News Notes

New Congress Will Consider Many Conservation Issues

The new session of Congress promises to be an interesting one for conservationists, according to the National Wildlife Federation, for the Kennedy Administration is expected to launch new programs and develop different approaches to old ones. Until the inauguration on 20 January, Congressional activity will be principally devoted to reorganizing; the composition of most committees will change in both the House and Senate.

As always at the beginning of a new session, a host of bills will be introduced. Earliest consideration, however, may be directed to the budget. Conservationists will be especially interested in appropriations for water pollution control, chemical pesticides research, recreational facilities in national forests, fire-ant control, and public works, such as dam construction. No bills are carried over from the 68th Congress, and all proposals, including re-introductions, will be given new numbers and taken through the entire legislative process.

Some of the Issues

Some of the major conservation issues that probably will come before the 87th Congress are as follows.

Water pollution control. Several members of the Congress already have announced their intention to introduce bills to amend the Federal Water Pollution Control Act. At least one proposal, by Congressman John A. Blatnik (Minn.), probably will include increasing the authorization for federal grants to municipalities for construction of waste-treatment plants; strengthening federal law-enforcement authority in this field; and upgrading the status of the federal water pollution control program within the Department of Health, Education, and Welfare.

Oil pollution treaty. The Senate may be asked to allow the U.S. to accede to terms of the 1954 London Convention Relating to Pollution of the Seas by Oil. Such a proposal won the approval of the Senate Committee on Foreign Relations last year but did not reach the Senate floor.

Waterfowl wetlands. New proposals leading to the acquisition of waterfowl wetlands in both the U.S. and Canada may be introduced. Congress may be asked to authorize the Bureau of Sport Fisheries and Wildlife an advance loan for the immediate acquisition of U.S. wetlands, the funds to be repaid from sales of duck stamps.

Land retirement. In any farm program which proposes land retirement as a means of coping with the crop surplus problem, conservationists will be interested in the establishment of conservation practices, including those of particular benefit to wildlife.

Wilderness preservation. Additional consideration of the establishment of a Wilderness Preservation System probably will continue along lines of S. 3809 and H.R. 12951, so-called "clean" versions of the proposals which were introduced shortly before the 86th Congress adjourned last fall.

Multiple-use policy for public domain. Congress, which last year directed that national forests be managed in accordance with multiple-use principles, probably will be asked to establish a similar policy for public domain properties administered by the Department of the Interior.

Pesticide chemicals. Efforts to establish a "Chemical Pesticides Coordination Act," similar to one proposed in a bill which failed to pass the 86th Congress, are anticipated.

Automation of Industry Is Soviet Goal

The Soviet Union is launching a major effort to ultimately convert its industrial production to automation, according to a recent report by the Mathematics Center at the Martin Company's Research Institute for Advanced Studies (RIAS) in Baltimore. An 11-man panel has surveyed recent Soviet contributions to mathematics, evaluating research and attempting to identify special features that indicate the objectives of Soviet science. The panel concludes:

"There is reason to believe that the U.S.S.R. can achieve a rapid acceleration in its rate of technological progress by an all-out scientific program in the field of automatic control. It seems clear that they intend to make the effort and it is unwise to assume that they will not be successful."

This warning of a Russian bid for world supremacy in industrial production was based on 12 months of intensive study of Russian scientific journals and books, and on personal contact and scientific correspondence with Russian mathematicians over a period of years. Joseph LaSalle of RIAS, chairman of the special panel, said that the field of Russian mathematics is revealing "because the level of mathematics of a country is an important measure of the strength of its science and technology."

The panel concluded that "in mathematics the Soviet Union and the United States lead the world and are about at the same level." But the 350-page report predicts that the Soviet Union will move at a faster rate than the United States in advancing the application of mathematical theories because communication seems to be better between Russian than between American mathematicians and engineers.

Pointing out that all too many American mathematicians write only for each other, the report states, "Leading Soviet mathematicians have an interest in and contribute to both pure and applied mathematics. Soviet mathematicians make serious and successful efforts to communicate the latest theoretical advances to engineers and scientists."

The panel members surveyed the following fields of mathematics: algebra, control and stability, functional analysis, numerical analysis, probability and statistics, partial differential equations, and topology. (RIAS had previously published a study on Soviet nonlinear differential equations, by Solomon Lefschetz and LaSalle.) The detailed studies for each field will be published in book form in 1961 by the Macmillan Company.

Salary, Employment, and Education Data Released by Science Foundation

More than 110,000 scientists have answered a National Science Foundation questionnaire that is providing a statistical profile of the salary, experience, education, age, and other characteristics of this country's scientists. The data are being gathered and processed by the foundation's National Register of Scientific and Technical Personnel.

A preliminary report shows that in 1960 scientists had a median annual salary of $9000. The highest median salaries were earned by those employed in industry, those with a doctorate,

and those engaged in management or administrative duties.

Nearly half of the registrants reported that their foremost specialty was either in chemistry or the life sciences (agricultural, biological, and medical). Ten percent designated physics, and 9 percent mathematics. The largest single field designated as the foremost specialty was chemistry.

Sixty percent of the employed scientists indicated they held advanced degrees; 37 percent had the doctorate, and 23 percent had the master's.

Although the median age for full-time employed scientists was 38, one-fourth reported that they had had 20 or more years of professional experience; 60 percent, from 5 to 19 years.

The National Register of Scientific and Technical Personnel has been maintained by the foundation since 1953 to make available timely information on the supply and professional characteristics of scientific personnel in important fields. The questionnaires are circulated by scientific societies: the American Chemical Society, the American Geological Institute, the American Institute of Biological Sciences, the American Institute of Physics, the American Mathematical Society, the American Meteorological Society, the American Psychological Association, and the Federation of American Societies for Experimental Biology. Information from a total of about 250,000 scientists is expected.

Water Pollution Conference Recommends National Goals

Some 1200 people assembled in Washington, D.C., 12–14 December, for the National Conference on Water Pollution called by the U.S. Surgeon General at the request of President Eisenhower. (Registration undoubtedly would have been higher but for a severe snow storm.) The conference was organized to include a day of plenary discussions and a banquet, a day devoted to four separate panel discussions, and a day for summations. Virtually all water-use interests were well represented.

Although no formal votes were taken on conclusions, the four panel discussions developed 31 recommendations for the Department of Health, Education, and Welfare to consider in preparing a summary of the conference. The recommendations are to be condensed into the water pollution control goals, together with suggested programs, requested by Arthur S. Flemming, Secretary of HEW.

Recommendations

Panels 1 and 3 recorded their conviction "that the goal of pollution abatement is to protect and enhance the capacity of the water resource to serve the widest possible range of human needs, and that this goal can be approached only by accepting the positive policy of keeping waters as clean as possible, as opposed to the negative policy of attempting to use the full capacity of water for waste assimilation."

Panel 2 recommended adoption and publication of a national credo, that "(i) users of water do not have an inherent right to pollute; (ii) users of public waters have a responsibility for returning them as nearly as clean as is technically possible; and (iii) prevention is just as important as control of pollution."

These basic statements of philosophy, also enumerated in a plenary-session address by Ira N. Gabrielson of the Wildlife Management Institute, were objected to by a representative of the National Association of Manufacturers. He suggested modifications to make allowance for economic feasibility.

Panel 1 also recommended that the "public policy formally recognize the recreation value of our water resources as a full partner with domestic, industrial, and agricultural values in water quality management policies and programs."

Other recommendations were for more research, particularly into the relatively new fields of radioactivity, chemical pesticide, and thermal pollution; greater control of pollution from federal installations; increased dissemination to the public of pollution-control information; comprehensive watershed planning to include location of industrial sites and systematic stream-flow regulation; development of water-quality criteria and monitoring; recognition of soil conservation, sediment control, and salinity control as pollution abatement measures in resource-development programs; and realization of the value of federal grant-in-aid programs. Discussions revealed that differences of opinion exist concerning the extent to which the federal government should be committed for financial help in the construction of waste-treatment plants and for enforcement of water-pollution laws.

The four members of Congress who addressed conference participants at the banquet—Senators Robert S. Kerr (Okla.) and Francis Case (S.D.) and Representatives John A. Blatnik (Minn.) and William C. Cramer (Fla.)—said they would introduce or support legislation to amend the Federal Water Pollution Control Act. However, their approaches to the pollution control problem would differ.

News Briefs

U.S.–Chilean antarctic program. A cooperative program of antarctic research supported by the governments of Chile and the United States has been announced by the National Science Foundation. Five U.S. scientists recently left Valparaiso aboard a Chilean naval vessel to launch the program.

The United States will help Chile establish geomagnetic research at the Presidente Gabriel Gonzales Videla station by providing geomagnetic observing equipment. Chile, in return, will assist a U.S. expedition on the Palmer Peninsula by providing transport and helicopter support throughout the present antarctic summer.

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Industrial research increases. Private industry spent $9.4 billion for research and development in 1959, the National Science Foundation reports. This was 15 percent higher than the 1958 level and represents a continuation of an upward trend. However, estimates of such expenditures supplied to NSF by industrial firms indicate a somewhat smaller annual increase in 1960 (8 percent) than in 1959. More than half (57 percent) of the industrial research and development funds in 1959 came from the federal government.

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Protozoology. The first International Conference on Protozoology, arranged under the auspices of the Czechoslovak Academy of Sciences, will be held jointly with the 13th meeting of the Society of Protozoologists in Prague, 22–30 August 1961. Each session will consist of one or two general lectures by outstanding protozoologists invited by the Czechoslovak Academy and of short contributed papers. Simultaneous translation facilities will be provided.

Contributed papers are invited from all those interested, regardless of membership in the Society of Protozoologists. In the Western Hempshire, inquiries should be sent to the acting

secretary, Dr. Norman D. Levine, College of Veterinary Medicine, University of Illinois, Urbana, Ill. The abstract deadline at Urbana is *1 March 1961*. In the Eastern Hempshire, communications should be sent to Prof. Otto Jirovec, Charles University, Vinicna 7, Praha II, Czechoslovakia. The abstract deadline in Prague is *1 April 1961*. Those who wish to attend the meetings but do not wish to present a paper should write Jirovec to this effect, regardless of where they reside.

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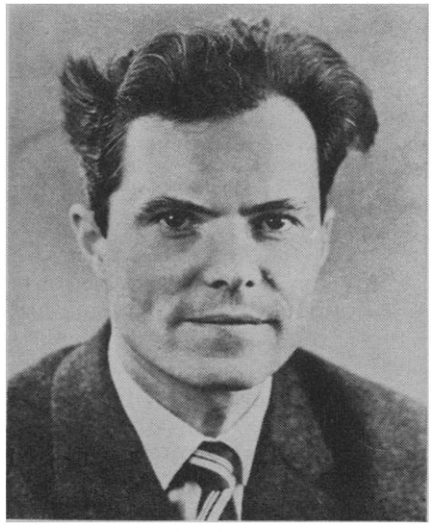
Biology film preview. At a recent preview, Roman Vichniac of Yeshiva University, research biologist and well-known photographer of microscopic life, showed the initial reel in the "Living Biology" experimental film series he is preparing to improve biology instruction in high schools and colleges across the nation. The film, "The Living Tide," is the first of 13 16-mm sound-color films to be produced under an 18-month grant from the National Science Foundation.

Scientists in the News

Rudolf L. Mössbauer, research fellow in physics at California Institute of Technology, has won the 1960 Research Corporation Award for discovering the radiation effect that now bears his name, the "Mössbauer effect." Mössbauer, who is on a 2-year leave from the Institute of Technical Physics in Munich, Germany, will receive the $5000 award on 19 January at the Research Corporation's annual dinner, at the Sheraton East Hotel, New York.



Rudolf L. Mössbauer

The editors of *Time* magazine have named 15 scientists as U.S. "Men of the Year," whose work "shapes the life of every human presently inhabiting the planet." This 34th annual selection of men or women who have "dominated the news . . . and left an indelible mark—for good or ill—on history" is the first in which more than one person has been named, except for 1937 when General and Madame Chiang Kai-shek were chosen. The 1960 "representatives of all science" who are featured in *Time*'s issue of 2 January are as follows:

Robert Woodward, 43, Harvard's Nobel Prize winner, is known for his syntheses of quinine, cholesterol, and, in 1960, chlorophyll.

Charles Stark Draper, 59, of Massachusetts Institute of Technology, is the aeronautical engineer largely responsible for the development of the inertial guidance systems that control far-ranging U.S. missiles, including the Polaris.

William Shockley, 50, physicist, earned a Nobel Prize, with two colleagues, for creating the transistor.

Emilio Segrè, 55, physicist, did much of his early work in his native Italy, collaborating with the late Enrico Fermi in perfecting the slow neutron process essential to production of the atomic bomb. He won a Nobel Prize for his research on anti-matter.

John F. Enders, 63, virologist associated with the Children's Medical Center in Boston, won a Nobel Prize for developing a poliomyelitis vaccine.

Charles Townes, 45, currently on leave from Columbia University to work at the Institute for Defense Analysis in Washington, is noted for his work with microwaves and his contributions to the development of the maser.

George W. Beadle, 57, Nobel Prize-winning head of the biology division at California Institute of Technology, initiated genetic investigations that led to the first explanations of the manner in which genes control enzymes and enzymes control the basic chemistry of life.

James Van Allen, 45, cosmic ray specialist at the State University of Iowa, conducted experiments with rockets and satellites that demonstrated the existence of the Van Allen radiation belts that girdle the earth.

Edward Purcell, 48, now on leave from his job as a Harvard physicist, won the Nobel Prize for his "nuclear resonance" system for measuring atomic properties. He has a special talent for reducing the complexities of science to understandable simplicity.

Edward Teller, 53, Hungarian-born physicist at the University of California, is best known for his contributions to the development of the H-bomb.

Willard Libby, 52, of the University of California at Los Angeles, received the 1960 Nobel Prize for his work with radioactive carbon dating.

Isidor I. Rabi, 62, now a part-time professor at Columbia University, won a Nobel Prize in 1944 for experiments in molecular physics which were vital to U.S. atomic research.

Linus C. Pauling, 59, Caltech chemist, won a Nobel Prize in 1954 for his chemical bond theory.

Joshua Lederberg, 35, won a Nobel Prize in 1958 for his discovery that bacteria infected with certain viruses may suffer hereditary changes. Now at Stanford's School of Medicine, he is concerned with exobiological research, with the ultimate objective of comparing the patterns of chemical evolution of the planets.

Donald Glaser, 34, of the University of California at Berkeley, received this year's Nobel Prize for his invention of a liquid hydrogen bubble chamber for photographing atomic particles. He is now conducting research in microbiology.

Roger Revelle, director of the University of California's Scripps Institution of Oceanography for the past decade, has been chosen dean of the university's new School of Science and Engineering in San Diego. Revelle retains his position as director of Scripps.

The school, designed to provide graduate instruction and basic research in the sciences and engineering, opened its doors to graduate students for the first time in September. Departments of physics, chemistry, and the earth sciences are already in operation. Other departments are planned. The school is the university's first step toward the establishment of a large general campus in the San Diego area.

Roland Dietz, of the Max-Planck Institut für Meeresbiologie, Abteilung Bauer, Wilhelmshaven, Germany, is serving as visiting professor of cytology at the Dartmouth Medical School for approximately 6 months. Using the rectified polarizing microscope, he is studying the fine structure of living spindle fibers and kinetochores in tipulid fly meiosis.

Joanne S. Malkus, meteorologist at the Woods Hole Oceanographic Institution, Woods Hole, Mass., has accepted a professorship in the department of meteorology at the University of California, Los Angeles. She goes to her new post in January.

Charles A. Doan became dean emeritus of the College of Medicine at Ohio State University on 1 January. He remains a professor in the college. The former associate dean, **Richard L. Meiling**, has assumed the deanship.

William P. Shepard, who is retiring shortly as chief medical director of the Metropolitan Life Insurance Company, has accepted the office of associate director of the Institute for Advancement of Medical Communication (in New York), a nonprofit organization engaged in developing improved methods for communication within and between disciplines in the health sciences.

Wayne State University has created a university professorship with the aid of a $110,000 grant from the McGregor Fund. **John M. Dorsey**, internationally known psychiatrist, is the first appointee. He will leave the chairmanship of the psychiatry department at the College of Medicine to assume his new duties on 1 February.

As presently conceived, the university professor will not be attached to a specific department; rather, as "generalist" for the whole academic community, he will be responsible for a limited number of regular credit courses of wide usefulness to the student body and also for bringing to the campus, as lecturers and visitors for the benefit of the students, men who have "wholeness of vision."

John C. Cutler, U.S. Public Health Service specialist in venereal disease control, has been appointed assistant director of the Pan American Sanitary Bureau, regional office of the World Health Organization in Washington, D.C. For the past year he has been assigned to the Allegheny County (Pa.) Health Department as director of its Central Health District. He has also been adjunct associate professor of public health practice at the University of Pittsburgh.

Cutler is succeeded in the Allegheny County post by **Warfield Garson**, who has been director of the PHS Venereal Disease Experimental Laboratory in Chapel Hill, N.C., since 1955.

John R. Amberg, director of radiology at Milwaukee County Hospital, Milwaukee, Wis., has been appointed associate professor and chairman of the new department of diagnostic radiology in Marquette Medical School's Radiology Division. The division also has a newly established department of radiation therapy, which will be headed temporarily by division chairman **S. B. Morton**.

Clark K. Sleeth, long-time member of the medical faculty at West Virginia University, has been appointed dean of the institution's School of Medicine, effective 1 January. He succeeds **E. J. VanLiere**, who reached retirement age last October but has remained in the position of dean. Sleeth is a specialist in gastrointestinal physiology.

The American Society of Agronomy presented its three highest awards during its recent meeting in Chicago.

Michael Peech of Cornell University received the society's soil science award; **S. T. Dexter** of Michigan State University, the crop science award; and **J. K. Patterson** of Washington State University, the agronomic education award.

John C. R. Kelly, Jr., formerly manager of the technology department of the Westinghouse research laboratories, has been named to the newly created position of director, centralized technical services, of the Westinghouse central laboratories. In this position he will consolidate and administer the technical services formerly supplied by separate departments of the research laboratories and the Westinghouse materials laboratories. These laboratories are among those being brought together with the new products laboratories, the headquarters design laboratories, and the patent department into a new Westinghouse research and development center now under construction in Churchill Borough, near Pittsburgh.

Nisson A. Finkelstein, research physicist, has been appointed vice president in charge of research for the Stromberg-Carlson Division of General Dynamics Corporation, Rochester, N.Y., effective 1 January. He joined Stromberg-Carlson in 1959 as assistant vice president and director of research.

F. Eugene Nelson, formerly professor of dairy science at Iowa State University, has joined the University of Arizona's College of Agriculture.

Recent Deaths

Mark Balderston, Easton, Pa.; 71; professor emeritus of physics at Lafayette College, where he served from 1926 until his retirement in 1959; 19 Dec.

Eric Temple Bell, Watsonville, Calif.; 77; emeritus professor of mathematics at California Institute of Technology and a specialist in the theory of numbers, who developed several important theorems; in addition to many technical papers and several well-known textbooks, wrote popular works in mathematics, including a series of science-fiction novels under the name of John Taine; was working on a book about the 7th-century French mathematician Fermat; was a member of the National Academy of Sciences, a former president of the Mathematics Association of America, and a former vice president of the physical science section, AAAS, and of the American Mathematical Society; former editor of various scientific journals; 20 Dec.

Martin R. Huberty, Los Angeles, Calif.; 66; acting dean of the University of California's College of Agriculture at Los Angeles, director of the Water Resources Center, and professor of irrigation, soil science, and engineering; 12 Dec.

Karl Lehmann, Basle, Switzerland; 66; archeologist and professor at the Institute of Fine Arts of New York University; since 1938 had directed the expedition excavating the ancient Greek religious sanctuary on the island of Samothrace, in the Aegean Sea, under the auspices of N.Y.U. and in cooperation with the American School of Classical Studies in Athens; an authority on Greek and Roman art, archeology, religion, and philology, he wrote a number of books, among them a definitive work on Trajan's column in the Forum of Trajan, a three-volume study of ancient bronzes, and a book on the ancient ports of the Mediterranean; 17 Dec.

Valy Menkin, Kansas City, Mo.; 59; head of the pathology department of the dental school at the University of Kansas City; former head of the experimental pathology department at the Temple University School of Medicine; member of the Royal Society of Medicine in London; had isolated nine substances in investigations of various biological manifestations of inflammation and was the first to demonstrate the anti-inflammatory property of cortisone; 13 Dec.