

rate nearly 40 times the rate among non-smokers. Although no precise calculation can be made of the proportion of life-long heavy cigarette smokers who will die of lung cancer, the evidence suggests that, at current death-rates, it is likely to be of the order of 1 in 8, whereas the corresponding figure for non-smokers would be of the order of 1 in 300. The observation on the effect of giving up smoking is particularly important, since it indicates that men who cease to smoke, even in their early forties, may reduce their likelihood of developing the disease by at least one half. . . .

"Knowledge of the causation of lung cancer is still incomplete. Many factors other than tobacco smoking are undoubtedly capable of producing the disease; for example, at least five industrial causes have been recognized. Nevertheless, the evidence for an association between lung cancer and tobacco smoking has been steadily mounting throughout the past eight years and it is significant that, during the whole of this period, the most critical examination has failed to invalidate the main conclusions drawn from it. . . . The epidemiological evidence is now extensive and very detailed, and it follows a classical pattern upon which many advances in preventive medicine have been made in the past. . . ."

## PIRATE

The Pacific Science Board of the National Academy of Sciences-National Research Council is sponsoring a 3-year study of the biology and ecology of rats on Pacific islands. Rats occur on most of these islands, where they play a dominant, and often disruptive, part in the ecology of the biotic community. The scientific literature indicates, however, that no fundamental research on island rat populations has been carried out in recent years. The few local studies of rat biology have been of brief duration and restricted in scope.

Field work was started in the summer of 1955 at Ponape in the U.S. Trust Territory, a tropical island of 130 square miles that has mountains rising 2500 feet and a population of about 6000. The civil administrator has made available the facilities of the Agricultural Station as well as housing and other forms of assistance.

The investigation, known as the PIRATE (Pacific Island Rat Ecology) Project, is designed to gather data on the normal activities of rats on both high islands and atolls. The common local species are the black rat (*Rattus rattus*) and the Polynesian rat (*Rattus exulans*), while about the buildings there are Norway rat (*Rattus norvegicus*) and the house mouse (*Mus musculus*).

The principal investigator of this project is Tracy I. Storer of the University of California at Davis, who is assisted by ten project consultants. The field research team, which has a changing membership, includes Joe T. Marshall, Jr., University of Arizona (1955-56); William B. Jackson, formerly with the U.S. Public Health Service (1955-57); Robert L. Strecker of Miami University (1956-58); and Kyle R. Barbehenn, formerly with the Army Chemical Center (1957-58).

The PIRATE program is made possible as a result of generous assistance from the Administration of the Trust Territory of the Pacific Islands, logistic support from the Office of Naval Research, and financial assistance from the National Science Foundation and National Institutes of Health. Storer would appreciate receiving any information on Pacific Island rats that might be helpful to the research team or that might be evaluated in the preparation of the final report of the project.

## National Foundation for Infantile Paralysis Fellowships

The National Foundation for Infantile Paralysis offers postdoctoral fellowships in research, academic medicine, or the clinical fields of psychiatry, rehabilitation, orthopedics, the management of poliomyelitis, and preventive medicine and also in the medical associate fields of social science, health education, physical therapy teaching, and occupational therapy teaching.

Financial support of the fellow varies according to his previous education, professional experience, marital status, and number of dependents. Compensation to the institution is arranged according to the program undertaken. For a full academic program, tuition and fees are allowed; for other programs, a sum not to exceed \$1250 per year (includes tuition) is provided.

All awards are made upon recommendation of the appropriate National Foundation Fellowship Committee. U.S. citizenship is required, but those who have filed a petition for naturalization will be considered. Partial fellowships are available for qualified veterans to supplement G.I. educational benefits.

The National Foundation has authorized the expenditure of \$26,500,000 since 1938 for scholarships and fellowships, and for aid to educational institutions, professional organizations, and related activities. Current deadlines for applications in the medical and medical associate fields are 1 Sept. and 1 Dec. for consideration in November and February, respectively. For further information write to: Division of Professional Edu-

cation, National Foundation for Infantile Paralysis, 301 E. 42 St., New York 17, N.Y.

## Los Alamos Group on Nuclear Tests

The Los Alamos Chapter of the Federation of American Scientists, which has about 50 members who are employed at the Los Alamos Scientific Laboratory, has released a statement entitled "Putting nuclear weapons testing in perspective." The statement expresses concern about the arguments presented to President Eisenhower recently by E. O. Lawrence, Edward Teller, and Mark Mills in favor of continuation of nuclear tests to develop "cleaner" bombs. In the company of Atomic Energy Commission Chairman Lewis L. Strauss, the three physicists from the University of California Radiation Laboratory are reported to have said to the President: "Give us four or five years to test each step of our development and we will produce an absolutely clean bomb."

The FAS Los Alamos group says:

"We are encouraged by some recent improvements in the prospects for agreement in the London disarmament talks. At the same time we regret that recent highly publicized views of Drs. Ernest O. Lawrence, Edward Teller, and Mark M. Mills were subject to interpretation as an oblique attack on initial forms of the U.S. disarmament proposals.

"The dominant concern of U.S. policy must be to seek out and to take all equitable steps in disarmament and in international relations which can be expected to diminish the risk of war. When placed in contrast with this objective, technical improvements in the means of waging war are insignificant. Therefore, it is urgent that the technical reasons recently publicized for continuing nuclear weapons tests be put in proper perspective. . . . The choice which faces us now is not so much between 'clean' and 'dirty' bombs, but rather between a world in which war and, therefore, nuclear bombing will occur, and a world in which we shall be free of their scourge.

"A secondary technical reason offered for continuing weapons testing is the hope that such testing may contribute to the development of peacetime uses of atomic energy. To the extent that there is a basis for this hope, we stress that the appropriate auspices for such a program would be provided by the inspection and supervision of a U.N. Commission, rather than by the competitive concealment of secret weapons programs. . . .

"We are reassured by President Eisenhower's firm statement that this country will not be deflected from its offers to ban, under appropriate conditions, the

testing and production of nuclear weapons, despite the technical reasons that have recently been advanced for continuing military programs for nuclear weapons testing. We share the President's conviction regarding the importance of the London disarmament negotiations as a means through which this country may move closer to a basis for security through world peace."

## Financial Help for

### Type Culture Collections

The International Association of Microbiological Societies has at its disposal certain limited funds, which it receives from the International Union of Biological Sciences, for assisting the work of type culture collections of microorganisms. Curators of such collections who make their type cultures internationally available and require financial help for this purpose are invited to make application *immediately*, specifying their need, to the secretary of the IAMS, Prof. G. Penso, Istituto Superiore di Sanità, Viale Regina Elena, 299, Rome, Italy.

### Heart Association Fellowships

The American Heart Association has announced that applications by research investigators for support of projects to be developed during the fiscal year beginning 1 July 1958 are now being accepted. Funds for association-supported research in the cardiovascular field are provided by public contributions to the Heart Fund. At least half of all funds received by the American Heart Association's national office are allocated to research.

The deadline for research fellowship applications and established investigatorships is 15 Sept. Applications for grants-in-aid must be made by 1 Nov. Further information and applications may be obtained from the medical director of the American Heart Association, 44 E. 23 St., New York 10, N.Y.

### African Locust Peril

The 20-nation United Nations committee on desert locust control has warned against an approaching plague of locusts in Africa and the Middle East. An infestation comparable to the disastrous invasion of 25 years ago is expected.

Heavy crop damage has already been experienced in Libya and Tunisia. Extensive summer breeding of the insect is now under way in Equatorial Africa, and swarms are expected to escape to surrounding countries from widespread

breeding grounds in central and southern Arabia. In the Somali peninsula, breeding of scattered local swarms has also been augmented by outside swarms, and further invasions are expected. The developments are described as a departure from the normal pattern of the locust cycle, with three generations of locusts and perhaps a fourth involved, as against the usual cycle of one or two generations.

Under the auspices of the Food and Agriculture Organization, the mobilization of men and equipment and a centralized system of locust control have been on an international basis since 1952, with offices in Saudi Arabia and Ethiopia. The committee has recommended establishment of a third center to coordinate the work in northern, northwest, and western Africa.

### Fish Collection

The collection of type specimens of fishes described principally by William Beebe, director of the department of tropical research of the New York Zoological Society, and his staff has been donated to the United States National Museum and to Stanford University. The division of this collection was made on a geographic basis. The types of species described from Atlantic Ocean localities are now in the National Museum, those from the Pacific in the Natural History Museum, Stanford University. A detailed list of the type specimens of fishes resulting from Beebe's work and their present location is in preparation.

### Team Work on Embryology

The Hubrecht Laboratory in Utrecht, Holland, organizes projects for international research teams every 2 years. The third team will meet in 1958 from 15 Mar. to 15 Sept. The general topic will be "A morphological and physiological analysis of regulative and nonregulative processes in the development of mosaic eggs of several terrestrial and fresh-water invertebrates." The general idea of international cooperation in science, as well as specific scientific aims, is the goal of these projects.

The team is open to postgraduates in biology and related sciences. It is particularly meant for young staff members who will be able to continue their work afterward. The size of the team will be limited to 10 participants; as many nations as possible will be represented. Either English, French, or German will be chosen as the communicating language, depending on the familiarity of the participants with these languages. The closing date for application is 15 Sept. 1957. Those interested should write

to the director of the Hubrecht Laboratory, Janskerhof 2, Utrecht, Holland, and include information about their scientific education and personal record and two letters of recommendation from well-known scientists.

### Chymia

The publication of *Chymia*, an annual devoted to the history of chemistry, will be resumed in the spring of 1958 with volume 5. The publication is now sponsored jointly by the Edgar Fahs Smith Collection of the University of Pennsylvania and the Division of the History of Chemistry of the American Chemical Society. All papers will be published in English.

The editor-in-chief is Henry M. Leicester, College of Physicians and Surgeons, San Francisco, Calif., and all articles for publication should be submitted to him. The journal will be published by the University of Pennsylvania Press, 3436 Walnut St., Philadelphia 4, Pa.

### New Journals

*Dermatologia*. Revista Mexicana. vol. 1, No. 1, July-Sept. 1956. Obdulia Rodríguez, Ed. Asociación Mexicana de Acción contra la Lepra, 1 Calle Dr. Garcidiego No. 21, México 7, D.F. Three times a year. \$5.

*Illinois Journal of Mathematics*. vol. 1, No. 1, Mar. 1957. J. L. Doob *et al.*, Eds. University of Illinois, Urbana. Quarterly. \$9 per vol. (four numbers).

*Journal of Microbiology, Epidemiology, and Immunobiology* (translated from the Russian). D. J. Bauer, scientific translation editor. Pergamon Institute, New York. Monthly. \$50 per year.

*Journal of Molecular Spectroscopy*. vol. 1, No. 1, July 1957. Harald H. Nielsen, Ed. Academic Press, New York. Bimonthly. \$10 per vol.

*Microchemical Journal*, vol. 1, issue 1, 1957. Nicholas D. Cheronis *et al.*, Eds. Interscience, New York. Semiannually. \$9.60 per year.

*Nuclear Instruments*. On accelerators, instrumentation, and techniques in nuclear physics. vol. 1, No. 1, Jan. 1957. K. Siegbahn, Ed. North-Holland, Amsterdam. Bimonthly. \$17 per vol.

*Population Review*. Asian demography. vol. 1, No. 1, Jan. 1957. Indian Institute for population Studies, Madras 20, Semiannually. R. 10.

*Scopus*. vol. 1, No. 2, May 1957. Hebrew University, Jerusalem.

*SRI Journal*. vol. 1, No. 1, Jan.-Mar. 1957. Charles A. Scarlott, Ed. Stanford Research Institute, Stanford, Calif. Quarterly. \$4.

*Tetrahedron*. International journal of