

by a group of Canadian scholars who have formed a "Canadian Pioneer Problems Committee," working under the auspices of the American Geographical Society and supported on the one hand by the Social Science Research Council and on the other by individuals, institutions, and bureaus of government in Canada. Two field seasons have been occupied in gathering information first hand according to a well-

defined but flexible scheme of investigation set up in the beginning. The successive annual reports of the committee have demonstrated the wisdom of the method, and within a year or two there will appear a number of volumes of results that can not fail to be of importance to Canada as a nation as well as to other countries having large areas of marginal lands which are or will soon be in process of development.

## SCIENTIFIC EVENTS

### THE ZOOLOGICAL SOCIETY OF LONDON

ACCORDING to the annual report of the Zoological Society of London, as reported in the *London Times*, the assets of the society amount to £177,708, a decrease of £493 on the corresponding figures for last year, but these do not include the capital of the De Arroyave Trust Fund, the chief item in which is a holding in consolidated 2½ per cent. stock of £123,889. The total income of the year was £141,525, an increase of over £7,000 on that of last year. The income from the Regent's Park Gardens was much less than in 1930, chiefly on account of the bad weather during the greater part of the season, but this was more than made up by the income from the new park at Whipsnade, opened for the first time last Whitsuntide. The total number of fellows decreased from 8,430 to 8,307, as the new fellows elected did not balance the number of deaths and resignations.

The gardens are again to be kept open until 11 P. M. on Thursday evenings from June 2 to August 25 inclusive, and the J. H. Squire Celeste Octet is to play during dinner. On Saturdays and Sundays from May 28 to August 28, inclusive, the band of the 65th (8th London) Field Brigade, Royal Artillery, will play in the afternoons. It is regarded as doubtful if the Thursday evening late openings actually cover the cost of the extra attendance and lighting, but they give an opportunity to many persons engaged during the day to see the collection.

Notwithstanding the bad weather, there were only 27 deaths among the animals from tuberculosis, the lowest since 1925, and of these only one was a monkey which had been 11 months in the gardens and had probably been affected before its arrival. Among the mammals bred and reared in the gardens were three kangaroos and wallabies, two opossums, three porcupines, three musquash, four agoutis, four coypus, a yak, bison, Mongolian wild horses, Grévy's zebra, sea-lion, lion, eland, black-buck, water-buck, nyloghaie and lemur, four ibex, 10 wolves, four Barbary wild sheep, and six thar. Among the birds bred and reared the most notable successes were four Cape penguins, one macaw, one cockatiel, 20 parakeets belonging to several species, and 138 budgerigars, including green,

yellow and blue varieties. At Whipsnade one wombat, one llama, one yak, one red deer, one fallow deer, two nyloghaie, two black-buck, two white red deer, two Chartley and five Highland cattle, and six wolves were bred and reared.

### RESEARCH COMMITTEES OF THE SECTION OF HYDROLOGY OF THE AMERICAN GEOPHYSICAL UNION

THE Section of Hydrology of the American Geophysical Union has announced the organization of nine permanent research committees. This section is concerned with the study of the waters of the earth from the time they are precipitated upon the surface as rain or snow until they are returned to the atmosphere or are discharged into the ocean. Each committee is to make an annual survey of work in progress in the field of hydrology which it covers and to maintain contact with the workers in its field. Following is a list of the committees and chairmen, together with brief statements of the field to be covered by each committee:

*Committee on Snow:* J. E. Church, meteorologist, Nevada Agricultural Experiment Station, and adviser, Nevada Cooperative Snow Surveys, University of Nevada, Reno. The quantity and distribution of the snowfall, the methods of making snow surveys, the melting and evaporation of the snow and the relation of the snow to run-off and absorption.

*Committee on Glaciers:* F. E. Matthes, geologist, Geologic Branch, U. S. Geological Survey, Washington, D. C. The hydrology of existing glaciers, as distinguished from the work and products of ancient glaciers. The committee is to obtain and interpret systematic records of the advance and retreat of glaciers in the United States, including Alaska; also, related records of the movement of the ice, weather conditions and the discharge of water from the glaciers.

*Committee on Evaporation:* G. F. McEwen, oceanographer, Scripps Institution of Oceanography, University of California, La Jolla. The rate of evaporation from free-water surfaces, the effects of weather and other conditions that influence evaporation, and the methods of determining evaporation; also, the fluctuations of lakes and their causes.

*Committee on Absorption and Transpiration:* C. H.