

**The Torry Research Station: Dr. G. A. Reay, C.B.E.**

DR. G. A. REAY, who retires from the directorship of the Torry Research Station, Aberdeen, in October, was born on May 31, 1901, in Aberdeen. From Robert Gordon's College he went to the University of Aberdeen, obtaining his M.A. degree in 1921 and his B.Sc. in 1923, winning a senior Kilgour scholarship with which he commenced research in biochemistry. After a further year at Aberdeen he moved to Emmanuel College, Cambridge, and continued his research under the late Sir Frederick Gowland Hopkins. He was awarded a Carnegie research fellowship in 1926 and in 1927 obtained his Ph.D. In September 1927 Reay joined the staff of the Department of Scientific and Industrial Research Food Investigation Organization, becoming one of a small team of enthusiasts who set out to investigate and improve the handling of fish at sea. The Torry Research Station was not yet in existence, but Reay and his colleagues successfully demonstrated the value of adequate washing and proper icing procedures, and also the benefits of freezing fish at sea. The Torry Research Station was opened in October 1929, Reay being one of its first scientists and concentrating on the mechanism of protein denaturation in frozen fish. He soon began stressing the greater importance of low storage temperatures than of rapid freezing, a view at variance with much contemporary thinking. On the retirement in 1937 of the Station's first Superintendent, Mr. A. L. Lumley, Reay was appointed officer-in-charge, becoming superintendent in 1947 and director in 1958. He was elected a Fellow of the Royal Society of Edinburgh in 1955, and was awarded an O.B.E. in 1949 and a C.B.E. in 1958. Dr. Reay is an able musician and a keen angler.

**Dr. J. A. Lovern, O.B.E.**

DR. J. A. LOVERN, who has been appointed to succeed Dr. G. A. Reay as director of Torry Research Station as from November 2, was born in Liverpool in 1906. Dr. Lovern gained a first-class honours B.Sc. degree in chemistry at the University of Liverpool in 1927 and a Ph.D. in 1929 for investigations of the chemistry of fish oils under Prof. T. P. Hilditch. Thus began his professional acquaintance with fish, and also with Aberdeen, for he had to prepare his oil samples on board the research vessel of the old Fishery Board for Scotland. Joining the staff of the Torry in April 1930, when the Station was but six months old, Dr. Lovern gained international fame before the Second World War for his outstanding and varied chemical and biochemical investigations of fish oils. The University of Liverpool recognized this achievement by awarding him a D.Sc. in 1937. Two and a half war years in Washington, D.C., with the British Food Mission allowed Dr. Lovern to become thoroughly acquainted with the United States and Canadian fish industries and related research. Returning to Torry in 1945, Dr. Lovern enhanced his academic reputation by his notable work on the more complex lipids and the lipoproteins of fish, being promoted senior principal scientific officer on special merit in 1947. At the same time he became responsible for the Station's by-products research, especially on fish meal, and as a result he has become increasingly engaged in advisory work and sponsored research for the Association of Fish Meal Manufacturers and, since 1959, for the International Association of Fish Meal Manufacturers, of the Scientific Committee of which he has been chairman since its inception. Dr. Lovern was elected a Fellow of the Royal Society of Edinburgh in 1960 and received an O.B.E. in 1962. His hobbies include hill walking, natural history and alpine plant culture.

**Royal Greenwich Observatory: Dr. O. J. Eggen**

DR. O. J. EGGEN, formerly of the Lick Observatory, California, has joined the staff of the Royal Greenwich Observatory at Herstmonceux (Sussex). An authority on photoelectric photometry, he has put forward views on

moving groups of stars considered most significant in relation to the history of the galaxy. He worked for five years at Herstmonceux before returning to the United States, where for three years he has been a professor in the California Institute of Technology and had use of the 200-in. telescope on Mount Palomar. Dr. Eggen will work as a temporary senior principal scientific officer at the Royal Greenwich Observatory.

**Government Expenditure on Science**

IN reply to various questions in the House of Commons on July 2, total expenditure in the United Kingdom on all branches of oceanography and marine biology in 1964-65 was estimated by Sir Edward Boyle at about £2.17 million; Government expenditure on medical research in 1963-64 at £18.5 million, of which £7 million was for the Medical Research Council. Expenditure by the Department of Scientific and Industrial Research on seven basic research projects in scientific documentation at universities and colleges was estimated at £100,000, excluding research at the National Physical Laboratory. The new grant arrangements with the Association of Special Libraries and Information Bureaux would allow for an expenditure of up to £20,000 a year for a research programme in this field.

**Channel Tunnel**

IN a statement in the House of Commons on July 1, the Minister of Transport, Mr. E. Marples, announced that the British and French Governments had decided that the further geological survey for the Channel tunnel should begin this summer. Arrangements were being made for the Channel Tunnel Study Group to conduct the survey on an agency basis under the general supervision of the British and French Governments, who were to appoint a Joint Commission of Surveillance for this purpose. Half the cost, which was expected to be about £1.25 million, would be met by the British Government and half by the French Railways which, at the instance of the French Government, were participating in the contractual arrangements. The survey arrangements were entirely without prejudice to decisions yet to be made by the Governments on the organization and financing of the project, but it was the present intention of both Governments that eventually the cost of the survey should be charged to whatever organization might be set up for the tunnel itself. Mr. Marples added, in reply to questions, that this was the first of many investigations which would have to be made before the tunnel was built. In the House of Lords, on the same day, Lord Chesham said that Col. D. McMullen, chief inspecting officer of railways in the Ministry of Transport, would be co-chairman of the Joint Commission of Surveillance, of which Dr. C. J. Stubblefield, director of the Geological Survey, would also be a member. He hoped that the survey would be completed within a year.

**Problems of Water Supply in Britain**

IN reply to a question in the House of Lords on July 15, the Joint Parliamentary Secretary, Ministry of Housing and Local Government, Lord Hastings, said that large quantities of water were already being obtained by exploiting the natural storage capacity of underground aquifers, but in some areas their full capacity was unknown or not fully utilized. The Thames Conservancy was exploring the potentialities of the chalk in the Thames Basin, and since the publication of *The South-East Study, 1961-81*, a preliminary investigation of the chalk in the Great Ouse Basin had been arranged. The Water Resources Board and the new river authorities would investigate the suitability of geological conditions in Britain for the large-scale use of artificial recharge to augment natural storage capacity, but he did not think that this could be a complete panacea for all water