that the military and industry have become intertwined and have rooted themselves deeply into the American landscape: the Defense Department employs 3.5 million people and has a payroll double that of the automobile industry; four million people are directly employed in defense industry; 100 corporations receive 75 percent of defense procurement contracts, and these corporations now employ 1400 retired officers of the rank of major and up, including 261 generals or officers of flag rank. Many communities have become heavily dependent on military payrolls, among them, for example, San Diego, where 82 percent of all manufacturing jobs were in the aircraft missile industry in 1959.

From these facts, he moves to the heart of his thesis, which is that military men and industrialists helped produce the Cold War through their pathological aversion to the Soviet Union, and that now that they have enthroned themselves in the Cold War atmosphere, they successfully resist any attempts at a rapprochement with the Soviet Union. They succeed, he contends, because the economic welfare of the nation is tied to the prospect of war, and they are abetted in maintaining their dominance by a public relations apparatus that fills the press with war hawk material.

The measure of their success, he charges, is visible in many places, but most notably in U.S. failure to show a more compromising attitude toward a nuclear test ban and disarmament, in the fierce politicking that greets efforts to reduce defense expenditures in any locality, and in the growth of the radical right.

These, among others, Cook contends, are the visible outcroppings of the power wielded by an alliance that has come, in his view, to dominate the American government. Cook, thus, is offering a theory of omnipotent, unseen force, deducing its existence from the effects he attributes to it: He thereby invites the test of whether his theory can account for a number of things that have happened in the long and sorry history of the Cold War, in addition to those happenings that fit his theory.

For example, if the military-industrial complex is as dominant and as pathological as he claims it is, why wasn't the Soviet Union destroyed when the United States enjoyed an atomic monopoly? Why wasn't the complex able to save General MacArthur when Truman decided that the time had come to assert the supremacy of the civilian over the military? If the complex is dominant and infused with right-wing thinking, how do we account for General Walker's rapid transit from divisional headquarters to the psychiatric examining room?

If we accept Cook's contention that defense spending is so entrenched in American economic life, how do we account for the fact that between the Korean War and July 1960, Michigan's share of military prime contracts dropped from 9.5 to 2.7 percent; Illinois, Ohio, Indiana, and Wisconsin together had a total of 21.9 percent, which dropped to 9.1 percent. The nationwide total for defense spending went up, of course, but these areas, which are fully able to raise their voices in American politics, have suffered the effects of what, from their standpoint, might just as well have been a disarmament agreement.

If the military-industrial complex is dominant, why did the United States abstain from nuclear testing during the 3-year informal moritorium? Most military leaders were in agony over this decision, but it was not until the Soviets led the way that the United States resumed testing.

If Cook's theory of dominance is valid, why is the Air Force receiving only a fraction of the space funds that it requests? Why is the administration able to resist demands for a production program for the RS-70?

If the radical right is as potent as Cook makes it out to be, why did all three Birch Society candidates lose out in the congressional elections? Gerrymandering unquestionably had something to do with their misfortune, but what is gerrymandering to an overwhelming political tide?

And whatever happened to the radical right? Where is it?

If the military-industrial complex is running the show, how do we account for who's muzzling whom these days? Military men now can barely say the pledge to the flag without checking the text with the Pentagon's civilian bosses.

Cook contends that the dominance of the complex was demonstrated when "Congress, by the narrowest of votes," approved the establishment of the Arms Control and Disarmament Agency. The vote, as a matter of fact, was 290 to 64 in the House and 73 to 14 in the Senate. If we were to conclude that a narrow vote signified the dominance of the complex, are we to conclude that an overwhelming vote signifies its weakness?

Cook notes that the Foreign Policy Research Institute has proposed that we spend Russia into the ground by raising our military budget to $65 billion a year. Since the budget is only a little over $50 billion, what are we to conclude about the influence of the Institute? We might conclude that it has some dangerous notions, but that is quite different from concluding that it is shaping the nation's policies.

Finally, the political roots of the American test-ban position are many, deep, and not altogether clear, but the forces conjured up by Cook can legitimately cry "Foul" when he attributes to them parentage for the present watered-down position and some of its predecessors. The United States has come a long way on the test-ban issue and at present would happily sign a treaty if the Soviet Union were willing to run the risk of having a few non-Communists tramping across its soil perhaps a dozen times a year.

There is no doubt that the existence of a vast military establishment creates problems that severely strain this nation's governmental processes. But to conclude, as Cook does, that "there is hardly an area in our lives today in which the military influence is anything less than supreme" is to waste energy in a search for a political phantom.—D. S. GREENBERG

Announcements

The National Science Foundation has been designated by President Kennedy to correlate federal activities in the **International Year of the Quiet Sun** (IQSY), which will take place from 1 January 1964 through 31 December 1965. (It is expected that solar activity will be at a minimum during this period.) The U.S. program will consist of synoptic observations in solar activity, geomagnetism, aurora and airglow, ionosphere, cosmic rays, and meteorology, and studies of the sun, the interplanetary medium, solar-terrestrial relationships, and aeronomy.

NSF, working with the Office of Science and Technology, will assume responsibility for assuring that IQSY activities are consonant with the overall U.S. scientific program; it will also handle budgetary arrangements for any additional activities required beyond

those regularly carried out by federal agencies.

Programs of participating nations will be planned and coordinated by a special committee of the International Council of Scientific Unions. The U.S. is represented on this committee by the National Academy of Sciences' United States Committee for the IQSY, chaired by Martin A. Pomerantz of the Bartol Research Foundation.

Plans for an expanded research program to develop and test methods of numerically simulating **global weather conditions** have been announced by the U.S. Weather Bureau's General Circulation Research Laboratory, which was dedicated last week in Washington, D.C. Initial studies will be devoted to refinement of the known equations believed to govern weather changes. These equations, incorporated in a mathematical model, will be fed to a specially designed and programmed computer together with information on pressure, temperature, and other weather factors at 10,000 points around the world. The resulting predictions will be recomputed until a sufficient series has been made for final analysis and adaption for long-range forecasts. It is believed that further experimentation will reveal the possible effects of weather modification devices such as man-made clouds or artificial ground cover.

A "living science library" of basic laboratory equipment, intended to encourage junior and senior high school students in **health science** careers, was initiated last week in Minneapolis as a test project of Minnesota Blue Shield. The library includes microscopes, charts of anatomy and cell development, microscope slides and museum specimens of plants and invertebrates, models of internal and external parts of the human body, and Riker mounts of mosses, ferns, and insects. The first recipient of the 300-item collection is the Minneapolis Public Library, for use during its annual book fair. It is anticipated that the project will be made available annually to other community libraries throughout the state. (Marlin Bree, Minnesota Blue Shield, 2218 University Ave., St. Paul 14)

A Canadian **peace research institute** will be established this fall in Toronto to conduct studies on the causes and prevention of war. Directors of the institute include Brock Chisholm, former director-general of the World Health Organization; Hugh L. Keenleyside, former director-general of the U.N. Technical Assistance Administration; Franc R. Joubin, geologist and uranium mining specialist; and Gerard Pelletier, editor of the French-language newspaper, *La Presse*. Present plans call for a full-time staff of 25 physical and social scientists starting next year.

The program also includes an international peace research fund to provide other countries with financial aid for the establishment of similar research centers. The institute reports that the Canadian public has pledged $250,000 toward its operation. (Canadian Peace Research Institute, 341 Bloor St. W., Toronto 5)

Princeton University plans to establish a department of **astrophysical sciences** for research and graduate education in astronomy and astrophysics and in plasma, atomic, and molecular physics. Chaired by Lyman Spitzer, Jr., the new department will sponsor the existing plasma physics program that is currently a joint project of the departments of astronomy, physics, and aeronautical, electrical, and mechanical engineering. Initial work will include space-oriented research with balloon-borne telescopes, which have already been developed and operated under the direction of Martin Schwarzschild, the university's Eugene Higgins professor of astronomy. Future plans call for the development of rockets and satellite telescopes for extreme ultraviolet stellar spectroscopy.

Graduate students will be admitted to the department beginning next fall; fellowships and teaching and research assistantships will be available. (Lyman Spitzer, Jr., Department of Astrophysical Sciences, Princeton University, Princeton, N.J.)

Lehigh University's recently established **Center for Information Sciences** initiated an interdisciplinary instructional program last month with the first in a scheduled series of lecture-seminars. A full graduate-level curriculum, supplemented by courses in psychology, industrial engineering, philosophy, and mathematics, is planned for completion by 1965–66.

Research activities at the center, which began last spring, include the development of methodology for the analysis of information use, theory of information storage and retrieval, semantic and logical syntax of natural and artificial languages, computability of syntactic analysis, statistical properties of text, simulation of retrieval systems for analysis and evaluation, and programming for linear deduction in logic. (Robert S. Taylor, Center for Information Sciences, Lehigh University, Bethlehem, Pa.)

National standardizing laboratories throughout the world are to participate in an international program for comparison of the **measurement of radioactivity**. The U.S. Atomic Energy Commission has approved the export of radioactive americium-241 for use in the program; other nations, including the Soviet Union, are supplying additional radioisotopes. The americium, to be studied to determine its disintegration rate, will be distributed as microcurie standardized samples to participating laboratories, with a limit of five microcuries to any one country. Results of the comparison studies are to be made public upon completion.

Pathologists throughout the U.S. are invited to participate in a nationwide **bone sampling program**, initiated by the U.S. Public Health Service to identify and evaluate possible geographical and individual differences in levels of strontium-90 and other radionuclides in the human body. Specimens from deceased persons up to 25 years of age who were free of manifest disease that could have contributed to impaired calcium metabolism are desired; teeth and fetuses will also be examined. (Chief, Division of Radiological Health, PHS, Washington 25, D.C.)

A federally operated **geomagnetic observatory and magnetic test facility** is to be established in Dallas, Texas. The station, a joint undertaking of the U.S. Coast and Geodetic Survey, Texas Instruments Incorporated, and the Graduate Research Center of the Southwest, is designed to provide basic information on the character and origin of the earth's magnetic field and additional data of significance to the national space program. The basic observatory will include a variometer building and a structure to house an optically pumped magnetometer coil system or proton-precession head, or both; a separate magnetic test facility, to be operated by the Graduate Research Center, will contain instruments for nonroutine, precise magnetic measurements. Similar observatories are located near Tucson, Ariz., and Fredericksburg, Va.

Grants, Fellowships, and Awards

The U.S. Atomic Energy Commission is offering eight fellowships for advanced training in **industrial medicine**, particularly in relation to the atomic energy industry. The program, to begin about 1 July, consists of a 2-year academic phase and a year of in-plant or field training. The fellowships, which carry annual stipends of $5000 plus $350 for each dependent, apply only to the first 2 years; initial appointment is made for 1 year and may be renewed. The stipend (minimum, $7500) for the year of in-plant training, is paid by the organization that provides the training experience. Candidates must be U.S. citizens who have completed at least 1 year of internship and are licensed to practice medicine in one of the states or territories. Deadline: *1 January 1963*. (Henry A. Blair, Atomic Energy Project, University of Rochester School of Medicine, Rochester 20, N.Y.)

Educational Testing Service is offering two fellowships in **psychometrics**, providing full-time graduate work in psychological measurement, mathematics, and allied areas at Princeton University, and related part-time training with ETS. Candidates should have either a major in psychology, with supporting work in mathematics, or a major in mathematics together with some work in psychology. Annual stipends are $3950 plus dependency allowances. Deadline for receipt of applications: *4 January*. (Director, Psychometric Fellowship Program, Educational Testing Service, Princeton, N.J.)

Grants for **field research** in the Southern Appalachians are being offered by the Highlands (N.C.) Biological Station. Programs, supported by the National Science Foundation, include long-term comprehensive field studies in the gorges of the southeastern escarpment of the Blue Ridge Mountains, and research projects outside the gorge areas which require the station as a base of operations. (Executive Director, Highlands Biological Station, Highlands N.C.)

The Joint Institute for **Laboratory Astrophysics** has established a visiting membership program for ten scientists during the coming academic year. Appointments, which may be for 6-, 9-, or 12-month periods, will not be dependent upon citizenship or national origin, and recipients will not be obligated as to duties or study areas. Stipends (maximum $19,000 for 12 months) will normally equal the recipient's present salary, adjusted to the length of appointment; awards to foreign scientists will be based on an equivalent position in the U.S. Additional funds are available for initial transportation costs and professional travel. Deadline for application: *15 January*. (Secretary for Visiting Members, JILA, 1511 University Ave., Boulder, Colo.)

Meeting Notes

An international conference on the **application of large radiation sources in industry** will be held from 27 to 31 May in Salzburg, Austria. The conference—devoted primarily to applications of radiation in chemical processes—will cover recent progress in both fundamental and applied aspects of technological irradiation, economics, and possibilities for future research and development. Papers concerning the design of sources or their use in agriculture will not be accepted. Deadlines: 350-word abstracts, with indication as to whether material is new or a review, *2 January*; complete texts (3 copies), *1 April*. (John H. Kane, Division of Special Projects, Atomic Energy Commission, Washington 25, D.C.)

A charter flight is being arranged for American microscopists who wish to attend a symposium on **microscopy**, to be held from 22 to 26 July in Brighton, England. Papers will cover light, electron, and x-ray microscopy in biology, metallurgy, ceramics, chemistry, and physics. (Elizabeth Bitoy, McCrone Research Institute, 451 E. 31 St., Chicago 16)

The 2nd symposium on **manned space flight**, jointly sponsored by the Air Force Systems Command, NASA, and the Institute of the Aerospace Sciences, will be held from 22 to 24 April in Dallas, Texas. Unclassified sessions will cover launch vehicle technology, environmental control systems, guidance and control, and crew safety; sessions on spacecraft design and simulation programs will be confidential. Deadline for receipt of complete title and 250-word abstract (in triplicate): *1 December*. (A. I. Sibila, Chance Vought Corp., Astro Div., P.O. Box 6267, Dallas 22, Tex.)

Papers on various aspects of **thin film technology** in electronic application are solicited for a symposium to be held from 15 to 18 April in Pittsburgh. Acceptable topics include techniques for thin film deposition, monitoring, and testing; materials for specific application, such as magnetic, dielectric, superconducting, tunneling; experimental and theoretical properties; aging effects; compatibility with other thin films and various substrates; and devices and integrated circuits employing thin films. Deadline for receipt of 75-word abstracts (3 copies): *14 December*.

Short (5 to 10 minute) news papers describing recent research results are also desired. Deadline for submission of abstracts: *15 March*. (I. A. Lesk, Motorola Semiconductor Division, 5005 E. McDowell Road, Phoenix, Ariz.)

Courses

The 3rd winter institute in **quantum chemistry and solid-state physics**, established by the University of Florida in collaboration with the University of Uppsala, will be held at Gainesville (3–29 Dec.) and Sanibel Island, Fla. (31 Dec.–19 Jan.). The program consists of a preparatory course on elementary quantum chemistry, 3 to 8 December; the main course, 10 December to 12 January; and a symposium on atomic and molecular quantum theory, 14 to 19 January. (D. W. Smith, Chemistry Department, University of Florida, Gainesville)

A 10-week institute for high school teachers of **chemistry and physics** will be offered from 28 January to 5 April in Oak Ridge, Tenn. Sponsored by the U.S. Atomic Energy Commission, the program will be limited to approximately 20 participants, preferably science teachers, supervisors, specialists, and consultants. Other educational agencies actively involved in secondary-school science education may also participate. The tuition-free course will include laboratory sessions, seminars, and tours of atomic installations and laboratories. Facilities will be provided for teachers with special projects to develop their own methods and materials. Deadline for receipt of applications: *1 December*. (Oak Ridge Science Lecture Demonstration Program, Oak Ridge Institute of Nuclear Studies, P.O. Box 117, Oak Ridge, Tenn.)

Publications

An anthology of readings on the **Legal and Political Problems of World Order**—intended as a basic textbook for graduate courses in world law, disarmament, and related matters—has been published by the Fund for Education Concerning World Peace Through World Law, New York. Compiled and edited by Saul H. Mendlovitz, professor of international law at Rutgers University, the 858-page manual outlines reading assignments for 12 sessions. *World Peace Through World Law*, by Grenville Clark and Louis B. Sohn, is suggested as a companion text.

Courses based on the book are to be given during the current academic year at the University of Hawaii, Rutgers Law School, University of Colorado, and Inter-American University Law School, Puerto Rico. The extension divisions of Kansas State University, Victoria University (New Zealand), and the universities of Colorado, Oklahoma, Wyoming, Texas, and California will also offer the course. (Fund for Education Concerning World Peace Through World Law, 11 W. 42 St., New York 36. $2.25)

An accelerated project for the publication of comprehensive directories of **South American research workers and institutions** is being conducted by the Center for Scientific Cooperation for Latin America (Montevideo) under the joint sponsorship of the National Science Foundation and UNESCO. The project, headed by A. Establier, director of the center, is intended to increase the availability and exchange of information between scientists in the Americas. Previously scheduled for completion in approximately 10 years, the new program is now expected to be completed in 2 years. The number of published copies of each directory is to be increased from 1500 to 3000.

A reprint of papers on various areas of **documentation**, presented at the 1961 national "State of the Art" symposium, is now available. (American Documentation Institute, 1728 N St., NW, Washington 6, D.C. $2)

A directory of career information on **health professions and health-related sciences** is available free of charge from the National Health Council. The publication contains a list of national agencies that issue and distribute their own materials, an index of all career titles covered and sources of information on each, and supplementary notes suggesting additional sources. (National Health Council, 1790 Broadway, New York 19)

A technical and economic analysis of **air cushion vehicles** has been published by Transportation Research Associates. The 230-page study, including several full-scale illustrations, reviews the current technology and spotlights areas where significant breakthroughs can be expected (Transportation Research Associates, P.O. Box 167, Bowling Green Station, New York 4. $22.50)

Films

A National Committee for **Fluid Mechanics** Films was established in January of this year to produce experiment-demonstration films illustrating the theoretical aspects of fluid mechanics. The nine-member group, chaired by Ascher H. Shapiro of the Massachusetts Institute of Technology, is supported by a National Science Foundation grant under the administration of Educational Services, Inc., Watertown, Mass. A cooperating group of 19 educational institutions across the country has been formed to provide suggestions and criticisms on the effectiveness of the committee's program and the various methods for using film. The two films currently available are:

The Fluid Dynamics of Drag; 4 parts of 21, 32, 37, and 29 minutes; purchase ($500) or free loan. Illustrates the drag of streamlined and unstreamlined bodies moving through fluids of low and high viscosity and small and large density.

Vorticity; 44 minutes, purchase ($175) or free loan. Experimental illustrations of the physical significance of the ideas of vorticity and circulation and the related dynamical theorems of Crocco, Kelvin, and Helmholtz.

Half-hour films currently in production include *Flow Visualization Methods, Wave Phenomena in Fluid Dynamics, Surface Tension Phenomena in Fluid Dynamics, Nozzles and Diffusers in High-Speed Gas Flow, Pressure Fields and Acceleration Forces, Eulerian and Lagrangian Frames, Volume Kinematics, Separated Flows, Boundary Layer Control*, and *Fundamentals of Boundary Layers*. (Educational Services, Inc., 47 Galen St., Watertown 72, Mass.)

Scientists in the News

Albert H. Coons, visiting professor of bacteriology and immunology at Harvard Medical School, and a career investigator of the American Heart Association, has received the T. Duckett Jones Memorial award for his development of fluorescent antibodies. The $6500 award is presented annually by the Helen Hay Whitney Foundation, New York.

Recent staff appointments in the National Science Foundation's division of biological and medical sciences:

Herman Lewis, chairman of the life sciences department at Michigan State University, as program director for genetic biology.

Robert M. Johnson, associate professor of physiology and assistant director of the research foundation at Colorado State University, as associate program director for facilities and special programs.

Melvin C. Hobson, Jr., research associate at the University of Pennsylvania, has joined the staff of the Virginia Institute for Scientific Research, Richmond, as a senior research chemist.

Daniel R. Frankl, engineering specialist with General Telephone and Electronics Laboratories, Bayside, N.Y., is taking a leave of absence to serve as visiting professor of physical metallurgy at the University of Illinois during the current academic year.

Francis V. Wagner, director of computer facilities for North American Aviation, has been appointed director of plans and programs for Informatics Inc., a recently formed computer organization in Culver City, Calif.

John A. Swets, associate professor of psychology at Massachusetts Institute of Technology, has received a 1-year leave of absence to become senior scientist at Bolt Beranek and Newman Inc., Cambridge, Mass.

Antonio E. Colás, professor and head of the section of biochemistry and director of graduate studies at the University of Valle Medical School, Cali, Colombia, has been named associate professor in the departments of biochemistry and obstetrics–gynecology at the University of Oregon Medical School.

Thomas F. Jones, head of the electrical engineering school at Purdue University, has been named president of South Carolina University. He succeeds emeritus president **Robert L. Sumwalt**, who retired.

Howard E. Mitchell, of the University of Pennsylvania's department of psychiatry, has been appointed director of a nationwide project to study the number and distribution, roles, and functions of psychiatric aides in state and county mental hospitals. The project is being conducted by the National Association for Mental Health under contract with the National Institute of Mental Health.

James Wei, of Socony Mobil Oil Company's central research division, will serve as visiting associate professor of chemical engineering at Princeton University during the 1962–63 academic year.

Marion F. Brink, research biologist with the U.S. Naval Radiological Defense Laboratory, San Francisco, has joined the staff of the National Dairy Council, Chicago, as associate director of the department of nutrition research.

Ronald L. Martin, of Technical Research Group, Inc., Long Island, N.Y., has been appointed associate director of the particle accelerator division at Argonne National Laboratory (Ill.).

Gerrit Bevelander, former professor of histology at New York University, has been appointed professor and chairman of the department of histology at the University of Texas Dental Branch, Houston.

Marvin Mann, head of the New York Shipbuilding Corporation's test program for the *N.S. Savannah*, has been appointed assistant to the director of regulation for the U.S. Atomic Energy Commission.

John R. Smith, associate professor of medicine at Washington University School of Medicine, is serving a 1-year term as visiting professor of physiology at the Universidad del Valle, Cali, Colombia.

Robert A. Jones, of Rutgers University, has been appointed associate professor and chairman of the department of psychology at Seton Hall University, South Orange, N.J.

Riojun Kinosita has retired as chairman of the department of experimental pathology at the City of Hope Medical Center, Duarte, Calif., to devote full time to research. **Alfred G. Knudson, Jr.**, former chairman of the department of pediatrics, will head the newly formed department of biology, which consolidates the departments of experimental pathology, genetics, and the section of virology of the department of pediatrics.

Frank Moya, assistant professor at Columbia University's College of Physicians and Surgeons, has been named professor and chairman of the department of anesthesiology at the University of Miami School of Medicine. He succeeds acting chairman **Andrew R. Piergeorge**.

Jerome M. Glassman, former head of the department of pharmacodynamics at Wyeth Laboratories, Inc., has been appointed director of the pharmacological laboratories at U.S. Vitamin and Pharmaceutical Corporation, Yonkers, N.Y.

Max Fink, recently appointed research professor of psychiatry at Washington University, St. Louis, Mo., has been named the first director of the Missouri Institute of Psychiatry, St. Louis.

Herbert Friedman, recipient of the first $5000 Navy distinguished scientific achievement award presented in June of this year, has been granted an additional $5000 after further review of the accomplishments on which the original prize was based. Friedman, who is superintendent of the Naval Research Laboratory's atmosphere and astrophysics division, is credited with numerous discoveries and achievements in upper air research.

Robert E. Ascheman, assistant instructor and research assistant in the department of agronomy at Ohio State University, has been appointed senior plant physiologist at Eli Lilly and Company's Greenfield (Ind.) Laboratories.

John D. Tallant, physicist at the U.S. Department of Agriculture's Southern Regional Research Laboratory, New Orleans, has received a Fulbright lectureship to serve as professor of textile physics at the University of Barcelona (Spain) during the current academic year.

Newlin F. Paxson, professor and chairman of the department of obstetrics and gynecology at Hahnemann Medical College, Philadelphia, has retired as emeritus professor. He plans to continue as an active member of the medical staff.

Recent Deaths

Jan van der Bilt, 86; lector-emeritus and astronomer at the Utrecht Observatory, Netherlands; 21 Sept.

Godfrey L. Cabot, 101; chemist and founder of the Cabot Corporation; 2 Nov.

Robert T. Crane, 82; a founder and former executive director of the Social Science Research Council, New York; 23 Oct.

Emery M. Emmert, 62; professor of horticulture at the University of Kentucky; 6 Oct.

Carl M. Epstein, 50; director of adult psychotherapy service at the Menninger Foundation, Topeka, Kan.; 13 Oct.

Charles G. Evensen, 35; professor of geology at Arizona State University; 21 Oct.

Arild E. Hansen, 63; director of research at the Bruce Lyon Memorial Research Laboratory, Children's Hospital of the East Bay, Oakland, Calif.; 16 Oct.

Harriet Harvey, 42; associate professor of zoology at the University of Oklahoma; 18 Sept.

Earl H. Herrick, 59; professor of endocrinology at Kansas State University; 30 Oct.

John W. Kerr, 90; retired assistant surgeon general of the U.S. Public Health Service, division of scientific research; 27 Oct.

Eger V. Murphree, 63; president of Esso Research & Engineering Company, a vice president of Standard Oil of New Jersey, and general chairman of the 1960 AAAS annual meeting; 29 Oct.

Daphne P. Stamatis, 46; physician and cancer researcher for the National Institutes of Health and former head of the Cancer Institute at the National Medical College, Athens, Greece; 31 Oct.

Lloyd S. Tenny, 85; bacteriologist and former chief of the U.S. Department of Agriculture's Bureau of Agricultural Economics; 2 Nov.

Richard E. Trees, 42; physicist at the National Bureau of Standards; 27 Oct.