

Lewis, physician in charge of the Department of Clinical Research at University College Hospital, for research work in connexion with the treatment of cardiac disease.

The following have been appointed fellows of King's College: Prof. Gilbert Cook, professor of mechanical engineering since 1921 and now head of the Department of Civil and Mechanical Engineering; Sir Halley Stewart, who is chairman of the Halley Stewart Trust, which has greatly enhanced the facilities for research in physics by placing 30 Chesterford Gardens at the disposal of the College and by the endowment of the research carried on therein; Dr. J. W. Pickering, formerly a student of the College and since 1923 honorary lecturer in physiology; Mr. C. K. Bird, a student in the Faculty of Engineering in 1904-8 and who, since the War, has achieved a distinguished position in another profession under the *nom de plume* of "Fougasse".

The following have been appointed fellows of University College, London: Prof. N. H. Baynes, professor of Byzantine history in the University; Prof. F. G. Donnan, professor of chemistry in the University; Dr. H. P. Himsforth, deputy director of the Medical Unit at University College Hospital Medical School; Dr. R. J. Ludford, honorary lecturer in cytology at University College; Dr. A. S. MacNalty, Chief Medical Officer, Ministry of Health; Mr. F. Norman, reader in German at University College and King's College; Mr. Julian Taylor, assistant surgeon, University College Hospital; Dr. F. C. Toy, deputy director of the British Cotton Industry Research Association.

APPLICATIONS, which must be received not later than April 15, are invited for the following scholarships awarded by the Institution of Electrical Engineers: Duddell Scholarship (value £150 per annum, tenable for three years), open to British subjects less than nineteen years of age on July 1, 1936, who have passed the matriculation examination of a British university. Ferranti Scholarship (value £250 per annum, tenable for two years), open to British subjects less than twenty-six years of age on July 1, 1936, who are students or graduates of the Institution and have been such for not less than two years. Swan Memorial Scholarship (value £120, for one year), open to British subjects less than twenty-seven years of age on July 1, 1936, who have completed a recognised course in electrical engineering or science of at least three years, and who desire to carry out whole-time research or post-graduate work of an electrical engineering nature. Silvanus Thompson Scholarship (value £100 per annum and tuition fees, tenable for two years), for works employees who are the sons of parents of limited means, open to British subjects less than twenty-two years of age on July 1, 1936. William Beedie Esson Scholarship (value £120 per annum, tenable for two years, renewable in approved cases for a third year), open to British subjects who are less than twenty-two years of age on July 1, 1936, have served a minimum apprenticeship (or its equivalent) of three years at an approved electrical engineering works, and desire to take up a whole-time day course in electrical engineering at an approved university or technical college. Further particulars can be obtained from the Secretary, Institution of Electrical Engineers, Savoy Place, London, W.C.2.

## Science News a Century Ago

### Steam Navigation in the Red Sea

In a paper by Lieut. Wellsted "On the West Coast of Arabia, from Ras Mohammed to Jidda", read on March 14, 1836, before the Royal Geographical Society, reference was made to the reefs which lie off the coast and extend considerable distances with navigable channels inside them. Writing at a time when steam navigation to India was frequently being discussed, Lieut. Wellsted said: "It has sometimes been debated whether, if a small steam boat were employed, the mails might not be conveyed up and down the Red Sea inside these reefs, more easily than without them; especially as their influence in destroying any wind, however strong, blowing against them was very remarkable. The passages inside the reefs were very numerous but it would be necessary to anchor each night. But both coal and other wear and tear would be saved and the route is unquestionably practicable".

### The Statistical Society

At the anniversary meeting of the Statistical Society held on March 15, 1836, Henry Hallam, the honorary treasurer, being in the chair, the report of the Council said the Society had 392 members. It was also remarked that "the early progress of a society, which has for its object, not the establishment of a particular theory or the development of any particular science but an enquiry into the various and innumerable relations existing among men and nations, must necessarily be slow—that the usefulness of such a Society cannot be estimated by the apparent amount of its labours or the number of its publications—that its fruits will become visible in an awakened spirit of research".

### Royal Asiatic Society and Indian Agriculture

At a general meeting of the Royal Asiatic Society held on March 19, 1836, the Right Hon. H. Mackenzie and Mr. J. F. Royle made the suggestion that a committee on trade and agriculture should be appointed to inquire into the capabilities of the various soils and climates of India with the view of stimulating production. Mr. Royle exhibited a collection of vegetable and mineral products from India, and in the course of his remarks said that by the application of science, especially of botany and meteorology, much might be done to increase the comforts and resources of the natives of India. That such views were not chimerical might be seen by looking at the rise and progress of the trade in indigo, opium, lac, cotton and more recently catechu, safflower, linseed and rapeseed. In proposing that the Society should investigate the production and inquire into the processes of cultivation of the East, and apply to their improvement the science of the West, he considered he was taking the only satisfactory and legitimate means of attaining the object in view—the improvement of the resources of India.

### Herschel's Supposed Discoveries in the Moon

The extraordinary hoax perpetrated by Richard Adams Locke in the newly-founded New York *Sun* regarding the discoveries said to have been made by Sir John Herschel at the Cape, to which reference was made in NATURE of January 13, 1934, p. 73, found an echo in *The Times* of March 21, 1836,

which quoting from *Galignani's Messenger* said: "The Lyons papers, and after them the *Gazette de France* and many of the departmental journals, have been relating wonderful stories of discoveries in the moon by Mr. Herschel, who is represented as giving, by means of an immense telescope he had constructed, a complete geographical description of that planet, its rivers and lakes, its mountains and vallies, its vegetation and animals, together with measurements of hills, plains, etc., the composition of the strata of the lunar soil, and many other very interesting things. We abstained from repeating these fables till we should have at least some plausible authority for their publication, and our circumspection has been justified." The account of the pretended discoveries, *The Times* added, appeared first in an American paper, and was evidently a hoax, though the French papers did not see through it. Another note appeared in *The Times* of March 29, saying that a French paper had attributed the hoax to "M. Nicolet, a Frenchman by birth, but settled in the United States".

## Societies and Academies

### LONDON

Royal Society, March 5. G. C. ULLYETT: Host selection by *Microplectron fuscipennis*, Zett. (Chalcididae, Hymenoptera). *Microplectron* was able to discriminate with ease between true and false hosts even where the latter resemble the normal host in everything except the presence of the living larva within the cocoon. The evidence seems to suggest that the acceptance of a host depends, to a large extent, upon the presence of larval movement. A new technique was developed, during these studies, which removed a number of objections present in previous methods. The selection within the host species as represented by choice between parasitised and healthy individuals and also between the latter and unsuitable hosts was investigated. A high degree of discrimination existed between healthy material and hosts containing parasite larvae which were well grown. The presence of parasite eggs, on the other hand, did not deter females from ovipositing in the host. A wholly mechanistic view of host selection is untenable; the underlying basis of behaviour is of a psychological nature. I. W. ROWLANDS and A. S. PARKES: A study of anti-thyrotropic activity. Inhibition of the effect of thyrotropic extract on the weight of the thyroid of the immature guinea-pig has been used as a test for anti-thyrotropic activity. The normal blood serum of the goat, horse, sheep, cow, and rabbit was not found to possess appreciable anti-thyrotropic activity, nor was that of a castrated ram injected with thyrotropic extract for four weeks. Anti-thyrotropic activity was induced in the blood of rabbits injected daily with thyrotropic extract over a long period. The activity began to appear after four weeks' injection and rose to a maximum at 10 weeks. 2 c.c. of serum obtained at this time completely inhibited the activity of an amount of thyrotropic extract otherwise sufficient to double the weight of the thyroid of the immature guinea-pig. A technique is described for the assay of anti-thyrotropic activity. G. A. MILLIKAN: The kinetics of muscle hæmoglobin. The rates of reaction of muscle hæmoglobin with oxygen and carbon monoxide

have been measured by means of a micro-photo-electric form of the Hartridge-Roughton streaming fluid apparatus. The approximate velocity constants for extracts of horse heart muscle were compared with those for the blood hæmoglobin from the same animal. The kinetic results indicate that muscle hæmoglobin should be available as a naturally occurring intracellular indicator of oxygen tension, with a time lag of less than 1/100 second. This provides a new tool for studying the time relations of oxygen consumption in muscle. Its oxygen affinity, its concentration in muscle, and its rates of reaction are all such as to fit muscle hæmoglobin for the role of an oxygen store which can tide the muscle over from one contraction to the next. No known property, however, precludes the possibility of its acting catalytically within the cell.

### DUBLIN

Royal Irish Academy, February 10. J. M. O'CONNOR: The physiological basis of the sensation of cold. (4) An analysis of the influence of temperature and of thyroid extract on the oxygen consumption of the anaesthetised rabbit. Under urethane anaesthesia and curare, the oxygen consumption is increased by thyroid extract 50 per cent at all temperatures from 22° to 39°. Within this range the influence of temperature follows the Arrhenius equation in three phases. The first, at 22°-29°, has a value for the Arrhenius constant of approximately £0,000; at 29°-32°, the constant of 16,000 approximately holds; at 35°-39°, the constant is approximately 22,000. At the transition points between the phases there is on the average a fall in oxygen consumption with rise in temperature. The additional oxygen consumed during shivering is proportional to the rate of change in oxygen consumption at the prevailing skin temperature less a threshold value. During the third phase there is no shivering. (5) The relation between basal metabolism, the regulation of temperature, and the sensation of cold. Comparison of the data referred to above with data in the literature from unanaesthetised but quiescent, that is, not shivering, rabbits, shows that the anaesthesia decreases the oxygen consumption in the first two phases but not in the third. The transition point between the third and the second phase is marked by an increase of about 90 per cent in the oxygen consumption on a slight fall of temperature. This transition point is situated close to the lower limit of the normal body temperature. The excitability of the human skin by cold stimuli corresponds to the rate of change in oxygen consumption with changing temperature.

### EDINBURGH

Royal Society, February 3. H. S. JENNINGS: Inheritance in Protozoa. An account was given of recent work in the laboratories of the Johns Hopkins University, on inheritance after conjugation of diverse stocks in the ciliate *Infusoria*. The characteristics of the descendants are for a period of time, up to thirty-six days in some cases, partly determined by the nature of the cytoplasmic body. But the conjugation nucleus gradually takes control and the later characteristics are entirely dependent on its nature. The relation of these findings to the inheritance of acquired immunity or resistance was discussed.