THE NATIONAL INSTITUTE OF OCEANOGRAPHY

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In 1944 Vice-Admiral Sir John Edgell, K.B.E., C.B., F.R.S., Hydrographer of the Navy, advised the Government that Great Britain had fallen seriously behind other countries in its contribution to research in oceanography, and that an oceanographical institute should be set up. The question was referred to the Royal Society, and the Oceanographical Sub-Committee of the National Committee for Geodesy and Geophysics showed itself, in a report which was accepted by the Society, to be strongly in favour of such a proposal. It urged the primary need for researches of physical character since the biological aspects are already well looked after in Great Britain by the Marine Biological Associations of the United Kingdom and Scotland, the Fisheries Laboratories at Lowestoft and Aberdeen, the Discovery Investigations, and other laboratories.

It is difficult to urge the importance of a new venture without appearing to undervalue what is being done already, but although navigational charts, tide predictions, and marine meteorological atlases have reached a very high standard, and the marine biological and fishery laboratories have made great contributions to descriptive and biological oceanography, we know very little about many of the basic processes which control the distribution of physical properties and large and small-scale water movements in the oceans. The tides are an exception, and the satisfactory state of our knowledge can be attributed to the systematic collection of information about the forces which generate them, and the energetic theoretical and practical study of the effect of these forces on seas of different size and shape. The less satisfactory investigation of waves, surges, currents, and processes included within the usual meaning of upwelling, sinking, and horizontal and vertical mixing, is partly due to a lesser demand for exact information, but mainly because the forces that are involved are not regular or capable of exact specification like the tide-generating forces, and less attractive to academic workers. Theory and observation have not gone sufficiently hand in hand; theoretical workers have had to oversimplify the problems to make a start, and the practical study has been based chiefly on such data as happened to be found most suitable among observations made for some other purpose in the course of general regional surveys. There is still plenty of need for oceanographical surveys and systematic collection of information from little-known parts of the world, but the most urgent requirement is for new theoretical and experimental approaches aimed at elucidating the primary factors which influence the transfer of water and energy from one region or depth to another.

The National Institute of Oceanography owes its existence to the growing feeling that much can be done to improve our knowledge of the basic processes in the sea by concerted action of experts in all branches of sciences which can be applied to marine problems. Approximately two-

thirds of the staff will have some bias towards the physical sciences, and the oceanographical group of the Royal Naval Scientific Service which has worked on waves, relations between waves and microseisms, magnetic and electrical effects of earth currents and water movements in the sea, and interchange of energy between the sea and atmosphere, will be used as a nucleus. The staff of the Discovery Investigations, well known for their researches, with special reference to whales, in the Southern Ocean, will be the nucleus of the biologists. The Institute will be concerned with some immediate problems bearing on navigation and the national resources of the oceans, but it is likely to do more towards advancing oceanography and furthering its applications by devoting most of its effort to improving our understanding of the basic processes. It must also provide facilities to attract academic workers to study marine physical problems in the hope that they will prove as fruiful as those which have attracted zoologists to the marine biological laboratories.

Pending the granting of a Royal Charter the National Institute came into being on 1 April, 1949, under a provisional executive committee consisting of representatives of the Admiralty, Ministry of Agriculture and Fisheries, Scottish Home Department and the Universities of Oxford, Cambridge, Liverpool and London. Dr. G.E.R. Deacon, F.R.S. and Captain (S) R.H.G. Franklin were provisionally appointed as Director and Secretary. The first annual report (Cambridge University Press, 5s.) was published early in 1951. The King granted a Royal Charter to the National Oceanographic Council which replaced the provisional executive committee as the governing body of the Institute in October, 1950. The Civil Lord of the Admiralty is chairman of the Council, and there are 32 members representative of the Australian, New Zealand, and Ceylon Governments, and of British Government Departments, learned societies, universities and organizations interested in oceanography. The Council is charged with the object of advancing oceanography in all its aspects. A copy of the Charter and a list of the members of the Council is printed in the Annual Report.

The future home of the Institute will be near London, chiefly to make it easier for the staff, which will include representatives of all branches of science, covering an unusually wide range of interests, to keep in touch with recent developments. To have the headquarters away from the sea will have some disadvantages, but it is believed that these will not be serious since most of the work will be done in deep water, and facilities for work on problems near the coast can readily be arranged, usually in fruitful cooperation with authorities interested in applications of the work.

It will be some years before the plan can mature. Young men with good qualifications especially in mathematics and physics and sufficient enthusiasm to apply their specialist knowledge to the comparatively ill-defined problems of oceanography, are needed to join the existing staff, which has some experience in most branches of the subject. There will also be some difficulty about accommodation till the Institute is settled in its own building some time within the next twelve months. Nevertheless good progress is being made. The R.R.S. *William Scoresby* has been marking whales in the South Atlantic Ocean, trying new methods of collecting marine animals and making two surveys of the water and biological conditions in the Benguela Current. In the course of this work the breeding ground of the pil-

chard on which the great new canning industry of the west coast of South Africa is based, was discovered. The R.R.S. *Discovery II* has been making a winter circumnavigation of the Antarctic Ocean to fill gaps in the oceanographical surveys made before the war. She will return to England in December, and next year will be engaged mainly in physical, biological and other investigations in the eastern half of the North Atlantic Ocean.

The Institute is fortunate in being able to draw on the experience of members of the Discovery Investigations and of the oceanographical research group of the Royal Naval Scientific Service, and it should soon be able to establish itself as a useful addition to the existing marine laboratories.