

preference to stem where this was physically possible. Furthermore, they invariably chose the leaf or stem material containing most nitrogen. In another experiment, a direct relationship was found between the amount of pasture available and the time spent by sheep in grazing. In spite of a progressive increase in the time spent, the sheep were unable to maintain their live-weights as grazing became more time-consuming. The animals grazing longest suffered the least loss of live-weight. This suggests that other sheep stopped eating because of fatigue before their appetites were fully satisfied. Such differences between individual sheep in their capacity to graze for longer periods on poorer pastures could have practical implications, particularly if the character should prove to be heritable.

Geological and Geographical Research in the U.S.S.R.

A REVIEW of geochronology research in the Soviet Union is given by D. I. Shcherbakov (*Priroda*, 2, 9; 1961). The scale appended gives, for example (in million years), Upper Cretaceous 100, Carboniferous 320, Cambrian 570. The oldest Pre-Cambrian 3,400–3,500. A. I. Perel'man (*Priroda*, 1, 41; 1961) is continuing his discussion of geochemical landscapes by applying geochemical studies to the previous periods of the Earth's history, thus contributing to a new science, named by A. A. Saukov "historical geochemistry". R. V. Teis (*Priroda*, 4, 31; 1961) provides a short summary of the work on oxygen isotopes in the Soviet Union, especially of the isotope palaeothermometry as applied to the calculation of the temperature of ancient seas as determined by the date derived from sedimentary rocks of the Russian platform and those of the Crimea. Isotope methods were also used to determine the geochemical history of atmospheric oxygen especially during the process of photosynthesis. The Lake Balkhash, in spite of being situated in a semi-desert zone and prone to evaporation, has a very low salinity, namely, 2.84 gm./l. According to M. N. Tarasov (*Priroda*, 2, 72; 1961) this may be due to the infiltration or seepage of the Lake waters into the fringing rocks surrounding the numerous bays of this Lake. Other suggestions and hypotheses are also discussed.

Angara-Yenisei Hydroelectric Schemes

A SHORT review of these schemes has recently been prepared by P. M. Dmitrievsky (*Priroda*, 1, 25; 1961). Both the Rivers Angara and Yenisei will have 'cascades' of six dams, providing power for hydroelectric stations. The largest of these, situated at Bratsk, on the River Angara, was begun in 1955. Its head is more than 100 m.; power, 4.5 million kW.; and annual output, 21.7 milliards kW./hr. The annual output of the Angara set will be 70 milliards kW./hr., and of the Yenisei scheme 120 milliards kW./hr. Completion of some units is expected by 1965. The area served by these two schemes is rich in coal, iron ore, aluminium ore and salt.

High-Temperature Induction Furnaces

THE design of laboratory high-temperature induction furnaces has been examined in both theoretical and practical aspects by P. H. Dundas, of the Carbon Research Laboratory, Chemical Engineering Department, Imperial College of Science and Technology, London. Dundas has attempted to simplify an otherwise complex electrical engineering analysis, so that the research physicist can avoid wasting much

time and energy over trial and error methods when faced with problems of high temperature that can be satisfied only by the use of induction heating. An article in *Research Applied in Industry*, published by Butterworths, 88 Kingsway, London, W.C.2, provides a new approach to the use of induction heating as an important high-temperature tool (14, No. 7; July 1961).

Histoplasmosis

THE discovery of benign histoplasmosis in 1945 spurred interest in a disease that had been considered rare and invariably fatal. During the ensuing years, a great deal of basic information has been gathered on the epidemiology of histoplasmosis. Most of this knowledge has been gained through the development and use of immunological tests, case history studies, and the screening of soil samples and animals for the presence of *Histoplasma capsulatum*. In a review of existing information (*Mycopathologia et Mycologia Applicata*, 14; August 1961), Dr. Libero Ajello, of the Communicable Disease Centre, Mycology Unit, Public Health Service, U.S. Department of Health, Education and Welfare, describes how the culture of internal organs of domestic and wild animals has revealed the presence of *H. capsulatum* in different parts of North America, Central America, South America and Africa. It shows also that this fungus apparently cannot multiply in internal organs of birds, the body temperature of which is higher than 40° C. Epidemiological investigations almost invariably revealed that *H. capsulatum* was present in the soil of the region where epidemics occurred. Sometimes the soil containing *H. capsulatum* was transferred by human activities from infected localities through non-infected air, lessening the possibility that the spores of the fungus have been transported by air from the central endemic areas (Ohio-Mississippi-Missouri river valley) to localities far removed from these regions. In the same journal, Henry C. Sweany considers the diagnosis of histoplasmosis and shows that the disease has such a clinical variability that it may simulate not only tuberculosis, sarcoidosis, lymphomas and certain severe anaemias, but it may also occur together with any one of them, which makes the diagnosis all the more difficult. In 25 per cent of the cases studied, it was associated with tuberculosis.

The Australian Mathematical Society

THE Australian Mathematical Society met in Brisbane, at the University of Queensland, during May 24–26, and held a joint session with the Australian and New Zealand Association for the Advancement of Science on May 29, 1961. Sixty members attended. The new Council elected was as follows: *President*, Prof. T. G. Room; *Vice-Presidents*, Prof. A. L. Blakers and Prof. L. S. Goddard; *Publications Secretary*, Dr. G. E. Wall; *Treasurer*, Prof. C. S. Davis; *General Secretary*, Prof. H. O. Lancaster. A successful summer research institute was held at the Australian National University, Canberra, during January and February 1961, with Prof. T. M. Cherry as director. A second institute meeting will be held in Canberra, in January 1962, with Prof. E. S. Barnes as director.

Mathematical Reprints

THE reprints of the Chelsea Publishing Co., 50 East Fordham Road, New York, 58, have made available a large number of scarce or unobtainable mathe-