

(Continued from page 1265)

being done, by local governments and through private initiative.

The debate, therefore, was largely carried on between two groups of shelter advocates, with the federal-buildings-only group losing out. Only in the closing stages of the debate, when permission to speak is doled out in 2-minute tots and the members are thinking about the final vote and dinner, was anything much heard from those who oppose any shelter program at all.

In his 2 minutes, Representative George E. Brown, Jr. (D-Calif.) put forward strategic and psychological arguments for opposing the shelter program. "By the time a shelter program could be completed," said Brown, "new weapons development could completely negate the purported saving of 25 million lives and in fact could increase the casualties beyond the 100 million figure.

... If the U.S.S.R., or possibly other enemies, in the years to come, were to decide that their goal in an attack was to cause casualties to 100 million or 150 million, in all probability they will have the weapons to do it with."

Brown went on to say that a shelter program "creates a climate in which nuclear war becomes more credible, more reasonable, more acceptable to the American people." Brown said that, in his opinion, "the net result of a massive civilian defense program will be to increase chances of nuclear war by helping to establish a climate in which such war becomes acceptable."

One or two other members opposed to shelters asked to revise and extend their remarks in the *Congressional Record*, but there was no real debate on what might be termed larger issues of the shelter controversy.

Congress seems to have felt uneasy and uncertain about civil defense in general and shelters in particular in recent years, and it has been willing, perhaps even grateful, to take the advice of its own experts in the matter. Until last week, the House had looked mainly to the Thomas subcommittee of the Appropriations Committee for its leads. Last week the House was persuaded by what appeared to be conflicting advice from the Hébert subcommittee. Unless these apparent differences are reconciled, rank and file congressmen this year may find themselves faced with more difficult decisions on civil defense than they have been accustomed to.—JOHN WALSH

Announcements

Seven U.S. institutions and the University of Costa Rica have incorporated the **Organization for Tropical Studies (OTS)**, to develop "a sound program of education and research... available to the entire academic community of the Americas." Initial plans call for a cooperative program in the biological sciences, with later efforts in the other scientific disciplines. Instruction will be in Spanish and English. The U.S. members are the universities of Miami, Florida, Kansas, Southern California, Washington, Michigan, and Harvard. Norman Hartweg, professor of zoology at the University of Michigan, is the first president. Further information on OTS is available from its executive secretary, Jay Savage, Apartado 16, Ciudad Universitario, Costa Rica.

The National Aeronautics and Space Administration is inviting proposals for **space experiments** to be performed on the two-man Gemini spacecraft. The experiments should require manned observation or manipulation, or recovery of the experimental package. The Gemini project will consist of a series of two-man missions to orbit the earth. Scientists should submit both technical, and management and cost proposals. Thirty copies should be sent to the Office of Grants and Research Contracts, Code SC (Gemini project), NASA Headquarters, Washington, D.C. Deadline: *15 October*. (Further information is available from J. R. Gill, Code SM, NASA Headquarters)

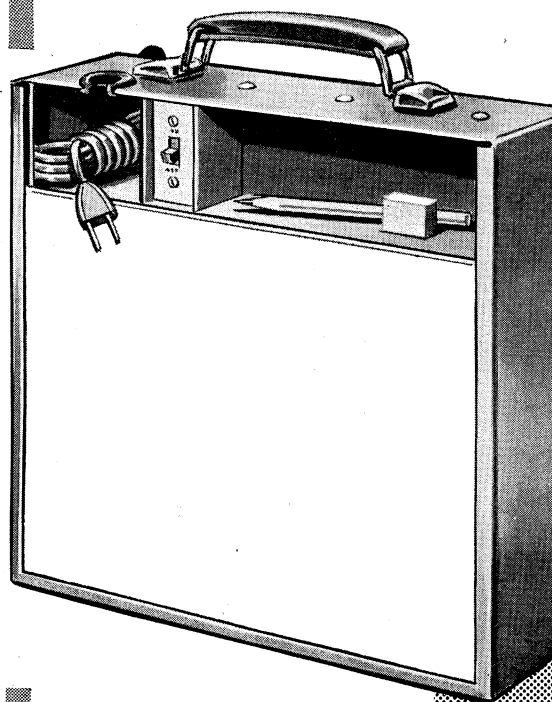
The ability of birds and mammals to adapt to cold will be studied at the University of Alaska's newly established **laboratory of zoophysiology**. The facility, supported by a grant from the National Institutes of Health, is the first unit of a planned Institute of Arctic Biology at the university. Its purpose is to analyze the processes by which animals, including man, become acclimated to the extremes of arctic winters and to the rapidly changing seasons. Laurence Irving, zoophysiology professor at the university, is head of the laboratory.

The University of Bridgeport, Conn., has begun a graduate program in **mechanical engineering**, leading to the master of science degree. Major work will be offered in solid mechanics, fluid

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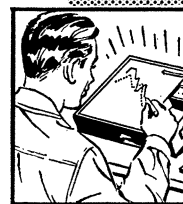
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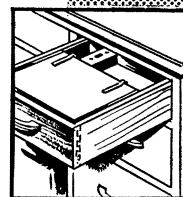
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Some examples of research programs initiated by the MRI staff:

In Metal Fatigue Investigations . . .

When a Senior Physicist joined MRI, one of his consummate interests was the small angle scattering of x-rays. This led to professionally rewarding work in metal fatigue which presently claims his main attention. Using x-ray diffraction and electron microscopy, this researcher and his team have been studying the relationship between fatigue mechanisms, subgrain structure and dislocation motion. Current investigations are concentrating on surface effects in crack propagation.

In Studies of Lubrication and Wear Mechanisms . . .

Research on lubrications for space applications was in its early stages when another Senior Physicist came to MRI. Suggestions by this researcher established several projects at MRI for lubricant and wear mechanism studies involving the energy of cohesion and the shear strength of graphite in a contaminant-free and known water-vapor atmosphere. A signal result of his efforts has been the development of high vacuum (10^{-13} Torr) equipment.

In High Temperature Chemical Reactions . . .

Another Senior Physicist had some ideas about reactions in oxidizing atmospheres. This led to mass spectrometer studies which occur in one-atmosphere flames at temperatures up to 3000°K, which have promise for unique and practical applications.

It is this environment, so receptive to the individual contributor, that has been responsible for many of the Institute's most significant achievements. Founded in 1944, MRI is concerned today with R&D efforts of national scope. Programs are expanding and a number of appointments are now being made in these areas:

In Chemistry

Physical Chemist, Ph.D., to study deposition of thin films, evaluate solid state properties of ultrapure materials and related areas.

In Physics

Solid State Physicist, Ph.D., to study theoretical basis of mechanical phenomena in crystals, with special reference to dislocation generation & elastic and plastic deformation.

Solid State Physicist, Ph.D., to investigate surface effects in dislocation motion, utilizing transmission electron microscopy and x-ray analysis. (Interest in conceptual planning of research.)

Physicist, M.S./B.S., to experimentally study the mechanisms and deformation in solids, using electron microscopy and x-ray analysis and stress measurement techniques.

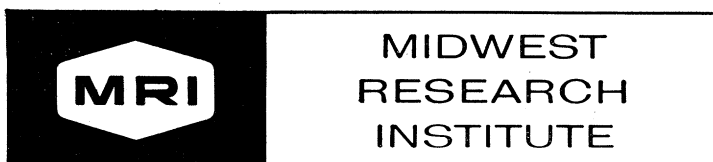
In Gas Dynamics

Senior Aerodynamicist, M.S./Ph.D., carry on fundamental studies in unsteady supersonic and hypersonic gas dynamics.

In Lubrication Engineering

Senior Engineer, M.S./Ph.D., to formulate, evaluate, and determine applications of solid lubricants to extreme environments.

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mechanics, or heat transfer and energy conversion. Registration is open to persons who have a bachelor's degree in engineering, mathematics, or physics from an accredited college. (W. P. Berggren, College of Engineering, University of Bridgeport, Bridgeport, Conn.)

Meeting Notes

A symposium on **organic geochemistry** is scheduled 10-12 October at the University of Texas, Austin. The topics to be discussed include the origin of petroleum, alkanes, Pre-Cambrian organic matter, geochemistry of stable isotopes, biological compounds formed under abiotic conditions, and organic constituents of sediments. (W. Shive, Chemistry Dept., University of Texas, Austin)

The American Meteorological Society has scheduled a national conference on the **physics and dynamics of clouds**, 24-26 March, in Chicago, Ill. Papers are invited on precipitation mechanisms, convection, thunderstorm electricity, cloud studies by satellite, and dynamics of cloud systems. Deadline for receipt of title and abstract: *4 November*. (D. L. Bradbury, Dept. of Geophysical Sciences, Univ. of Chicago, Chicago 37)

The first meeting of the **Society of Engineering Science** is scheduled 4-6 November in Lafayette, Indiana. Papers will be presented on continuum mechanics, plasma physics, transport theory, control processes, and systems analysis. The society was formed in January to "foster the advancement of engineering science and strengthen the bridge between scientific discoveries and engineering applications" through interdisciplinary research and collaboration on problems of common interest to scientists and engineers. (A. C. Eringen, Dept. of Aeronautical and Engineering Sciences, Purdue Univ., Lafayette, Ind.)

An international symposium on the thermal stability of **polymers** will be held at Battelle Memorial Institute, Columbus, Ohio, 5-6 December. Papers will be included on pyrolytic and thermal oxidative stabilities of polymeric structures, methods for studying thermal stabilities, and stabilizing various types of polymers. (P. B. Stickney, Battelle Memorial Inst., 505 King Ave., Columbus 1)

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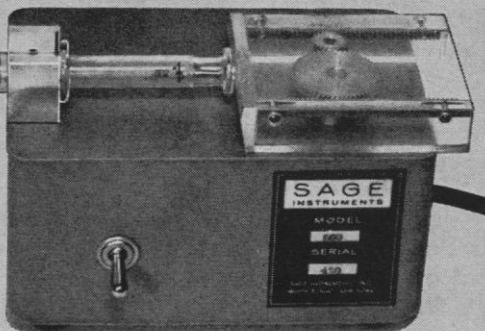
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Scientists in the News

Bernard E. Brodie, head of the Laboratory of Pharmacology at the National Heart Institute, has been named recipient of the 1963 Torald Sollmann award in pharmacology. The \$2500 prize is sponsored by the Wyeth Laboratories and the American Society for Pharmacology and Experimental Therapeutics, for "significant contemporary contributions to the advancement and extension of knowledge" in pharmacology.

Walter Auffenberg, associate director of the AIBS Biological Sciences Curriculum Study at the University of Colorado, Boulder, has become curator of natural sciences at the University of Florida. He is succeeded by **William V. Mayer**, associate dean of arts and sciences on leave from Wayne State University.

The new head of the department of organic research at the William S. Merrell Co., is **Robert W. Fleming**, formerly senior research chemist at Parke, Davis & Co.

Henry Irving Kohn, clinical professor of experimental radiology at the University of California, has been named first Alvan T. and Viola D. Fuller-American Cancer Society professor of radiology at Harvard University.

Robert W. Pennak, biology professor at the University of Colorado, has been elected chairman of the school's department of biology.

George B. Noland, associate professor of biology at the University of Dayton, has been appointed head of the school's biology department.

J. L. Franklin, research associate at Humble Oil and Refining Company, has been named Welch professor of chemistry at Rice University, on leave until 1 December.

The new president of the Ecological Society of America is **John F. Reed**, president of the Fort Lewis A&M College, Durango, Colo.

At Massachusetts Institute of Technology, **William S. von Arx** has been appointed professor of physical oceanography and **Henry M. Stommel** has been named professor of oceanography.

J. Robert Willson, professor and chairman of the department of obstetrics and gynecology at Temple University, has been named chairman of the obstetrics and gynecology department in the University of Michigan medical school.

Gertrude Rand Ferree, retired research associate in ophthalmology at the Knapp Foundation of the Columbia University College of Physicians and Surgeons, has been awarded the Gold Medal of the Illuminating Engineering Society. She is the first woman to receive the organization's highest honor.

Recent Deaths

William S. Chepil, 59; agronomy professor, University of Kansas, 6 September.

Mintin A. Chrysler, 91; research professor emeritus of botany, Rutgers University, 16 August.

Walter Cook, 64; dean of the college of education, University of Minnesota; 9 September.

Virginia Griffing, 46; chemistry professor, Catholic University, Washington, D.C.; 5 September.

Arthur Warren Hixson, 83; professor emeritus of chemical engineering, Columbia University; 8 August.

Donald S. King, 74; former professor of thoracic medicine, Harvard University; 30 August.

Walter S. Loewe, 79; research professor emeritus of pharmacology, University of Utah medical college; 24 August.

Sisir Kumar Mitra, 72; India's National Research Professor of Physics; 13 August.

Stephen Rothman, 68; professor emeritus of medicine, University of Chicago, 31 August.

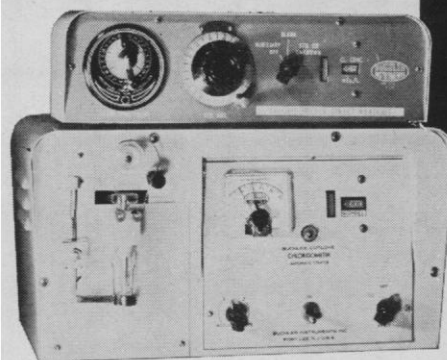
Charles Seymour, 78; retired president of Yale University; 11 August.

Erratum: In the report "Relative dating of Arlington Springs Man," by K. P. Oakley [*Science* 141, 1172 (20 Sept. 1963)], the value 10.4 in the line for Midland, Texas, in column 2 of Table 1 should have been 7.7.

Erratum: Several errors occurred in the announcement of awards for the Jane Coffin Childs Fund on page 894, 6 September. The announcement should have read:

The Jane Coffin Childs memorial fund for medical research is offering grants-in-aid and postdoctoral fellowships in the fundamental aspects of neoplastic growth. The awards are open to foreign as well as to U.S. citizens. Application deadlines for grants: 1 November, 1 March, and 1 September; for fellowships: 1 October (L. E. Lee, Jr., Childs Memorial Fund, 333 Cedar Street, New Haven 11, Conn.)

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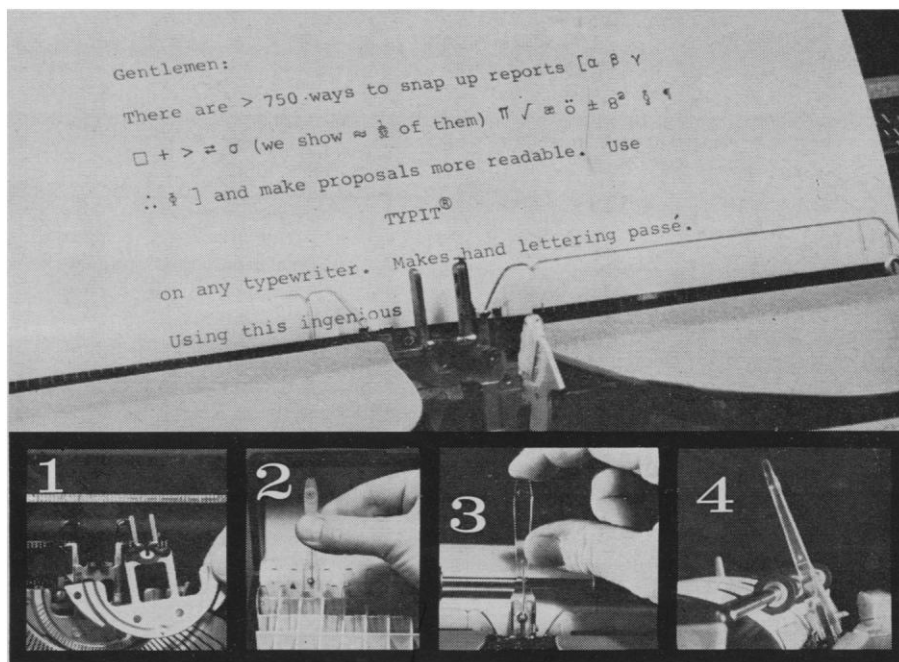
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