "Challenger" Expedition, nearly forty years ago, that any systematic attempts were made to examine the deeper and more remote regions, or to explore the physical and biological conditions of the ocean as a whole.

Development
of the modern
science of
oceanography.

It seems desirable to commence this book by indicating, as briefly as possible, the various steps by which the present development of the modern science of oceanography has been reached. This can best be accomplished by (1) pointing out some of the scientific observations made previous to the "Challenger" Expedition, (2) referring to the expeditions contemporaneous with and subsequent to that expedition, and (3) referring to the work carried out at marine biological laboratories, and in connection with international and other fishery investigations.