

NASA program was in large measure its brainchild.

With the acceptance of the lunar landing as a national goal and the resulting growth in NASA budget and staff, however, the role of the board inevitably changed.

The space science board had recommended elevating a manned lunar landing to the status of a national goal even before President Kennedy asked Congress for the supplementary appropriation with which the moon project was christened. But the board recommendation put the manned lunar landing in the broad perspective of the scientific exploration of the moon and planets and did not affix a 1970 deadline.

As the Mercury and Apollo programs gained impetus the more expensive and spectacular manned program dominated space agency planning. The original space science board-NASA plans for exploration of the near-earth environment have been little affected by the Apollo program, and very important results have been obtained. In the case of unmanned investigations of the moon, despite brilliant successes with the Mariner II and Ranger VII spacecraft, pre-Apollo aspirations have not been fulfilled.

The board retains its influence on scientific questions such as the matter of sterilization of space vehicles destined to land on other planets, but there can be no doubt that the group has lost its dominant position in planning and provides—as it might be phrased at NASA—only one input.

While the board furnishes advice on space operations to all federal agencies, its close ties to NASA are indicated by the fact that NASA, starting next year, will provide all the funds for the board's \$200,000-a-year budget, which in recent years has been financed by equal payments from NASA and the National Science Foundation.

Members of the space science board and its committees tend also to serve on NASA internal committees, and this is one factor which has led to a feeling among some members of the Academy that, because of the board's long and close relationship with NASA personnel and NASA plans, the board has lost some of the detachment appropriate to an NAS committee.

It is pointed out that the only other high-level independent committee advising the government on space policy is a panel of the President's Science Advisory Committee, and it is widely

thought that the PSAC panel yielded standing as an effective critical force on space policy when it lost a wrangle with NASA about the overall plans for making a lunar landing.

It should be noted that close association between NASA and scientists whose work depends on experiments in the upper atmosphere and space has a look of inevitability. Not only is NASA by far the biggest patron of space research, but it has a virtual corner on the means of getting nonclassified research packages off the ground.

Because of the complicated hardware and large amounts of money involved, scientists who do research which depends on experiments in the outer reaches of the earth's atmosphere and beyond have grown accustomed to relying on teamwork to get their results. And cooperation means compromise.

Scientists alone don't call the tune in the space program, and many researchers unquestionably regret this. The space science board has evidently adopted the view that it can do the best job for science by taking into account the nonscientific elements in decisions about space—there are and have been dissenters to this view on the board—and the board seems to accept the view that making space policy involves the exercise of the art of the possible, just as do more conventional forms of politics.

—JOHN WALSH

Announcements

The establishment this fall of Florida Atlantic University, as part of the state university system, has been announced. The new university will consist of five colleges—business administration, education, humanities, science, and social science—and will also offer an **ocean engineering** curriculum. The department of ocean engineering will emphasize underwater acoustics, power, structure, instrumentation, mining, and corrosion. A summer trimester will be devoted entirely to practical work in seamanship, navigation, data processing, exploration, and oceanographic work at sea. Further information on the new department is available from its chairman, Charles R. Stephan, Florida Atlantic University, Boca Raton, Florida 33432.

The School of Foreign Affairs of the Foreign Service Institute, Department of State, will begin a pilot semi-

nar on **science, technology and foreign affairs** in January. The 4-week course, for a selected group of foreign service and departmental officers and participants from other government agencies, will examine the interaction between science, technology, and foreign affairs.

Meeting Notes

An International Symposium on **Radioisotope Sample Measurement Techniques in Medicine and Biology** is scheduled 24–28 May in Vienna, Austria. It will be sponsored by the International Atomic Energy Agency. Topics to be included are: liquid scintillation counting, assay of beta-ray emitting isotopes, assay of gamma-ray isotopes, and assay of alpha-ray emitting isotopes. Deadline for 250- to 350-word abstracts: *19 December*. (J. H. Kane, Chief, International Conferences Branch, Division of Special Projects, U.S. Atomic Energy Commission, Washington, D.C. 20545)

The Indian Society of Genetics and Plant Breeding will sponsor an international symposium on the **Impact of Mendelism on Agriculture, Biology, and Medicine**, scheduled 15–20 February in New Delhi, India. Topics to be included are Mendelism and evolution, genetics in plant breeding, cytology and cytogenetics, mutation, human and animal genetics, biochemical genetics, and teaching of genetics. (A. T. Natarajan, Secretary, Indian Soc. of Genetics and Plant Breeding, Division of Botany, Indian Agricultural Research Institute, New Delhi 12, India)

About 500 scientists and engineers are expected to attend the American Society of Testing and Materials national meeting on **steel**, 25–29 January in Mexico City. U.S. and Mexican steel specialists will present papers on production, testing, and utilization. (ASTM, 1916 Race St., Philadelphia, Pa. 19103)

The **1965 National Telemetering Conference** is scheduled 13–15 April, in Houston, Texas. It will be sponsored by the American Institute of Aeronautics and Astronautics, the Institute of Electrical and Electronics Engineers, and the Instrument Society of America. Papers for the Conference in the fields of aerospace, bio-medicine, oceanography, and industrial telemetering are be-

ing solicited. Deadline for 35-word abstracts and 300- to 500-word summaries: *4 January*. (R. W. Towle, Advanced Technology Laboratories, 369 Winsman Avenue, Mountain View, California)

Oak Ridge National Laboratory will sponsor an International Symposium on "**fission product release and transport** under accident conditions," 5-7 April at Oak Ridge. Papers are invited on characterization, transport behavior, deposition, and filtration. Deadline for 500-word abstracts: *15 January*. (C. J. Barton, Oak Ridge National Laboratory, P.O. Box X, Oak Ridge, Tenn. 37831)

The **American Geophysical Union** annual meeting will be held 19-22 April, in Washington, D.C. Papers are being solicited in the areas of seismology, meteorology, oceanography, hydrology, geodesy, geomagnetism and aeronomy, volcanology, geochemistry, tectonophysics, petrology, and the space sciences. Deadline for submission of titles and abstracts in meteorology: *6 January*. Deadline for submission of titles and abstracts in all other areas: *15 January*. (W. E. Smith, Exec. Secretary, American Geophysical Union, Suite 506, 1145 19th Street, NW, Washington, D.C. 20036)

Courses

The first in a series of **medical teacher training** programs will be offered by the recently established Center for the Study of Medical Education at the University of Illinois medical college, 18 January to 27 February. The course is designed to provide an opportunity for a small group of medical faculty members to examine new techniques for medical education. The course will consist of seminars based on selected readings, and working sessions built on specific problems; attention will focus on the process of learning, methods of teaching, and evaluation of students and programs. Participants also will work individually on a specific educational problem. No tuition will be charged. (T. C. King, 1853 West Polk St., Chicago, Ill.)

The University of New Hampshire has begun an interdepartmental graduate program leading to the M.S. and Ph.D. degrees in **genetics**. Students may specialize in animal or plant genetics,

or cytology and cytogenetics. Assistantships and fellowships are available. Further information may be obtained from G. M. Dunn, 207 Nesmith Hall, University of New Hampshire, Durham.

A 2-day course in "**Creativity at Work**" is scheduled 10-11 December at Madison, Wisconsin. Sponsored by the University of Wisconsin's university extension division, it is designed for production, design, maintenance, and R&D engineers, and interested persons in related professional fields. Topics to be covered include obstacles to creativity, creative methods and approaches, and a discussion of the creative process flow chart. The enrollment fee is \$35 and should accompany each application. (Director, Engineering Institutes, University Extension Division, Wisconsin Center, University of Wisconsin, Madison 53706)

A 3-day program, "**The Biology of Marine Microorganisms**," sponsored by the University of California at Berkeley, is scheduled 21-23 December. It is intended for university and industrial scientists and graduate students in microbiology, marine biology, biochemistry, botany, and zoology, and professionals in related fields who are interested in the development of marine microbiology. Topics to be covered include microbial environments in the sea, techniques for study of marine microorganisms, principal types of marine microorganisms, and activities of marine microorganisms. Tuition for the program is \$60 for students enrolled in graduate school, and \$100 for professionals. Advance enrollment is required. Enrollment deadline: *14 December*. (Letters and Science Extension, University of California, Berkeley, 94720)

Oak Ridge Institute of Nuclear Studies has announced a program of courses designed to train personnel in the safe and efficient use of radioactive materials, and to stimulate further interest in their applications. They will be presented by the ORINS Special Training Division. The first two courses are:

1) A 4-week basic course on the use of **radioisotopes in research** to train participants in the use of radioisotopes as research tools, scheduled: 11 January to 5 February, 22 March to 16 April, 3-28 May, 9 August to 3 September, and 27 September to 22 October; and

2) A 3-week **medical qualification** program for physicians which fulfills

the minimal requirements for licensure by the U.S. Atomic Energy Commission to use radioisotopes in diagnostic procedures, scheduled: 4-22 January, 1-19 March, 3-21 May, and 13 September to 1 October. (R. T. Overman, Special Training Division, ORINS, P.O. Box 117, Oak Ridge, Tennessee 37831)

Grants, Fellowships, and Awards

Tuition-free scholarships are available for a 2-week course in **Chemical Microscopy** scheduled 1-12 February in Chicago, Ill. Sponsored by the McCrone Research Institute, the scholarships are open to full-time students who will acquire graduate or senior status by the end of the present academic year. Recipients of the scholarships will have the normal \$300 tuition and fees waived, but must provide their own living accommodations during the course. Deadline for applications: *21 December*. (J. Teetsov, McCrone Research Institute, Inc., 451 E. 31 Street, Chicago, Illinois 60616)

Publications

"NIDR Reports on **Dental Research**" has been issued by the U.S. Public Health Service. The 31-page booklet contains the 1964 statement presented by the director of the National Institute of Dental Research before the congressional appropriations committees, and includes a description of NIDR research progress, grants activities, and manpower and training. In addition, it contains sections on progress in dental caries research, as well as research on periodontal disease, calcification, congenital anomalies, and oral ulcerations. (PHS Publication No. 1244, Information Office, NIDR, Bethesda, Md. 20014)

New Journals

The **American Geophysical Union** has announced the establishment of a scientific quarterly, *Water Resources Research*, to be published early in 1965. The publication has extended an invitation for papers reporting basic or applied research, or offering an examination of the principles governing water planning and development. Papers in the physical, chemical, or biological sciences should be sent to: W. B. Langbein, U.S. Geological Sur-

vey, Washington, D.C. 20242. Papers on the social sciences, including economics and law, should be submitted to: A. V. Kneese, Resources for the Future, 1755 Massachusetts Avenue, NW, Washington, D.C. 20036. (*Water Resources Research*, American Geophysical Union, Suite 506, 1145 19th Street, NW, Washington, D.C. 20036. AGU members, \$3; nonmembers, \$6 per calendar year.)

Scientists in the News

At St. Louis University:

George H. Zimny, formerly associate professor of psychology at Marquette University, has joined the psychology department;

William E. Holt has been appointed associate clinical professor of psychiatry. He had been with the psychiatry department at the University of Pennsylvania.

David Alan Turner, formerly director of the biochemistry research division at Sinai Hospital and professor of radiology at Johns Hopkins School of Medicine in Baltimore, has joined the staff of the Research Institute, Hospital for Sick Children, Toronto, Canada, as associate scientist. Turner will be responsible for research in lipid metabolism related to intestinal absorption and atherosclerosis.

The American Public Health Association has announced the recipients of the 1964 Bronfman Prizes for Public Health Achievement. The Prizes, conferred annually for "outstanding international accomplishments in developing and applying new knowledge to prevent disease and extend life expectancy," are the highest award of the Association. They carry a \$5000 honorarium, an engraved scroll, and a crystal cube symbolizing the thrust of creative public health practice leading directly to improved health and life expectancy for large numbers of people. This year they were received by:

Robert H. Felix, dean of the School of Medicine, St. Louis University, and former director of the National Institute of Mental Health;

Malcolm H. Merrill, director of the California State Department of Public Health; and

George E. Moore, director of the Roswell Park Memorial Institute, Buffalo, N.Y.

Walter Wiest has been named associate professor of biochemistry in obstetrics and gynecology at the Washington University Medical School. He had been associate professor of biochemistry at the University of Utah.

The American Institute of Biological Sciences has instituted a program to study the potential of retired biologists as a source of scientific manpower. A pilot study now underway in California is investigating the need for biologists as well as inventorying the resident emeritus biologists.

The chairman of the study is **I. D. Wilson**, emeritus professor of zoology and animal pathology at Virginia Polytechnic Institute; other members of the committee are:

C. C. Compton, entomologist and project leader for a study of industrial research at Rutgers University;

L. W. Durrell, emeritus dean of the department of botany and plant pathology, Colorado State University;

Frank B. Lindsay, chief of the Bureau of Secondary Education, California State Department of Education; and

A. J. Riker, who recently retired as professor of botany at the University of Wisconsin's department of botany.

George W. Preckshot, formerly director of the National Research Participation Program in chemical engineering at the University of Minnesota, has been appointed professor of chemical engineering at the University of Missouri.

J. Kenneth Trolan, assistant director of the research and development division of Field Emission Corporation in Oregon, has been appointed professor of physics at the University of Redlands, California.

Gregory Breit, Donner Professor of Physics at Yale, has been named recipient of the 1964 Franklin Medal. The medal is the highest award of the Franklin Institute, and is given annually to scientists who "have done most to advance physical science or its applications."

Walter Welkowitz, formerly assistant to the president, director of research and development, and general manager of the instrument division at Gulton Industries, has been appointed associate professor in the Rutgers College of Engineering. Welkowitz' responsibili-

ties will include work on the University's first bio-medical engineering program, designed to apply engineering knowledge and equipment to medical problems and to train engineers in physiological and biological areas as well as in engineering, and to introduce the medical student to analytical course work.

Florence B. Seibert, former special consultant for the Bay Pines Veterans Administration, has been named director of the Cancer Research Laboratory at the Mound Park Hospital Foundation, St. Petersburg, Florida.

Appointed as visiting professors for the 1964-65 academic year at the University of California, Los Angeles, are:

Athanasios Papoulis, professor of electrical engineering at the Polytechnic Institute of Brooklyn; and

Yuan Feng Chan, associate professor of engineering at Purdue University, as visiting associate professor.

Leslie E. Howlett, director of the division of applied physics of the Canadian National Research Council, has been elected president of the International Committee of Weights and Measures. The committee is the executive body of the International Bureau of Weights and Measures.

Robert L. Williams has been appointed chairman of the department of psychiatry in the College of Medicine at the J. Hillis Miller Health Center of the University of Florida. He succeeds **Peter Regan**, who has become vice-president of the State University of New York at Buffalo.

Herluf H. Stranskov, former professor of zoology at the University of Chicago, has been appointed visiting professor of zoology at the University of Rhode Island for the 1964-65 academic year. Stranskov replaces **Elizabeth B. Chase**, who is on sabbatical leave.

R. Bruce Sloane, former professor and head of the department of psychiatry at Queen's University, Kingston, Ontario, Canada, has been named chairman of the psychiatry department at Temple University School of Medicine and Hospital. **O. Spurgeon English**, whom he succeeds, has retired, but will retain his Temple affiliation as professor of psychiatry.