

and controversial subject. Kinetic effects have of recent years been used to explain the long-range elasticity of many natural substances, particularly rubber, and suggestions have from time to time been made that the same principles may lie behind the exceptional elasticity of muscle, wool fibres, and various synthetic materials. Dr. Darwin outlined the thermodynamic and statistical arguments of equipartition of energy and entropy, and used them in a critical survey of explanations of long-range elasticity. He showed, too, how these same kinetic principles led to the use of adiabatic demagnetization for attainment of very deep temperatures.

On Friday evening and Saturday morning, members of the Conference saw much of science in the textile industries at the laboratories of the Wool Industries Research Association. Alternative visits on Saturday morning to the Bradford Conditioning House and to Messrs. Prince-Smith and Stells, Ltd., Keighley, enabled members to appreciate the extent of testing of textile materials, and the ingenuity that has been used in design of textile machinery.

An exhibition of apparatus, instruments and books cognate to the subject of the conference was held in

the physics laboratories of the University. Twenty-six firms and research organizations, including the National Physical Laboratory, had stands at the Exhibition. A special section devoted to popular applications of physics calculated to demonstrate its varied application to everyday matters, especially in the manufacture and use of textiles, aroused much interest. Representative instrument makers contributed exhibits which served to show how many and varied are the instruments available to help the textile manufacturer overcome many of the difficulties inherent in producing a uniform product from variable raw materials. The exhibition was of inestimable value in suggesting to textile manufacturers the large variety of problems that physics may tackle.

The Institute of Physics assumed a difficult task in choosing "Physics in the Textile Industries" as the subject for its third conference. Physics is becoming better recognized by textile manufacturers, but its progress in the industry has proved difficult and slow. The success of the conference and the attention it has attracted should advance the application of physics in one of the largest industries of Great Britain, and in turn help it to meet ever-increasing competition from abroad. A. B. D. CASSIE.

Forest Administration in Malaya

THE Forestry Department of the Straits Settlements and the Federated Malay States was organized in 1901 and the Malayan Forest Service, which includes all senior officers serving in Malaya, was created in 1926. Afterwards, the protected States of Johore (1920), Kedah (1923), Kelantan (1933), Brunei (1933) and Trengganu (1936) set up forestry departments of their own, to the charge of which officers of the Malayan Forest Service were appointed. A Research Branch was commenced in 1918, and has greatly developed and undertaken important work, its sections now consisting of botany, wood anatomy, silviculture, chemistry, entomology, forest economy and timber testing. In connexion with the Research Branch, a vernacular school is maintained for the training of the subordinate staff. The Research Branch and School are now much on the same lines as the classic example at Dehra Dun, India.

Decentralization took place in 1935, and the Malayan forest organization is now defined as a group of ten forest departments held together by a common and interchangeable staff of trained officers "with a central coordinating body (including the director of forestry), with executive control in some territories and advisory duties in others, that always exerts some influence towards co-operation and a broadly common forest policy". So long as the central co-ordinating body is listened to, progress in the future should be as good and better than the past. But decentralization is a dangerous thing in forestry—as can be seen in many parts of the forestry world in the British Empire. The required area of forests to be reserved in the interest of the individual country as a whole, stock mapping in forests under exploitation or shortly to be exploited, and, that safeguard of the forests, the working plan—these three essentials to a correct administration of a country are in one or more cases, and often in all three, lagging seriously behind what is needed in many parts of the Empire.

When this is the position—and in how much of our Empire outside India is this the case—decentralization and the withdrawal or even lightening of the control of a central authority responsible for a large region of country is seriously to be deprecated.

That this latter contention merits attention is shown by the statement contained in the "Annual Report on Forest Administration in Malaya for 1937" (F.M.S. Govt. Press, Kuala Lumpur, 1938). The Director writes, "Some uneasiness has however been caused by sudden and unexpected demands for the release of extensive areas that have always been regarded as permanent reserves. Thus, in Tahang the Tekai reserve of 83,000 acres had to be relinquished for inclusion in the King George V National Park, in this way preventing the exploitation of some particularly good *merbau* forest, conveniently situated near the railway. In Perak practically the whole of Pasir Panjang Ulu reserve of 19,000 acres was earmarked for a *padi* irrigation scheme, innumerable applications were received for permits to prospect for minerals and a strong bid was made by Sakai to settle in an old-established reserve that is by no means too large to meet the needs of the surrounding population and in which regeneration operations have been carried out for years at considerable expense to Government. This department is far from being unsympathetic to the claims of these various communities and realizes that adjustments will be necessary, but the long-range policy that is inseparable from conservative forestry makes it imperative that conflicting interests should be planned far enough in advance to enable systematic forest operations to be undertaken with some prospect of fruition".

Sympathy may be expressed with a department placed in such a situation, but the forestry authorities do not appear to understand that it is one of the objects of and duties of the working plan to safeguard forests from calamities of this type and others.

On the subject of working plans, the Director writes, after alluding to plans for the mangrove forests of Perak and Selangor, "Whereas the plans for the mangrove follow the usual pattern, those for inland forests are much less detailed and will continue so until greater stability is reached in the consuming industries and the threat of revocation is removed. Reference has been made (above) to the existing uncertainty with regard to the permanence of tenure, without which no serious planning is possible".

Why? This was not the policy followed in India; nor is it in Europe. In the centre of France a fine beech forest exists. There is also an industry working out kaolin within the forest. A working plan has been in force for the area for more than eighty years; and yet the manager of the kaolin industry can come to the forest officer any day and say he wants to commence to excavate at such and such spot, thereby involving one or more compartments, which necessitates some adjustments in the working plan and possibly of the yield for some years to come. Once a working plan has been sanctioned for an area of forest by the central authority the latter is not so ready to go back on a considered policy. Areas now threatened in Malaya might never have come into this unenviable position had they been placed under a working plan.

This report is of considerable interest and contains abridged reports of the activities of the Forest Departments of Johore, Kedah, Kelantan, Trengganu and Brunei.

University Events

CAMBRIDGE.—At a special congregation to be held on June 6, it is proposed to confer the honorary degree of Sc.D. on Prof. W. N. Haworth, Mason professor of chemistry in the University of Birmingham, and on Sir Henry Dale of Trinity College, director of the National Institute for Medical Research, London.

At King's College, Dr. A. E. Alexander has been elected to a fellowship. Dr. Alexander, who was educated at Brockenhurst County School and the University of Reading, obtained a first class in Part II (Chemistry) of the Natural Sciences Tripos in 1935 and was awarded the Gordon Wigan Prize in 1937. He was elected to a Ramsay Memorial fellowship in 1937 and now holds a Rockefeller travelling fellowship.

LONDON.—Dr. G. A. D. Haslewood has been appointed to the University readership in biochemistry tenable at Guy's Hospital Medical School. Since 1935 he has been assistant in pathological chemistry at the British Postgraduate Medical School.

Mr. P. A. Sheppard has been appointed to the University readership in meteorology tenable at the Imperial College of Science and Technology. Since 1934 he has been technical officer in the Department of Meteorology at the Chemical Defence Experimental Station, Porton.

It has been resolved to institute a certificate of proficiency in natural history, and regulations have now been adopted for it.

SHEFFIELD.—Dr. J. Monteath Robertson has been appointed lecturer in physical chemistry, in succession to Dr. S. Glasstone, who has resigned.

Science News a Century Ago

Photography in Germany

WRITING from Paris on April 2, 1839, a foreign correspondent of the *Athenæum* said: "The announcement of Daguerre's discovery has turned the brains of half the world: you sober English have certainly not escaped the infection; and the speculating Germans, as you have noticed, are hard at it. I learn, by letters just received from Munich, that Profs. Steinhel and Robel are astonishing the natives with their Photogenic pictures. It is said that they have discovered the process of the Daguerre, but it seems to me more than probable that their process rather resembles that of Mr. Talbot; and that by their invention pictures can be obtained not only with the aid of the camera obscura but by the direct agency of light so that they take, in an instant, copies of pictures traced upon blackened glass. . . . Daguerre's pictures are, it is known, traced upon copper (?) but Messrs. Steinhel and Robel imprint theirs upon paper."

Application of Döbereiner's Discovery

IN a letter to the *Mechanics' Magazine*, sent from Sandwich on April 5, 1839, W. H. Weekes referred to "a suggestion of my own made many years since, with a view to effect the simultaneous lighting of street lamps throughout a town or district". Weekes had been accustomed, by means of a private press, to keep memoranda in printed form, and one of these dated January 24, 1826, he sent to the editor of the journal. In this memorandum he had written: "One of the most interesting facts as connected with the recent advancement of modern chemical science, perhaps, is the important discovery of that intelligent continental philosopher Döbereiner, who has ascertained the peculiar property of *spongy platinum* to become ignited by exposure to the action of a stream of hydrogen gas, and the consequent inflammation of the gas itself, from contact with the ignited metal; thus furnishing a most ingenious, elegant and useful mode of obtaining instantaneous light. . . . Now, will similar results obtain from the action of *spongy platinum* on the gaseous compound carburetted hydrogen or coal gas? Of this I think there can be little doubt, and if proved the spongy platinum may unquestionably be rendered applicable to the purpose of lighting street lamps spontaneously."

Johann Wolfgang Döbereiner, the German chemist who discovered the property of spongy platinum referred to, was born December 15, 1780, and died March 24, 1849.

Seasons and Infantile Mortality

THE issue of the *British and Foreign Medical Review* of April 1839 contains the following information: "The season of the year evidently exercises great influence on the rate of the mortality of children. According to Trevisan, of 100 children born in Italy in the winter 66 die in the first month, and only 19 survive the first year; on the other hand, of 100 children born in summer so many as 83 survive the first year, of 100 born in the spring 48, of 100 born in the autumn 58. In Belgium the rate of mortality in the first month of children born in January, compared with that of children born in July is 33·21 to 17·19."