the contact between investigator and investigated, the more readily the information is obtained and the more complete it appears to be.

The Panel proposed that four kinds of dietary surveys should be made—"of (1) the family, (2) individuals, (3) the consumption of individual foods, and (4) institutions and works canteens". Two methods of family studies are described in detail: (*a*) a questionnaire method, and (*b*) the log-book method. The first of these is largely a test of the housewife's memory (in addition to her willingness to tell); the second requires her to keep detailed records, with the investigator checking every second day following the initial recording of stores. For individual intake records, a measurement-at-table technique is described.

These methods were used successfully in Britain even during the War, but conditions in newly liberated territories must surely have been very different. The Panel goes on to state that "it is important that sufficient clerical staff is available to keep the analyses of the data well in hand", it suggests that "each household might be surveyed for at least a fortnight and whenever practicable for four weeks", and it talks of a "team of thirty to forty investigators together with four supervisors", and the establishment of a central organisation for Hollerith work analysing the survey data.

The report would, in my opinion, have gained in value if it had included a description of methods which could be applied when such facilities are not available and under conditions where form-filling co-operation cannot be expected (after all, it is not only the illiterate who find difficulty in filling in forms accurately). However, it may be that the Panel—apparently thinking in terms of Europe only—was able satisfactorily to forecast the conditions and facilities which were actually found. It would now be useful and interesting to know.

The report on "Nutrient Values of European Foodstuffs During the War", prepared by the Combined Working Party on European Food Supplies, is included as an appendix. M. W. GRANT

GLACIER OSCILLATIONS IN THE NORTHERN AND SOUTHERN HEMISPHERES

THE Report of the Committee on Glaciers for 1945 (*Trans. Amer. Geophys. Union*, 27, 219; 1946) contains much valuable data on glacier variations in the United States and Peru, together with an outline of the general pattern of glacier histories in the two hemispheres.

Prior to 1850, European glaciers had been oscillating forward and backward at frequent intervals, the major advances being the greatest since the end of the Pleistocene. Since 1850, however, recession has been dominant, although interrupted by a moderate re-advance around 1890 and by local smaller advances between 1910 and the early 1930's. The recession has proceeded by successive stages of increasing rapidity, with marked acceleration during the last decade. In the western United States recession has also been dominant since the 1850's, and although some glaciers made feeble and brief re-advances during the 1920's and early 1930's, on the whole the rate of recession has accelerated up to the present time.

The glaciers of New Zealand lost enormously in length and thickness between the 1860's, when the first observations were made, and the early 1890's, when they regained much of their volume. Small temporary re-advances have been noted during about 1906–34, but since then the glaciers have again been wasting away, at an increasing rate which has recently been quite abnormal. The Peruvian glaciers have shared an almost parallel history since the 1860's, again including a phase of accelerating shrinkage since 1932.

Thus in both hemispheres there has been dominant shrinkage during the last eighty or ninety years, with rather close synchronization of some of the variations and especially of the remarkable accelerating recession of recent years.

Among the inferences drawn from the evidence passed in review by the Committee on Glaciers, the following are of far-reaching significance:

(*a*) The causative climatic variations have affected both hemispheres simultaneously and not in alternation.

(*b*) It is therefore reasonable to suppose that the more pronounced post-Pleistocene variations and the major Pleistocene variations were also synchronous in the two hemispheres.

(*c*) Whatever the causes of these climatic variations may be, their world synchronism rules out all 'astronomical theories', such as those of Croll, Spitaler and Milankovitch, that require refrigeration of one hemisphere and simultaneous warming of the other. The mathematical verity of these theories is not impugned, but it is evident that the causes of climatic change which they postulate are subordinate to other more potent causes, the nature of which is still undetermined.

(*d*) Calculations of glacio-eustatic changes of sea-level that are based on the assumption of synchronous glaciation and synchronous deglaciation in both hemispheres are essentially sound in principle.

FORTHCOMING EVENTS

Tuesday, July 23

ROYAL ANTHROPOLOGICAL INSTITUTE (joint meeting with the SOCIETY OF ANTIQUARIES OF LONDON and the UNIVERSITY OF LONDON INSTITUTE OF ARCHÆOLOGY, at University College, Gower Street, London, W.C.1), at 5.30 p.m.—Dr. L. S. B. Leakey: "The Acheulean Site of Olorgasailie, Kenya".

Thursday, July 25

BRITISH ASSOCIATION (joint meeting of Section L (Education) and the Division for the Social and International Relations of Science, at the Royal Institute of British Architects, 66 Portland Place, London, W.1), at 10.30 a.m.—Conference on "UNESCO and Universities".

GEOLOGICAL SOCIETY OF LONDON (at Burlington House, Piccadilly, London, W.1), at 5 p.m.—Prof. Emmanuel de Margerie: "Three Stages in the Evolution of Alpine Geology—Saussure, Studer, Heim" (Second William Smith Lecture).

APPOINTMENTS VACANT

APPLICATIONS are invited for the following appointments on or before the dates mentioned:

ASSISTANT LECTURER AND DEMONSTRATOR IN BOTANY, a LECTURER IN THE ELECTRICAL ENGINEERING DEPARTMENT, a LECTURER IN THE MATHEMATICS DEPARTMENT, a SENIOR LECTURER IN PRODUCTION ENGINEERING, a LECTURER IN THE NATURAL PHILOSOPHY DEPARTMENT, and DEMONSTRATORS (2) IN THE DEPARTMENT OF PHARMACY—The Secretary, Royal Technical College, Glasgow (July 27).

LECTURER IN CHEMISTRY at the Coventry Technical College—The Director of Education, Education Offices, Coventry (July 27).

JUNIOR LECTURER IN ELECTRICAL ENGINEERING—The Clerk and Treasurer, Dundee Technical College, Bell Street, Dundee (July 27).

SENIOR LECTURERS (2) IN MATHEMATICS in the University of Melbourne—The Secretary, Universities Bureau of the British Empire, 24 Gordon Square, London, W.C.1 (July 30).

LECTURER and an ASSISTANT LECTURER IN MECHANICAL ENGINEERING—The Registrar, University College, Southampton (July 31).