

THE FRESH-WATER LOCHS OF SCOTLAND

INTRODUCTION

BY SIR JOHN MURRAY, K.C.B., F.R.S., D.Sc., ETC.

I.—ORIGIN AND HISTORY OF THE LAKE SURVEY WORK

DURING the *Challenger* and some subsequent deep-sea expeditions I spent many years in the exploration of the physical and biological conditions of the great ocean basins. While preparing the scientific results of these expeditions for publication, it seemed to me that, for the purpose of comparison, a detailed examination of the fjord-like sea-lochs of the coasts of Scotland might yield very valuable information. In order to undertake an investigation of this kind it was necessary to have a small steam yacht fitted with the necessary arrangements for taking deep-sea temperatures, for dredging and trawling, and other like operations. With the assistance of Mr A. P. Henderson, the late Mr John Henderson (both of the firm of Messrs D. & W. Henderson, of Partick), and financial assistance from my lifelong friend Mr Laurence Pullar, of 'The Lea, Bridge of Allan, I was able to build a small thirty-ton steam yacht, fully equipped for oceanographical investigations near shore. This yacht was called the *Medusa*, and during the years 1884 to 1891 she was almost continually employed in exploring the shallow waters and deep land-locked sea-lochs of the coasts of Scotland. During the same period a biological laboratory was carried on at Granton, near Edinburgh, and another similar laboratory in a large canal-barge, called *The Ark*, at Millport, Cumbrae, on the west coast of Scotland. This latter laboratory ultimately developed into the Robertson Museum and the laboratory of the Marine Biological Association of the West of Scotland, at Millport. Many valuable results were obtained by these investigations, in which Dr H. R. Mill, Mr J. T. Cunningham,