

but only begun. Even in the hour of triumph, when the shouts of victory might have distracted him, he wrote, in the very first paper he published after the discovery, that the way of progress was by further "experiment and research". It was, however, to be "experiment and research" on a scale larger, in time and space, than the medical profession had visualised, and the results have come in slowly for that reason; but solid progress

has been made, and Ross's last birthday was brightened by good news from Africa about the development of the work to which he had devoted his genius and his life. Then clouds closed over one of the most active minds of his generation one of the foremost men of science of his time and on one of the great benefactors of mankind. He died at the Ross Institute, London, on Sept 16, 1932. MALCOLM WATSON.

News and Views

Sir Ronald Ross

FOR many weeks the thoughts of scientific colleagues everywhere, as well as those of a large group of the lay public, have frequently turned to the bedside of Sir Ronald Ross where he was lying grievously ill. All who knew Sir Ronald personally cherished the hope that they might again be privileged to meet him, though in their minds they knew that such an event was unlikely. The parting came on Friday last, when he crossed the dark river into the land of silence. To few men have such brilliant and intellectual attributes been given, and none has had greater influence upon the comfort and welfare of the human race. The versatility of his genius was really remarkable. Not only was he the author of several mathematical works of high order, but his volumes of verse showed him to possess rich talents of poetic conception and expression. His scientific work is appropriately surveyed on p. 465 of this issue by Sir Malcolm Watson, director of tropical hygiene and principal of the Department of Malaria Control at the Ross Institute and Hospital for Tropical Diseases, where Sir Ronald Ross died. We are fortunate in being able to publish this appreciation from one who did so much to apply the results of Sir Ronald's investigations to anti-malarial measures in the Federated Malay States, Singapore, and elsewhere, and has been closely associated with him at the Ross Institute for several years.

SIR RONALD ROSS was born on May 13, 1857, at Almora, India, and after being educated at a private school, studied medicine at St. Bartholomew's Hospital, and entered the Indian Medical Service in 1881. His investigations on the life-history of the malarial parasite and the means of preventing malarial infection began with a clue indicated by Sir Patrick Manson. When Ross first attacked the problem in 1895, at Secunderabad in India, the circumstances entailed much difficulty and many delays. Here he opened up an investigation as to whether the malarial parasite, discovered by Laveran, passes part of its life-history within the body of a living insect. After more than two years of fruitless experiments, Ross discovered a stage of the human malarial parasite in the tissues of the mosquito, anopheles, which had been allowed to feed on the blood of a malarial patient. In 1898 he proceeded to work out in detail the life-history of the malarial parasite found in sparrows and

larks in India. He traced the stages in development of this parasite from its inception into the stomach of the gnat, *Culex fatigans*, which feeds on the blood of these birds, to its passage back into their blood through the secretion of the poison gland of the insect. Thus he furnished conclusive experimental proof of the part played by the insect in propagating the infection. Ross was elected a fellow of the Royal Society in 1901, and in 1909 was awarded a Royal medal of the Society. He was awarded the Nobel prize in Physiology and Medicine in 1902; and national recognition of his work is represented by the honour of K.C.B. conferred upon him in 1911 and K.C.M.G. in 1918.

Egypt Exploration Society's Jubilee

By exhibiting two relatively small collections of objects and manuscripts from the many thousands presented to the British Museum by the Egypt Exploration Society during the fifty years of its existence, the authorities of the Museum have fittingly marked the jubilee of the Society and once more reminded the public of the way in which the national collections have been enriched and the sum of the nation's wealth increased by the benefaction of private effort. Yet the objects which may be exhibited in the collections of a museum, however intrinsically valuable, priceless for their rarity, or instructive as a means of re-creating the history or the everyday life of a vanished civilisation, represent but a part of the achievement of an association of private individuals engaged in the common pursuit of the scientific exploration of the obscurer phases of the early history of mankind. A year or two ago, when the Society for the Promotion of Hellenic Studies celebrated its jubilee, its services to the cause of classical scholarship and the study of early Mediterranean culture were duly recognised. The Egypt Exploration Society, having in view its wider appeal, may justly claim an even greater achievement. With no assistance from public funds, it has brought to light, restored, and handed over to the Egyptian Government in trust for future generations some of the most impressive of the monuments of Egypt's past, such as the temples of Deir el-Bahari, the Osireion, and the tombs of Beni Hassan, while its most recent excavations in a humbler, but historically no less instructive, sphere at Amarna have revealed the material surroundings and dwelling-places of the general population of an Egyptian city.

THE activities of the Society in excavation have afforded an opportunity to many well known in the archaeological world for the exercise of their skill. The list would be too long to recite, but the names of Petrie, Naville, Hall, Hogarth, Hunt, Grenfell, and Woolley in this connexion immediately leap to the mind. Their work has been recorded in the scholarly and beautifully illustrated publications of the Society. In the collections now specially exhibited in the Egyptian Galleries and the Manuscript Saloon of the British Museum may be seen some of the choicer relics excavated by them. These have been given to the Museum, it should be added, as the agreed method of disposal of the finds allotted for the share of the expenditure raised by subscription from private individuals. Over two score manuscripts, which include the priceless "Sayings of Jesus", new poems by Sappho and Bacchylides, and the text of Pindar's "Pæans", are shown. Among the more striking archaeological exhibits are the polychrome glass fish from Amarna and the sandstone sphinx inscribed with the famous pictographic script of Sinai, both of which have attracted much attention from the public, the diminutive gold statuette of Re, and the silver shrine from Daphnæ. With a number of exhibits of decorated glazed ware discovered at Amarna in the last two or three seasons' work is the unique Eighteenth Dynasty ivory *ushabti* from that site, whence also comes, among the finds of the season just past, the remarkably fine engraving of a young king's head on limestone, while the limestone head of a bald-headed old man, shown near by, comes from Deir el-Bahari. The relics from the recently discovered Buchæum, the temple of the Buchis bull cult, are here on exhibition for the first time. The larger objects and statues in the Gallery, for which the Museum is indebted to the Society, have been specially labelled.

Old and New Pharmacy

A WRITER in the *Sunday Observer* recently deplored the passing of the old-time English pharmacy with its window display of stoppered carboys of coloured water and its opal and gilded drug-jars. The loss of these emblems coincides with a change in the character of the pharmacist's occupation. The centralisation of manufacture tends more and more to convert him into a distributor of compounded medicines, in place of the skilled technician who made his own preparations out of crude drugs; but it must not be forgotten that he must now know a great deal more, about more complex drugs, than the old-time pharmacist. Side by side with this change there has grown up a demand on the part of pharmaceutical and fine chemical manufacturers for a new kind of pharmacist, whose knowledge is varied enough to enable him to deal with the new developments in therapeutics to which chemists, pharmacologists, and physiologists are constantly contributing. Much the same type of pharmacist is required by the great hospitals, which in these days often undertake the manufacture of pharmaceutical products on a considerable scale, for the use of their patients. To meet these new demands pharmaceutical education in Great Britain has been

and is still being remodelled, and if any justification is needed for the changes the Pharmaceutical Society is making in this direction, it will be found in the new "British Pharmacopœia", to be published next month. The advance notices of this work, which have appeared in the technical press, indicate that it will make greatly increased demands on the knowledge and skill of the pharmacist, even where he is only concerned with the care and distribution of the vast number of products used in modern medicine.

British Pharmaceutical Conference

IN these circumstances it was peculiarly fitting that the chairmanship of the annual meeting of the British Pharmaceutical Conference at Aberdeen should have fallen this year to Mr. Herbert Skinner, the veteran pharmacist of the Great Northern Hospital and a former president of the Pharmaceutical Society of Great Britain. In his opening address, Mr. Skinner deplored the tendency, which exists even among medical men, to regard the hospital pharmacist as merely a dispenser of medicines, and out of his own rich experience drew an interesting picture of the duties and responsibilities attached to such a position, in the course of which he insisted on the necessity of maintaining a laboratory in every pharmacy, if the pharmacist is not to lapse into a mere distributor. The number of papers contributed to the Science Section of the Conference was twenty-nine, which is stated to be a record. It is perhaps to be expected in a year which sees the advent of a new "Pharmacopœia" that these papers should be largely concerned with methods of analysis of drugs. The importance of this kind of work is obvious, since upon it depends control of the purity and strength of drugs, but it is to be hoped that at future Conferences there will be more papers of the type contributed by Dr. Linnell and his colleagues on the synthesis of pressor substances and local anaesthetics, since these imply the development of interest in the synthesis of new drugs in Great Britain.

New Zealand Earthquake of Sept. 16

SINCE Feb. 3, 1931, the strongest earthquake in the Hawke's Bay district is that which occurred at 1.30 A.M. on Sept. 16. In 1931 the principal damage was confined to Napier, Hastings, Waipawa, and other places lying within an elongated area about fifty miles in length and directed north-north-east. The earthquake of Sept. 16, though much less intense and unaccompanied by loss of life, was strong enough to cause slight damage, such as the partial collapse of some houses at Wairoa and Gisborne, to the north of Hawke's Bay. These places lie nearly along the continuation of the areas mainly shaken in 1931, but the centres of the two meizoseismal areas are separated by about eighty miles. The point of chief interest about the recent earthquake is the continual migration of the focus in the north-north-easterly direction from 1855 until 1931 and again until Sept. 16 last.

Henry Cavendish

WITH reference to a paragraph which appeared in these columns in the issue of *NATURE* for Aug. 6 (p. 198),