National Research Council of Canada Support for Universities

Information about the National Research Council of Canada's current programme of university support for science, engineering and medicine is contained in a "Report on University Support, 1958–59" (pp. ii + 143. Ottawa: National Research Council, 1958. 50 cents), which explains the programme, shows how it is conducted, and lists the recipients of scholarships, fellowships and associateships and the direct grants in aid of research. There is also a list of travel grants. Expenditure on scholarships in 1958–59 is estimated at 490,000 dollars, of which 475,000 dollars is for science and engineering and 15,000 dollars for psychology; on fellowships in science and engineering, 360,000 dollars; in medicine, 100,000 dollars; in dentistry, 12,000 dollars; and on medical associateships, 120,000 dollars. Of the grants in aid of research, 2,350,000 dollars is for science and engineering, and 1,250,000 for medical research; 135,000 dollars is allocated for the Prairie Regional Committee, 400,000 dollars for the Atomic Energy Control Board, 136,000 dollars for associate committees, and 366,000 dollars for general research grants. Grants of 43,000 dollars to assist travel by members of university staffs and of 146,580 dollars for special activities at universities bring the total to 5,908,500 dollars, while of a further 749,500 dollars for indirect university support, including administrative costs of the support programme, estimated at 175,000 dollars, 260,000 dollars are for the publication of the *Canadian Journal of Research*.

University College, London: Report for 1957–58

The annual report of University College, University of London, for 1957–58 includes the report of the chairman of the College Committee and that of the provost. This gives a brief account of some of the research work in progress, and a full list of publications by members of the College, arranged by faculty and department, occupies 34 pages of the report. Of the 2,827 undergraduate students and 803 postgraduate students 609 and 338, respectively, were in the faculty of science, 201 and 76 in that of engineering and 190 and two in that of medical science. Of the total, 2,943 were from the United Kingdom, 352 from the the British Commonwealth of Nations overseas and 335 from other parts of the world.

Laboratory Animals Centre

The organization and administration of an animal division for research purposes was considered at a symposium arranged by the Laboratory Animals Centre of the Medical Research Council Laboratories on May 5, 1958. The papers, which have now been published (Laboratory Animals Centre: Collected Papers, Vol. 7; 1958. Pp. 107. Carshalton, 1958. 10*s*.), dealt with the economics and efficiency of an animal division, the relation of an animal division to a research division, the problems of equating supply and demand, the organization of the field laboratories at the University of Sheffield, the scientific research within a laboratory animals division, the staffing of an animals division and animal technician training.

A New Method of Particle-counting on the Electron Microscope

In making estimates of particle counts by electron microscopy it is necessary for the particles from a known volume to be uniformly distributed over the grid in order to get a random sample of the material. In practice, however, this is difficult to achieve, and Backus and Williams (*J. App. Phys.*, 21, 11; 1950; *J. Amer. Chem. Soc.*, 71, 4052; 1949), as a compromise, have counted all the particles in small droplets, the size of which was determined by the number of polystyrene latex particles known to be contained in a unit volume of the solution. This technique has recently been improved upon by Nixon and Fisher (*Brit. J. App. Phys.*, 9, 66; 1958), who used a high-pressure spray gun made of metal, and intended to work with small droplet sizes; it can be used with as little as 0·2 ml. This decreased the size of the droplet, thus making it possible to use much higher magnifications without sacrificing the ability to obtain a picture of each droplet-trace entire on one frame.

Another approach to the problem has now been made by Dr. D. Gordon Sharp, in collaboration with Ivan Sorvall, Inc., Norwalk, Connecticut, in which virus from a known volume is deposited uniformly over a known area of agar jelly by means of centrifugation. The apparatus consists essentially of a centrifuge rotor with eight numbered compartments and a stainless steel cover. It contains eight stainless steel-housed 'Perspex' cell assemblies, and in each cell is placed a 1 cm. square of 2 per cent agar jelly. 1 ml. of the virus is added to each cell and the rotor spun in the centrifuge at 20,000 r.p.m. After spinning the rotor, the cells are opened and the agar squares, which have the virus particles uniformly distributed on their surfaces, removed to dry. A film of collodion is poured over the agar surface, allowed to dry and floated off on water. The floating collodion is then picked up on an electron microscope grid, and the sample is ready for counting. The advantages of this method seem to be that it is simple to use, and, because there are eight cells, eight different samples can be dealt with simultaneously.

Micro-Spot Cathode-Ray Tube

The new Ferranti 5/71 *CM* micro-spot cathode-ray tube has a line-resolving power comparable with that of a well-designed lens and marks an important advance in electron optics. The tube can display all the detail that a lens could project on to the same area and can be used to produce equally clear photographic prints. In systems employing the flying-spot scanning technique, however, resolution in the line direction is limited, for a given scanning speed, by the phosphor decay time, and unless this can be reduced without sacrificing light output it will not be possible to take full advantage of the 5,000 lines in such applications.

Hausaland Erg

From field work and the interpretation of air photographs, A. T. Grove (*Geog. J.*, 24, 528; 1958) advances the view that the landforms of the plains that stretch along the southern border of the Sahara were shaped by erosion and deposition under climatic conditions that differed greatly from the present, associated with deep weathering, water erosion and the formation of extensive lakes in humid periods followed by phases of much wind action and dune building in the intervening arid periods, matching the alternation of ice and river action in high latitudes. He directs attention, however, to the danger of matching glacial periods with tropical pluvials and to the conflicting views regarding the climatic sequences in the tropics during Pleistocene times in