Great Distances Traveled

On these traverses, he covered a total of almost 3100 miles, an expanse of ice wider than the United States. Crary also led a 320-mile traverse in April 1958, which integrated his longer trips with traverses from Byrd and Ellsworth stations to give a continent-wide scientific picture of unprecedented scope. In all, U.S. traverses organized by Crary totalled 7500 miles, spanning Antarctica from the Weddell Sea to the Ross Ice Shelf and into the Victoria Land Plateau.

Crary's first major trek, from 24 October 1957 to 13 February 1958, covered 1450 miles of the Ross Ice Shelf. On the second journey, which began 15 October 1958, and lasted 108 days, Crary's party travelled 1629 miles.

Group Records Varied Findings

During the latter trip, the group climbed Skelton Glacier to a height of 7500 feet, placing markers which will lay the groundwork for the first accurate measurements of mass ice flow down the glacier. They worked their way up the glacier to the Victoria Land Plateau, and proceeded inland 400 miles on the plateau, finding ice 8000 to 9000 feet thick. Average annual temperature on the plateau was determined to be −55°F, almost as low as the −58°F average at the South Pole. This was found by measuring temperatures in bore holes drilled to depths of about 50 feet. At this level, temperatures are known to be about the same as the annual average at the surface.

Among their other findings was an ocean-bottom depth beneath the Ross Ice Shelf of about 4400 feet below sea level, at 79°06′S, 165°30′E. It was measured by seismic sounding.

Primary purposes of the most recent traverse were to determine the snow and ice characteristics and thickness on a line extending directly into the main Antarctic highlands and to study the Skelton Glacier and the transition from low-lying ice shelf to high plateau.

More than a dozen specific types of scientific observations were made by the party, which also included Charles R. Wilson, Washington, D.C., and Stephen L. Den Hartog, Concord, Mass., glaciologists; Lyle D. McGinnis, Kaukauna, Wis., seismologist; and Frank C. Layman, Pittsburgh, Pa., mechanic. Trevor Hatherton, chief scientist of the New Zealand Antarctic program, accompanied the party most of the way.

Methods and Equipment Used

They travelled in three Sno-Cats. The first of these tractor-type vehicles carried an electronic crevasse detector, navigation equipment, and radio. Another housed seismic, gravity, and magnetic equipment, while a third carried mess facilities. Three 2½-ton sleds were used to haul fuel and spares. The party was resupplied by ski-equipped aircraft from Navy Task Force 43, under the command of Admiral George Dufek, which provided extensive logistic support for IGY scientific activities.

Elevations of the surface along the traverse route were obtained by altimetry and transit levelling. Thickness of ice was determined by seismic reflection methods. Characteristics of rock under the ice were established by seismic refraction methods.

Primarily to obtain data on annual snow accumulation, observations were made to depths of 10 meters from shallow snow pits and bore holes. Snow hardness, grain size and shape, densities, and temperatures were noted.

Surface meteorological data were collected on temperature, pressure, wind speeds, wind direction, cloud cover, and cloud types.

Standard "station" stops were spaced at intervals of about 30 miles for snow-pit studies, seismic reflections, gravity and magnetic observations, and temperatures in 10-meter bore holes. Minor stations were made about every 5 miles for gravity and magnetic studies.

During the passage up the Skelton Glacier, the intervals were shortened to 5 and 2 miles for standard and minor stations respectively. In addition, three major stations were made at the foot and top of the Skelton Glacier and at the western end of the plateau line. There, seismic refractions were added, the drill holes were made to depths of 20 meters, and snow samples were taken for oxygen-isotope studies.

Britain's Department of Scientific and Industrial Research

Some years ago Great Britain decided to try financing its Department of Scientific and Industrial Research on a 5-year basis. The experiment, which was designed to meet the needs of long-term planning of research, has proved successful, and the government is continuing the system for another 5 years.

An outline of the second 5-year plan was presented in the House of Commons recently by Harmar Nicholls, parliamentary secretary to the Ministry of Works, speaking on behalf of the Lord President of the Council for Scientific and Industrial Research, Lord Hailsham, who is the minister responsible for the DSIR. As before, the financial provisions of the program are subject to the necessary funds being voted annually by Parliament and may be reviewed in the event of a marked change in the economic situation or of major changes in cost. Some of the chief features of the new plan follow.

The Plan

Expenditure on research by the DSIR will be nearly doubled in the next 5 years. For the period 1959–64, approximately £61 million will be made available to the department, compared with £36 million for the first period, which ends on 31 March 1959.

Expansion will continue steadily throughout the period, and for the year 1963–64 expenditure is expected to reach about £14 million. This figure does not include certain special items, the largest of which is the British contribution to the European Organization for Nuclear Research (CERN), which will continue to be financed outside the 5-year plan.

The largest expansion will take place in the field of scientific grants to the universities. Post graduate awards to students will be increased by about 10 percent each year until in 1963–64, it is hoped, some 3800 students will be receiving DSIR grants for research training. In the same year it is expected that DSIR support for special research in the research departments of universities will be operating on a scale of about £1¾ million per annum.

DSIR Laboratories

In support of additional research carried out in the department's own laboratories, expansion of staff at the rate of about 6 percent per annum—or approximately 30 percent over the 5 years—is included in the plan.

Grants to the research associations will also be increased to over £2 million per annum by the end of the period. At present there are 49 organizations in the DSIR scheme. The Council for Scientific and Industrial Research will continue its policy of encouraging industry to bear an increasing proportion of the total cost. It may be expected, therefore, that the actual expansion of the research association movement will be proportionately greater than the increase in government grants.

It has also been decided to devote much more attention and more money to insure that the results of scientific research are known and applied.

It is also proposed that the Ministry of Works increase its rate of expenditure on behalf of DSIR so as to provide buildings and equipment for the increased staff of DSIR laboratories.

U.N. Space Group

The first meeting of the United Nations Committee on the Peaceful Uses of Outer Space has tentatively been scheduled for the second half of April, according to the *New York Times*. The committee, which consists of 18 government representatives, was established by

the General Assembly last December. It has not met because of a Soviet boycott resulting from the complaint that the committee has a pro-Western majority.

It is reported that the committee will elect officers and request Secretary General Dag Hammarskjold to outline activities in the field of outer space that should be undertaken by the United Nations and other international organizations. The committee will probably not begin full-scale operation until the Soviet Union agrees to cooperate. The *Times* article suggests that the disagreement over Soviet participation in the work of the committee can be overcome either at a meeting of foreign ministers, now expected on 11 May, or at a subsequent meeting of heads of government.

The U.S.S.R. will not cooperate unless the committee's membership is changed, and Communist and neutralist members are given the same number of seats as Western members. This change can be made only by the Assembly, which will not begin its 1959 session until September. If the Soviet Union accepted a compromise on the committee's membership, to be submitted to the Assembly next fall, this would improve the chances of inducing neutralist members, in particular India and the United Arab Republic, to participate in the committee's work. For weeks the United States has been trying to persuade Western members of the committee to hold a meeting in March or April, regardless of the Soviet boycott.

News Briefs

The National Science Foundation has announced the establishment of an Office of Social Sciences, with Henry W. Riecken as its head. The foundation's support of basic social-science research began 5 years ago, but the work has previously been associated with the program in the natural sciences. An Advisory Committee for the Social Sciences was announced simultaneously. Members include: Leonard S. Cottrell, social psychologist, Russell Sage Foundation; Fred Eggan, professor of anthropology, University of Chicago; John Gardner, president, Social Science Research Council; Joseph Spengler, professor of economics, Duke University; S. S. Wilks, professor of mathematics, Princeton University; and Dael Wolfe, executive officer, AAAS.

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An exhibition of material relating to Charles Darwin has opened at the University of Pennsylvania Museum. The exhibition, sponsored by the American Philosophical Society Library and the Friends of the University of Pennsylvania Library, commemorates the 100th anniversary of the publication of Darwin's *On the Origin of Species*. The exhibit includes the only known complete set in the United States of the first edition of *On the Origin of Species,* as well as subsequent revisions and reprints.

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The American Institute of Physics, which now publishes translations of six Soviet physics journals, is bringing out another important physics journal, *Uspekhi Fizicheskikh Nauk*. The new translation project is being supported by the National Science Foundation.

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Two AAAS affiliates, the American Society of Heating and Air-Conditioning Engineers and the American Society of Refrigerating Engineers, have merged to form the American Society of Heating, Refrigerating, and Air-Conditioning Engineers. The consolidated society has a membership of more than 18,000. Cecil Boling of West Hartford, Conn., is president.

Grants, Fellowships, and Awards

Fulbright and Smith-Mundt awards. For American applicants for Fulbright awards, the Committee on International Exchange of Persons conducts two major competitions each year. Between 1 March and 25 April applications are accepted for South America (Argentina, Brazil, Chile, Colombia, Ecuador, Paraguay, and Peru); for South and Southeast Asia (Burma, India, Pakistan, the Philippines, and Thailand); and for Australia and New Zealand. Between 1 June and 1 October applications are accepted for Austria, Belgium, and Luxembourg, Denmark, Finland, France, Germany, Greece, Iceland, Iran, Ireland (outside the Fulbright Act; under a special agreement), Israel, Italy, Japan, the Netherlands, Norway, Spain, Turkey, and the United Kingdom and Colonial Territories. Spain became a participant in the program by an agreement signed in the autumn of 1958, and the first Fulbright grants will probably become available there in 1960–61. Application forms and additional information may be obtained from the Conference Board of Associated Research Councils, Committee on International Exchange of Persons, 2101 Constitution Avenue, NW, Washington 25, D.C.

The Smith-Mundt program, under which approximately 75 Americans are annually awarded lecturing appointments in countries not included in the Fulbright program, does not operate on the basis of a general competition. Requests for lecturers from participating countries are received very irregularly, and occasionally involve direct invitations. To aid in filling Smith-Mundt lectureships and also certain Fulbright grants not filled through the open competition, the Committee on International Exchange of Persons is developing a Register of Scholars. The register is a biographical reference file of scholars interested in the possibility of overseas assignments. It contains information on their fields of competence, preference as to countries, probable periods of availability, foreign language competence, and related qualifications. Persons with college or university teaching experience are invited to register with the committee and they should request a special form.

Gravity. The Gravity Research Foundation, New Boston, N.H., has announced the 1959 awards for essays on gravity. Five awards, ranging from a $1000 prize to a $100 prize, will be made on 1 June for the best 1500-word essays on the possibilities of discovering: (i) some partial insulator, reflector, or absorber of gravity; (ii) some alloy, or other substance, the atoms of which can be agitated or rearranged by gravity to throw off heat; or (iii) some other reasonable method of harnessing, controlling, or neutralizing gravity. Essays must be received at the foundation's office *before 15 April*. They will be accepted from anyone who is seriously interested in the application of gravity to practical uses for the benefit of humanity.

Teaching. Approximately 9000 secondary-school teachers of science and mathematics will benefit during the academic year 1959–60 from 182 National Science Foundation In-Service Institutes conducted by United States colleges and universities. The In-Service Institute program started with two institutes in the spring of 1957. During the present school year there are 85 institutes offering part-time study to secondary-school teachers.

Institute meetings are held outside regularly scheduled school hours—that is, evenings, Saturdays, or late afternoons—so that teachers may attend while they are still teaching full time in their schools. A typical institute might meet once a week for 2 hours for the full academic year of about 30 weeks. Teachers participating in these institutes will receive financial support in the form of allowances at the rate of 7 cents per mile for travel from their homes to the institutes. Those teachers granted support will not have to pay tuition and fees. Participants will be chosen by the institutes, not by the National Science Foundation.

Scientists in the News

LOGAN WILSON, sociologist and president of the University of Texas, has been nominated by President Eisenhower to replace T. KEITH GLENNAN on the National Science Board. Glennan is head of the new National Aeronautics and Space Administration.