

News of Science

United Nations Radiation Report

The United Nations Committee on the Effects of Atomic Radiation began a series of meetings at U.N. headquarters on 9 June to review, complete, and approve a comprehensive report to the U.N. General Assembly. The June session of the 15-member committee has before it a working draft of the comprehensive report prepared at the committee's previous session, which ended on 28 February, and further studied by committee members since that date.

The final report, which is expected to be transmitted to U.N. member governments in July, deals with the effects of atomic radiation, including the natural background radiation, artificial radiation from medical applications and other peaceful uses of atomic energy, and fallout resulting from nuclear weapon tests. It is concerned both with the immediate effects on man and his environment and with long-range effects on future generations.

U.S. IGY Meeting

Walter Sullivan of the *New York Times* reported on 1 June that, after turning down a proposal that scientists from the 66 nations taking part in the International Geophysical Year meet in this country, the State Department is understood to have changed its policy. A post-IGY assembly will probably be held next year in or near Washington.

Meanwhile, the Soviet Union has invited IGY participants to meet in Moscow in August to prepare the final rules for exchange of data gained from Soviet and American satellites. While East and West have agreed in principle to exchange such data, they must still agree on how detailed the exchange is to be. Some American scientists have felt that the United States missed a valuable opportunity for building prestige when it rejected the original, informal inquiries on whether such a meeting would be welcome here.

Sullivan's report said:

"The chief factor in the State Department's reluctance seems to have been the prospect of having to accept a delegation from Communist China. The latter has

since withdrawn from the IGY in protest at the inclusion of Nationalist China.

"Peiping—and the State Department—were assured by leaders of the IGY that the program was completely non-political. The delegations represent the various national academies of science—not governments.

"State Department sources say, nevertheless, that there is still concern within the department at the prospect that delegations from such unrecognized nations as the Mongolian Peoples Republic and North Korea will wander the streets of Washington.

"Another embarrassment for the State Department is said to result from our diplomats' urging such Chinese Nationalists to apply for visas to Moscow so that the West will be fully represented at the meeting to run there August 1 to 9.

"The Communist bloc has its problems, too. If all IGY participants visit Moscow there will be delegations from North and South Vietnam, East and West Germany, Nationalist China and possibly both North and South Korea.

"The South Koreans recently asked to adhere to the IGY, but since no meeting of the IGY executive body is scheduled before the Moscow meeting, it is doubtful that the application can be accepted before then.

"The enrollment of South Korea would mean that of the four nations partitioned by the cold war, both halves of three would be taking part. The fourth instance—China—underlines an unusual lack of uniformity in Communist bloc policy.

"The Chinese Communists were the first to adhere. When the Nationalists were accepted, to avoid political complications, the two groups were listed in IGY documents as 'Chinese Committee—Peking (Peiping)' and 'Chinese Committee—Taipei.'

"This formula was not acceptable to Peiping, which withdrew on the eve of the IGY. By then Communist China had set in motion an ambitious program which apparently continued with little abatement, despite the withdrawal.

"According to press reports from the Chinese mainland, an oceanographic ship with six laboratories on board was outfitted. The network of fifty weather stations was expanded to 1000. The Aca-

demia Sinica—equivalent to our National Academy of Sciences—announced plans to set up a dozen satellite tracking stations from Tihwa, beyond the Gobi Desert, to the sea.

"It also opened a geophysical observatory in Lhasa, Tibet, and a physics research institute in Tihwa. The Tibetan observatory was opened last July 1, the start of the eighteen-month IGY. Networks of magnetic seismic stations were organized and a latitude observatory was established in Tientsin with Soviet help.

"Reports from the IGY World Data Center in Moscow indicate that it is receiving at least some of the fruits of this Chinese effort. The Soviet press has even spoken of Chinese plans to launch earth satellites without saying when this might be done.

"Apart from Communist China all other Soviet bloc nations except Albania are taking part in the IGY. . . ."

New Species of Wasps

Two new genera and approximately 30 new species of wasps whose eggs are laid inside the bodies of other insects, chiefly caterpillars—and which spend all their larval life feeding on the fats and body fluids of the hosts—are described in a recent Smithsonian Institution bulletin. The author is C. F. W. Muesebeck, honorary collaborator of the Smithsonian Institution.

The wasps, technically of the family Braconidae, are found chiefly in sub-tropical America. They represent one of the most remarkable adaptations of life in nature.

Eggs are deposited by the females inside the host insects by means of an ovipositor, which penetrates the skin, or even the hard scales of beetles. Inside the host the eggs hatch in an environment of relative safety and abundant food. But the larvae do not feed upon, or injure in any way, any of the vital organs of the host. They eat only fats and body fluids that are not essential to life. The host may continue, to all outward appearances, in relatively good health.

But as soon as the larval stage is completed, the wasps break through the body walls, usually killing the host. Metamorphosis of larvae into four-winged wasps usually takes place in two or three weeks.

Scientific Manpower Office

A special Office of Scientific and Technical Manpower has been set up within the Organisation for European Economic Co-operation to direct the organization's drive for increasing the supply of quali-

fied scientists and engineers needed to meet the growing demand of Europe's industries. Alexander King, while continuing as deputy director of the European Productivity Agency, has been appointed director of the new office and will report directly to the secretary general of OEEC. The scientific manpower program to be carried out by the office will be under the direction of a governing committee composed of high-ranking officials of the 17 European members of OEEC, the United States, and Canada.

The organization has already initiated several projects in this field which will now come under the direction of the new office. These include an annual review of the policies and programs of member countries for the training of scientists and engineers; a study of techniques for forecasting demands for scientific and technical personnel; and a series of summer training courses for science and mathematics teachers. The first of these courses will be held at Keele, England, and will be open to selected teachers and educational administrators from any of the member countries. It is expected that it will be followed by two more courses this summer in France and Germany.

Funds for this program and for further action projects to be determined by the governing committee will come from an allocation of \$500,000 by the U.S. Government, together with an initial contribution by the OEEC countries and special additional contributions as projects are approved.

Visiting Scientists Program

The National Academy of Sciences-National Research Council has been administering, for the International Cooperation Administration, a visiting scientists program under which more than 200 young scientists at the postdoctoral level have been brought to the United States for 2 years of basic research experience in American universities. Recently ICA asked the Academy-Research Council to continue the program and to extend it to other countries of the world.

The expanded program will bring approximately 150 young scientists to the United States and will serve essentially the same purpose as the original program. However, it will now bring young scientists from countries in Asia, Africa, and South America, as well as from Europe.

The program will be administered by the Office of Scientific Personnel with the cooperation of the Office of International Relations and the Pacific Science Board. Representatives of these three offices of the Academy-Research Council are visiting the countries that

are cooperating in the program for the purpose of developing mutually acceptable procedures whereby the scientific academies or equivalent institutions in these countries may assist in the selection of candidates. Walter F. Colby, who has served as assistant to the director of the Office of Scientific Personnel for the Foreign Research Scientists Program, will continue to direct the expanded program for visiting scientists.

Ovulation Test

A new color test for determining a woman's ovulation time, said to have the approval of some Roman Catholic officials, was described in April to the American College of Obstetricians and Gynecologists. Joseph Doyle of Tufts University reported that a special tape, held against the womb, will change color if the uterine secretions contain sugar, which is present only when a fertilizable egg is released from the ovary. Doyle said the procedure, if confirmed, would help make the rhythm method of birth control more reliable.

Soviet Specialists Graduate

The Soviet Ministry of Higher Education reports that Soviet colleges and higher institutes will graduate more than 100,000 specialists in the coming weeks. A complete breakdown of the figure is not available. However the largest single group, 17,000, consists of machine and instrument-making specialists. There will be about 8000 construction engineers, 5000 power engineers, more than 5000 geologists, 5000 chemical technicians, and 3200 metallurgists. The remainder will include "many economists, philologists, biologists, and so forth."

K. G. Nozhko, an official of the Ministry, told the newspaper *Sovetskaya Rossiya* that most of the new specialists would get jobs in Siberia and other eastern sections of the country.

United States Research and Development, 1953-1956

The National Science Foundation reports, on the basis of a recently completed survey, that industrial expenditure for research and development increased more than 75 percent during the three years 1953-1956, and that almost half the costs represented performance for the Federal Government.

"A carefully documented survey, completed for the foundation by the Bureau of Labor Statistics, shows that costs of research and development performed by industry in 1956 were \$6.5 billion," said

Alan T. Waterman, director, in releasing data from the survey, *Research and Development Costs in American Industry, 1956—A Preliminary Report*. "A similar survey, completed earlier for the foundation by the bureau, showed that industrial research and development cost \$3.7 billion in 1953. Many factors have contributed to the increasing growth of industrial research and development during recent years, including the development of new materials and processes completely unknown a decade ago and the increasing use of industrial contracts for carrying out the Federal Government's expanding research and development program. Whereas in 1953 federal contracts for industrial research and development stood at 37 percent of total industrial research and development (\$1.4 billion related to \$3.7 billion), they rose to almost 50 percent in 1956 (\$3.1 billion related to a total of \$6.5)."

On the basis of the industrial and Federal Government surveys completed for 1956 and estimates for other sectors of the economy, the National Science Foundation has stated that the country's total research and development effort amounted to approximately \$9 billion in 1956, or 67 percent more than the 1953 figure of \$5.4 billion. Thus, industry's share in this performance of research and development in 1956, totalling \$6.5 billion, was slightly less than three-fourths of all research and development performed in the United States.

A comparison of data from the 1953 survey with data from the more recent survey show the following important changes:

1) Total industrial research and development costs increased 76 percent, from \$3.7 billion in 1953 to \$6.5 billion in 1956.

2) Research and development financed and performed by industry itself increased 44 percent, from \$2.3 billion in 1953 to \$3.3 billion in 1956.

3) Federal Government financing of industrial research and development increased 131 percent, from \$1.4 billion in 1953 to \$3.1 billion in 1956—an increase of from 37 to 49 percent of total industrial research and development funds.

The survey showed that 13 industries accounted for more than 85 percent of all research and development performed by industry in 1956. One-half of all industrial research and development expenditures was concentrated in the aircraft and parts and in the electrical equipment industries. The aircraft and parts industry accounted for 32 percent of the total industrial research and development, and the corresponding figure for the electrical equipment industry was 18 percent. The machinery and chemical industries accounted for 9 and 8 percent, respectively, of the total. The