

of the zonal soils, but they can usually be regarded as fossil and as accidental constituents that are not relevant to classification at the categorical level of the 'great soil groups'.

#### The Linnean Tradition in Sweden

THAT the Linnean tradition of going far afield to collect and bring back plants, thereby extending floristic and taxonomic knowledge, is still very much alive in Sweden to-day is borne out by papers contributed to a recent number of the *Arkiv för Botanik* (1, Pt. 6; 1952). Prof. Von C. Skottsberg, of the Botanical Section of the Naturhistorischen Reichsmuseums, Stockholm, has contributed a further article on the flora of San Ambrosio, off the coast of Chile ("Weitere Beiträge zur Flora der Insel San Ambrosio (Islas Desventuradas, Chile)"), while K. H. Reichinger has written both on "Plantæ novæ syriacæ" and on the flora of Turkey from collections lodged in the Stockholm herbarium.

#### Trace-metal Dating of Archæological Sites

NEW chemical and physical methods of determining the age of ancient sites are continually being suggested—the fluorine method, carbon-14, and the determination of phosphatic content of the soil are some examples. In a recent number of *Science* (116; July 4, 1952), V. P. Sokoloff and G. F. Carter contribute an article entitled "Time and Trace Metals in Archæological Sites". The metals in question are copper and zinc. These two metals, as well as others, occur in soils in several different forms, both mineral and organic, and they can be determined by analysis. Actually the authors are mainly concerned with the study of various middens outside the suitability and the time-range of the carbon-14 method. It is not suggested that this is a very sensitive form of test, but it could differentiate middens a thousand years old from those of, say, Pleistocene date.

#### Velocity Distribution of Sporadic Meteors

A PAPER by Mary Almond, J. G. Davies and A. C. B. Lovell (*Mon. Not. Roy. Astro. Soc.*, 111, 585; 1951) gave an account of the application of the radio-echo technique to the study of the velocity distribution of sporadic meteors of magnitudes 4.5–6, and a second paper (*ibid.*, 112, 21; 1952) gives further results attained from the application to fainter sporadic meteors of magnitudes 6–7.5. The apparatus was basically similar to that previously used, but additional sensitivity was acquired by increase in transmitter power and aerial gain. Two series of experiments were carried out: apex experiments during the autumn mornings of 1950; and antapex experiments during the spring evenings of 1951. Details are given of the experiments carried out during November 8–December 14, 1950, between the hours of about 5h. and 7h. in the autumn mornings. On the assumption that the meteors were moving in random directions and at the parabolic velocity limit, J. A. Clegg worked out the velocity distribution to be expected, and it was found that there was no sign of a hyperbolic velocity component. The antapex experiments were carried out between approximately 17h. and 19h. during March 29–May 18, 1951, and the velocities measured. From the velocity distribution the same conclusion is arrived at as before, namely, that there is no sign of any hyperbolic velocity component. A very interesting feature of the curves is that the theoretical curves showing the distribution on the assumption of uniformly

distributed parabolic meteors indicate much higher velocities than those derived by experiment. Not only do the results all show the absence of hyperbolic velocities, but they also indicate that a large proportion of sporadic meteors must have relatively short-period orbits. Several other matters are discussed, such as the range of magnitudes and estimates of magnitude from electron densities in the trails, and also by comparison of visual and radio echo-rates. Now that the sporadic meteors can be accepted as members of the solar system, many moving in small orbits, the whole problem of their origin may have to be considered afresh. How did these short-period particles originate, and when were they formed? It seems doubtful whether any theory at present adequately answers these questions.

#### Conference on Malnutrition in Tropical Africa

A CONFERENCE of nutrition experts opened on November 19, at Fajara in the Gambia, British West Africa, to examine problems of malnutrition in African mothers, infants and young children. This is essentially a conference on kwashiorkor—one of many terms used to describe certain manifestations of malnutrition in young children in tropical and sub-tropical areas, especially in Africa. Kwashiorkor is now regarded as being associated with a deficiency of protein in the diet. The conference is being held under the auspices of the Commission for Technical Co-operation in Africa South of the Sahara. Delegates from the Governments of Belgium, France, Portugal, Southern Rhodesia, the Union of South Africa, the United Kingdom and African territories are to attend. There will also be observers from the Food and Agriculture Organization, the World Health Organization, the U.N. International Children's Emergency Fund and the International Children's Centre. The United Kingdom delegation includes Profs. B. S. Platt and A. A. Monierieff from London and experts from the West, East and Central African territories.

#### Survey of Applied Mathematics in the United States

THE United States National Academy of Sciences, under contract by the National Science Foundation, is to make a broad survey of research and training in applied mathematics in the United States. The survey, to be carried out with the co-operation of the Office of Naval Research, the Office of Ordnance Research of the Army, and the Office of Scientific Research of the Air Force, is expected to take one year, and Dr. F. Joachim Weyl, head of the Mathematics Branch, Office of Naval Research, has been loaned to carry out the work with the advice of a committee selected by the Division of Mathematics of the National Research Council. The survey group will seek to determine the nature and extent of research in applied mathematics being carried out by government organizations, universities and industry, and will also report on the training and teaching in the subject, with an indication of the areas which are not receiving adequate support. As part of the study, a conference on training and research needs in applied mathematics will be held during the spring of 1953 to consider the findings of the survey and to examine the future of research and teaching in this field. In general, this survey will be on the lines of that on physiology being carried out by the American Physiological Society, also under contract by the National Science Foundation (see *Nature*, August 16, p. 268).