

as no fragments of meteorite itself were ever found. It is suggested by the present authors that the meteorite may have disintegrated and the fragments fallen in the front of the partial tree-fall. On the other hand, B. I. Vronsky (*Priroda*, 3, 88; 1960) suggests, first, that the meteorite in question may have been a stone, and not an iron meteorite; and secondly, that the numerous water-logged hollows, so abundant in this area, may indeed represent impact craters of the meteorite fragments now deeply buried in the bog. Finally, E. L. Krynov, a foremost authority on meteorites (*Priroda*, 5, 57; 1960), does not agree with either view and is inclined to accept the hypothesis originally advanced many years ago by I. S. Astapovich and F. L. Whipple (*Priroda*, 9, 70; 1935), who have suggested that the Tunguska tree-fall was not due to the impact of a meteorite, but of a small comet containing a core of ice which had embedded in it meteoric matter.

Dispersion of Small Bodies

DR. D. O. WOLFENBARGER has prepared a scholarly review of the dispersion in space of small bodies (*Lloydia*, 22, No. 1, 1; 1959). In this paper he covers work published since the appearance of his earlier account, published in 1946. His aim has been to describe and analyse quantitative and objective results published on this topic. This is done with the help of 194 graphs which accompany the examples discussed. The types of unit dealt with are inorganic salts, viruses, fungi, pollen, molluscs, water-fleas, and insects, including grasshoppers, mosquitoes, flies and bees. The agents of dispersal include air currents, water, other organisms, growth, and automotility. The distances involved extend from less than 1 mm. from the source, reached by basidiospores of *Puccinia malvacearum*, the principal agent being gravity, up to the 140 miles covered by some tsetse flies by means of hitch-hiking on trains. In a discussion of the results, Dr. Wolfenbarger considers the achievements of dispersion in the biology of organisms, the details of sampling and measuring, and the endogenous and exogenous factors associated with varying distances of dispersion. There is much in this review that is relevant to plant, animal and human epidemiology, allergy, population genetics, plant breeding, and plant and animal ecology.

Search for Oil in Britain

IN 1937, G. M. Lees and P. T. Cox described a geological basis of oil prospecting in England as then envisaged. This was followed by a report on exploratory work by G. M. Lees and A. H. Taitt (1946), wherein particulars were given not only of the discovery of four new oilfields, but also of new geological information of high academic and economic significance. The search still goes on. A recent Memoir (1960) of the Geological Society, by N. L. Falcon and P. E. Kent, presents geological results of petroleum exploration in Britain by the British Petroleum Company during the years 1945-57 (Memoir No. 2: Pp. 56+5 plates. (London: Geological Society of London and H. K. Lewis and Co., Ltd., 1960.) 25s. net). Altogether eleven oil-producing areas have been established, with a cumulative production total, to the end of 1959, of more than 1.25 million tons. The latest fields are Plungar (Leicestershire) and Egman-ton (Nottinghamshire); prospects are at Bothamsall, an extension of Eakring (discovered in 1939), and at Corringham, near Gainsborough. Other possibilities

have been and are being pursued in which the well-tried techniques of reflexion seismic exploration and electric logging have been successfully exploited. It is noteworthy that gamma-ray logging proved to be of considerable help in sub-surface correlation of marine-band markers in the East-Midlands projects. Economically important also is that the pattern of oil prospecting as originally delineated has been extended to include search for natural gas, jointly on behalf of the Gas Council and Imperial Chemical Industries, but with what measure of commercial success has yet to be determined.

Freeze-drying of Plant Viruses

WHEREAS freeze-drying has been widely and successfully used for the preservation of bacteria, animal viruses and bacteriophages, there appear to have been relatively few attempts to conserve viruses by this means. It has been ascertained that some plant viruses retain their infectivity for long periods in frozen tissue or sap, or in plant tissue frozen and slowly dried over calcium chloride. Such procedures, however, are not suitable for preserving some labile and certain other viruses. M. Hollings and R. A. Lelliot (*Plant Path.*, 9, No. 2, 63; 1960) have now described effective methods for the freeze-drying of a considerable number of viruses. The preservation of sap preparations of forty-six isolates of thirty-nine plant viruses by the rapid sublimation of water from frozen suspensions and subsequent storage under vacuum (freeze-drying) was investigated. Infective virus was recovered from preparations of all strains, except one of potato virus A, after freeze-drying and after storage during periods varying from four to eleven months. It appeared that the spherically shaped viruses studied lost little or no infectivity during freeze-drying, but that several of the rod-shaped viruses lost much of their infectivity. There was no evidence of further serious loss of infectivity in forty-five of the preparations during the storage period.

Lalor Grants and Awards for 1961

THE Lalor Foundation has announced the programme of awards for 1961 which it is offering for support of research on the fundamental biochemical and physiological mechanisms concerned with fertility and the early stages of reproduction in various forms of life. The objectives are to further the knowledge and understanding of the basic phenomena involved and to extend and develop the possibilities for effective regulation and control. The awards may range up to 8,000 dollars a year, depending on the scope and duration of the project approved. Preference will be given to younger members of university and college faculty and staff, with an upper age limit of 41 years. The work may be carried on at the applicant's own institution or elsewhere. The Foundation will also grant post-doctorate summer or short-term research awards at the Marine Biological Laboratory at Woods Hole, Mass., or elsewhere for appropriate projects in the fields specified. For these awards, the stipends will normally not exceed 1,000 dollars for a single man or a woman, 1,200 dollars for a married man working at his home institution, and 1,350 dollars for a married man with principal programme at another institution. A number of these awards may be granted to nationals other than citizens of the United States, usually under the condition that the award holder's