

decreased from nearly 56.9 percent in 1910 to a low of 24.6 percent in 1952, then increased to 28.7 percent in 1956. However, the total number of students enrolled in this subject increased from about 500,000 in 1910 to more than 2 million in 1956.

Wide regional variations in enrollments in science and mathematics were found in 1956, the base year for the recent study. For example, 90 percent of the 10th-grade students in the South Atlantic region study biology, as compared with only 65 percent in the Pacific Coast states. In one region 27.9 percent of the students studied intermediate algebra, as compared with 3.8 percent in another.

Many small high schools do not offer advanced science or advanced mathematics courses. Although they enroll a relatively small proportion of the total high-school students, approximately 100,000 high-school seniors attend schools that do not offer advanced mathematics.

Visiting Scientists Program

The American Association of Physics Teachers and the American Institute of Physics are jointly sponsoring a program of visiting scientists for 1957-58. Supported by a grant from the National Science Foundation, the program will provide opportunities for the faculty and students in colleges and universities lacking extensive research facilities to meet well-known physicists informally and to hear them discuss their research interests. A few high schools will also be included in the program.

This activity is under the direction of the AAPT Committee on the Program of Visiting Scientists, whose chairman is J. W. Buchta of the University of Minnesota. Inquiries should be directed to W. C. Kelly, American Institute of Physics, 335 E. 45 St., New York 17, N.Y.

Nova Scotia Centre for Geological Sciences

An unusual international educational program celebrated its tenth anniversary on 30 Aug. with the closing exercises of the Massachusetts Institute of Technology Summer School of Geology at Antigonish, Nova Scotia. Sponsored jointly by the M.I.T. department of geology and geophysics and the Province of Nova Scotia, this school has helped educate some 350 young Canadian and U.S. geologists.

This outstanding example of international cooperation in education functions as follows. Several professors from M.I.T. and from Nova Scotia univer-

sities instruct a group of 25 to 30 students each summer in field training in geology and associated sciences at the Nova Scotia Centre for Geological Sciences at Crystal Cliffs. The project, which is administered by M.I.T., also carries on a program of student thesis work and staff research throughout the Province of Nova Scotia.

The province, largely through the Department of Mines and to some extent through the Nova Scotia Research Foundation, provides lodging, food, and transportation for the students and staff of the school. In several cases, the province has also provided grants and transportation assistance to students working on theses.

Students from four Nova Scotia schools—Acadia University, Dalhousie University, Nova Scotia Technical College, and St. Francis Xavier University—have an equal opportunity with M.I.T. students to participate in the instructional program and in the thesis work of the school. Students from other maritime colleges and from other schools in the United States are admitted as far as facilities permit.

Sixteen American schools besides M.I.T. have sent students to the program, with Yale University having sent the most. These U.S. students have come from 36 of the 48 states. In addition, foreign students from every continent of the globe have also participated in the program.

The curriculum of the school covers a period of 10 weeks, part of which is devoted to practical field mapping and detailed studies related to the natural resources of Nova Scotia. In the past 10 years, students have set up and occupied more than 50 camp sites for their field work.

These field studies have been chiefly devoted to unsolved problems, and many of the reports on stratigraphic and structural geology have had a bearing on natural resources. Such reports on problems of an economic or practical nature have included studies dealing with gold, copper, iron, cobalt, uranium, and coal. A number of these studies have been published by the Nova Scotia Department of Mines.

This international cooperative venture in geologic instruction and research was initiated by Walter L. Whitehead of M.I.T., Donald J. MacNeil of St. Francis Xavier University in Antigonish, and Harold D. Smith of the Nova Scotia Research Foundation. It has been sponsored and supported from the beginning by the Nova Scotia Department of Mines. Additional assistance has been given by the Nova Scotia Research Foundation, the Dominion Coal Company, and the Geological Survey of Canada.

Marshall Island Fallout Report

The Atomic Energy Commission has announced publication of *Radioactive Contamination of Certain Areas of the Pacific from Nuclear Tests—a Summary of the Data from the Radiological Surveys and Medical Examinations*. This report brings together the principal data on environmental contamination from the radioactive fallout following the 1 Mar. 1954 thermonuclear detonation at the Eniwetok Proving Ground. It collates ten radiological surveys made in the Pacific by the Applied Fisheries Laboratory of the University of Washington, U.S. Naval Radiological Defense Laboratory, Health and Safety Laboratory at the New York Operations Office of the AEC, and the Office of Naval Research. The report also contains pertinent excerpts of the findings of American medical teams who examined the exposed Marshallese. The report may be obtained for 50 cents from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

Cleveland Engineering Center

The Cleveland Engineering and Scientific Center, Cleveland, Ohio, is now under construction. A cornerstone ceremony was recently held for the \$1,525,000 building, which is scheduled to open next spring as headquarters for 13,000 engineers, scientists, and technical experts in the Cleveland area. The structure will have a main section of two stories and a five-story tower. In addition to the Cleveland Engineering Society, 52 member organizations of the Cleveland Technical Societies Council will use the building.

International Abstracts of Biological Sciences

Last October it was announced in *Nature* (128, 726) that it was the intention of the Council of Biological and Medical Abstracts Limited to change the name of *British Abstracts of Medical Sciences to International Abstracts of Biological Sciences*. This change has now occurred, and it emphasizes two important developments in the character of the journal: the abstracts now cover a wider range of subjects and they also cover the Russian literature. The inclusion of subjects not previously covered has been promoted by the appointment to the council of representatives from the Society of Experimental Biology.

A variety of other improvements have also been incorporated, and *International Abstracts of Biological Sciences*

now provides a comprehensive abstracting service for experimental and biochemical aspects of biology. The journal is published by Pergamon Press for the council on a nonprofit basis. Suggestions for improvements and offers of help in abstracting (especially from those with a knowledge of Russian) are always welcome and may be addressed to the Editorial Offices, International Abstracts of Biological Sciences, Pergamon Press Ltd., 4-5, Fitzroy Square, London, W.1., England.

Manhattan's Bedrock

Headed by J. Laurence Kulp, associate professor of geology, a group of geochemists from Columbia University's Lamont Geological Observatory recently investigated the age of New York City's bedrock. The research team was able to measure the ratio of potassium to argon (its decay product) in the rock, and their findings support the view that the Manhattan schist is some 380 million years old.

This conclusion is expected to end a long-standing controversy among geologists, some of whom have maintained that the Manhattan rock is Precambrian, up to 1700 million years old. Walter H. Bucher, Newberry professor emeritus of geology at Columbia and former president of the Geological Society of America, has argued that it is much younger.

Nuclear Chemical Company

The Nuclear Chemical Company, Chicago, Ill., is a new company that will manufacture and supply organic compounds tagged with radioactive carbon, hydrogen, phosphorus, and sulfur. Services offered by the new company include the performance of special syntheses and consultations and research involving applications of radiochemical techniques.

Bernard Wolnak, who is president of Mid-West Laboratories, will also head this new organization. Earl L. Whittaker, radiological chemist who was formerly associated with Nuclear-Chicago Corporation, will be in charge of laboratory operations.

Ultraviolet Spectral Data

Organic Electronic Spectral Data, Inc., of Silver Spring, Md., is preparing what is perhaps the most comprehensive collection of ultraviolet spectral data ever attempted. H. E. Ungnade of Los Alamos Scientific Laboratory, president of the nonprofit corporation, estimates that the collection may include descriptions of as many as 50,000 ultraviolet

absorption spectra of organic compounds. Purpose of the project is to make available in one definitive reference a majority of such data published since the onset of the photoelectric era. To aid the work, Beckman Instruments, Inc., recently made a \$1000 contribution.

Forty scientists from government, industry, and universities are cooperating in the venture, and the material is being abstracted from 65 journals in eight languages. Since the start of the project early this year, more than 21,000 spectra have been collected. The first two-volume set of *Organic Electronic Spectral Data*, which will cover the literature from 1946 to 1955, will be published next year by Interscience Publishers, New York, under the editorship of Ungnade and Mortimer Kamlet of the U.S. Naval Ordnance Laboratory, White Oak, Md.

Leukemia Fellowship in Argentina

Fundaleu, a leukemia foundation in Argentina, has announced the Silvina Estrada de Acevedo fellowship for research in experimental leukemia. This award has been established by Don Horacio Acevedo in memory of his wife. It is open to a scientist from any part of the world who has already been conducting research in the field. The fellowship recipient will work at the Department of Experimental Leukemia, Blood Research Institute, National Academy of Medicine, for a year, beginning 1 Feb. 1958. The grant may be extended for a year. Applications, which must include personal data and a project outline, should be forwarded *not later than 30 Nov.* to: Fundaleu, Instituto de Investigaciones Hematologicas, Academia Nacional de Medicina, Melo 3081, Buenos Aires, Argentina.

Pharmaceutical Research Information

Current Contents of Pharmaceutical Publications is a new weekly designed to fill the pharmaceutical industry's need for current research information. Research in human and veterinary medicine, public health, pharmacology, and synthetic chemistry will be covered. Organizations subscribing to the *Current Contents* service receive multiple copies of a weekly pocket-size booklet containing photographic reproductions of the current or advance tables of contents of nearly 250 periodicals.

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a list of the journals covered, specimen copies, and any additional information write to: Eugene Garfield Associates, 1523 Spring Garden St., Philadelphia, Pa.

Arkansas Technology Institute

The University of Arkansas is planning construction of its first Graduate Institute of Technology at Little Rock. Nine leading scientists and educators met 29 July at Winthrop Rockefeller's Winrock Farm in Arkansas to discuss the institute's buildings, curriculum, and staff. Rockefeller, as chairman of the Arkansas Industrial Development Commission, is working closely with the university in organizing the school.

The men attending the conference were A. V. Astin, director, National Bureau of Standards, Washington, D.C.; Lee A. DuBridge, president, California Institute of Technology; Clark D. Goodman, assistant director for technical operations, Division of Reactor Developments, U.S. Atomic Energy Commission; George W. Irving, deputy administrator, Agricultural Research Service, U.S. Department of Agriculture; Marvin J. Kelley, president, Bell Telephone Laboratories; Alan T. Waterman, director, National Science Foundation; Clyde Williams, president, Battelle Memorial Institute; R. M. Zabel, engineering manager, Westinghouse Electric Corporation; and Joseph R. Bransford, vice president, Telephone and Installation Division, Western Electric Company.

Arkansas is engaged in a campaign to get new industries, and the 1957 legislature appropriated \$600,000 for the 1957-59 biennium to build an institute for basic and applied research in the physical sciences. Out of the Winrock discussion came the conclusion that the school should be primarily an educational institution closely connected with the university, whose main campus is located at Fayetteville. It was agreed that the institute should concentrate on the pure sciences and not be an applied research center, that applied research to encourage location of new industries would follow in the natural evolution of the institute.

It was suggested that the new institute provide work to the master's level, building on top of the usual engineering degree and giving emphasis to the basic sciences and mathematics. A doctoral program may be considered in later years.

An advisory council set up as a steering group will hold meetings in the near future to select a director and continue organizational planning. Several sites for the institute are being considered in the Little Rock area.