

lent book on morbid anatomy, of which the second edition appeared only last year.

Dr. Donaldson had wide interests outside his department. He was a Scot with all the keenness for knowledge which is so characteristic of his countrymen. He loved his native land, and he had a wide knowledge of its customs, its songs and its language. His wanderings in the Highlands and Islands inspired him to learn Gaelic. He was a man of deep religious convictions, and his home life was an inspiration to many. Those of us who knew him regarded him as a great pathologist and teacher, we welcomed him as a colleague, but we loved him as a man, and, as one of his greatest friends has said of him, "Allied to a keen analytical intellect was a heart of the warmest emotions". To his wife and his two daughters we tender our heartfelt sympathy.

J. M. BEATTIE.

DR. MALCOLM E. MACGREGOR

It is with regret that we have to record the death at the early age of forty-three years of Dr. Malcolm Evan MacGregor, who was in charge of the Wellcome Entomological Field Laboratories at Esher, Surrey. Born in South Africa, he studied at Cambridge and later as a Carnegie fellow at Harvard, where he came under the influence of Dr. L. O. Howard, and decided to study the medical aspects of entomology. He first came into prominence during the War when he served with the R.A.M.C. in East Africa in connexion with mosquitoes and other insect carriers of disease. From East Africa he was invalided home, and on recovery was placed in charge of a War Office Research Laboratory at Sandwich to study mosquitoes in their relation to the spread of malaria

in Great Britain from returned soldiers carrying the disease.

After the War, MacGregor took charge of the Entomological Field Laboratory founded by Sir Henry Wellcome. Here he continued his studies of mosquitoes, particularly with the view of solving some of the fundamental problems underlying their mode of life, feeding, hibernation and reproduction. For a period, these researches were interrupted by a visit to Mauritius on behalf of the Colonial Office, to study the mosquito-malaria problem. A valuable report was the result, and it was shown that a second important malaria-carrying mosquito occurred in Mauritius, namely, *Anopheles funesta*, which had been overlooked both by Sir Ronald Ross and Sir Andrew Balfour during their visits to the island.

On his return to England, MacGregor resumed his mosquito studies. He showed that the diverticulum, a sac which opens into the oesophagus of the mosquito, is a kind of reservoir into which the mosquito can direct at will or by reflex action fluids unsuitable for the stomach. He studied the extraordinary effect of ultra-violet rays on the larvæ, the various reactions of waters in which they occurred, and strove to establish the fact that the larvæ of culex and anopheles mosquitoes live in waters of different but particular hydrogen ion concentration. Latterly, he had been studying a so-called autochthonous race of *Culex pipiens*, a race which is able to complete its life-cycle without any blood meal and does not hibernate.

MacGregor's death at the height of his scientific career is nothing short of a tragedy, inflicting a serious loss upon the science of medical entomology. He was the author of numerous scientific papers dealing with the subjects of his particular study, and of a book entitled "Mosquito Surveys".

News and Views

Gold in Kenya and Native Reserves

THE memorandum issued by the Colonial Office on the position in Kenya in relation to the leasing of lands in native occupation on native reserves for mining purposes cannot be regarded as satisfactory. It affords no guarantee that the more objectionable consequences of the amendment of the Ordinance will not ensue. For example, while admitting that "the matter of immediate importance is to ensure that any individual native . . . shall receive compensation and an alternative piece of ground on which he may live and work in proximity to his market", it states that the Governor "does not contemplate any difficulty in providing individual dispossessed natives with land". But when the amendment was introduced, and also when it was discussed in the House of Commons, it was stated definitely that the reason for payment of a money compensation was that land could not be provided for all the natives who, it was anticipated, would be dispossessed. Nothing is said of the terms of

tenure of the land on which the dispossessed natives will be settled, a matter of the first importance in tribal organisation, as has already been pointed out in NATURE.

THE Chief Native Commissioner himself, in introducing the amendment, stated that the natives would not lease their lands voluntarily and that their "most sacred traditions" would be violated by "removal from their own land on which they had the right to live, and setting them up on another piece, the owners of which had the right to eject them". No attempt is made to meet this difficulty. As the explanatory memorandum issued to natives had been circulated before the Chief Native Commissioner made his statement, it is therefore to be presumed that it did not assuage native feeling in this matter. Yet every anthropologist is well aware that it has been through neglect of susceptibilities of this character that our Colonial administrations have been involved in innumerable difficulties and

even, in some instances, in native risings. The small area which may be required on any given holdings, and the temporary character of the exclusion, both points which are stressed, are irrelevant. There are other points in which the memorandum of the Colonial Office falls short in facing the difficulties of the situation. These cannot be discussed within the compass of a brief note; but it is evident that further deliberation is a vital necessity.

George Edwards, F.R.S.

AN illustrated article by Mr. T. E. James in the first quarterly issue of *Science Progress* for 1933 recalls the work and interests of George Edwards, an eighteenth century naturalist (1694-1773) and Copley medallist in 1750 of the Royal Society. Edwards was made library-keeper of the Royal College of Physicians in 1733, on the recommendation of Sir Hans Sloane, its president, remaining in office at Warwick Lane for thirty-six years. During that period he devoted himself to the portrayal in colour of birds, quadrupeds and fishes (mostly new to science) from actual specimens. The Linnean Society has recently received from Major V. Seymer a set of Edwards's works, containing annotations and memoranda by a contemporary and correspondent of Edwards, namely, Henry Seymer, of Hanford, Dorset. It may be of interest to mention that the Linnean Society already possessed copies of Edwards's works, these having originally belonged to Joseph Grote, a collector of rare books on natural history and botany. At his death in 1805, his brother inherited his property, and ultimately the books, with many fine engravings, passed into the ownership of George Grote, the historian. His widow gave the greater portion of the collections to University College, London. Mrs. Grote reserved, however, the works by Edwards, but in 1877 placed them at the disposal of Sir Joseph D. Hooker, whom she designated as "the worthy and distinguished president of the Royal Society". In the end, Sir Joseph gave the books to the Linnean Society.

Arthur Woolf, 1766-1837

ONE of the most interesting chapters in the history of the steam engine is that relating to the Cornish pumping engine. Early in the eighteenth century, Newcomen engines were installed for pumping at the Cornish mines, and in 1777 these began to be superseded by the low-pressure condensing engines of Boulton and Watt, which required much less coal. While the mines gained greatly by the use of the latter, the all-embracing patent of Boulton and Watt prevented other inventors from putting their ideas into practice. The expiry of this patent in 1800 was a boon to the whole county and through the work especially of Woolf and Trevithick, the pumping engine of the nineteenth century proved as superior to the Boulton and Watt engines as the latter had been superior to the Newcomen engines. Of Trevithick's work a great deal will be said at the forthcoming centenary celebrations, while of Woolf's work a review was given in a paper entitled "A Cornish Engineer, Arthur Woolf, 1766-1837", read

to the Newcomen Society by Mr. Rhys Jenkins on January 18. The first great improvement due to Woolf and Trevithick was the use of steam pressures up to 40 lb. per sq. in., while Woolf was one of the pioneers of the compound engine. Like all their contemporaries, these engineers worked at a time when the caloric theory still held sway, and they were quite ignorant of the true theory of heat. Carnot, however, in his famous essay of 1824, referred to Trevithick and Woolf as being among the veritable creators of the steam engine, and it is as such they will be remembered.

British Science Guild Research and Development Lecture

THE Council of Management of the British Science Guild, at a meeting held on January 19 last, decided to establish an additional lecture to be known as the Research and Development Lecture. The main object of this annual lecture, which will be delivered in London in April or May, is to promote attention to the importance of research—both purely scientific and technical—and the utilisation of its results in the service of mankind. The increase of knowledge thus secured has direct relationship with industrial development, the daily needs of the community, economic principles and social problems, human welfare and progress as well as methods of thought and the trend of civilisation. Each lecturer will be asked to select from his own particular field suitable examples of contacts with any of these factors of progressive thought. In establishing the lecture, the British Science Guild associates it with the name of Sir Richard Gregory and his work as editor of *NATURE* in securing increased recognition for scientific work and scientific workers in national life and in international affairs. The first of these research and development lectures will be given in May by Sir Harold Carpenter on "Metals in Industry".

Papal Observatory in Castel Gandolfo

HIS HOLINESS POPE PIUS XI has shown himself a frequent patron of science. On the occasion of the official opening of the new academic year at the Papal Academy of Science, in the presence of the Pope, Dr. Joh. Stein, S.J., who has succeeded the late Father Hagen as director of the Papal Observatory, announced, as reported in the *Osservatore Romano* of December 19-20, that the Papal Observatory is to be moved from the Vatican to Castel Gandolfo, where it is to be rebuilt on a much larger scale. Castel Gandolfo is an old summer residence of the Popes, which has been returned to them by the Italian Government according to the terms of the Lateran Treaty and is being thoroughly restored. Joined to this historic building, a new observatory with the most modern equipment is to be constructed at the Pope's instructions, with easy access from the State apartments for his convenience during his summer visits to Castel Gandolfo. The contract for the supply of the instruments has been placed with Messrs. Carl Zeiss, Jena. The equipment includes two domes of about 8½ m. diameter, a large double astrograph with a 400 mm. refracting and a 600 mm. reflecting camera, a