SCIENTIFIC EVENTS

THE SOIL CONSERVATION SERVICE

THE annual report to the Secretary of Agriculture of H. H. Bennett, chief of the Soil Conservation Service, has been made public. He points out that the effectiveness of soil and water conservation at flood sources in minimizing floods is substantiated by several established facts:

1. Flood loads are due in large part to rapid surface run-off of rainfall or melting snow and the quick concentration of this water in stream channels.
2. The upland soils of a watershed constitute a storage reservoir capable of absorbing or retaining enough water to prevent, or at least greatly reduce, critical flood crests in the lower drainageways.
3. Proved and adaptable procedures to hold water in the soil are now available.

Mr. Bennett states that at the close of the year there was a wide-spread and growing conviction that the solution of the nation's flood problem lies in a coordinated watershed program of prevention and control in which the upstream farmer will reinforce with soil and water-saving practices the downstream fortifications of the engineer at critical areas of great danger. The former would prevent floods as far as possible and the latter would control critical flood crests when they do arise. To show the effectiveness of soil- and water-conserving practices in the alleviation of flood and drought conditions, Dr. Bennett cites data obtained by the Soil Conservation Service at its erosion experiment stations throughout the Great Plains.

The field activities of the service were considerably enlarged in the fiscal year. The number of demonstration projects was increased from 47 to 143 and the area of privately-owned land under cooperative agreement increased from approximately 4,000,000 to 7,000,000 acres. By July 1, 1936, nearly 18,000 farmers had signed voluntary agreements to cooperate with the service.

From a technical standpoint, the demonstration program remained unchanged during the year. It continued the introduction of such beneficial farming practises as strip cropping, contour tillage and contour furrowing; the construction of terraces, check dams and water-spreading dikes; woodland and gully plantings, and the retirement of steep slopes and badly eroded areas from cultivation.

More than 430,000 acres in the soil conservation demonstration projects, including the CCC camp areas, have been strip-cropped. Almost 200,000 acres have been contour-furrowed, and more than 900,000 acres have been tilled on the contour. Almost 38,000 miles of terraces, together with more than 200,000 terrace outlet structures, have been completed. Approximately 900,000 small dams have been built to check the run-off of rainfall and the spread of gullies.

In addition to these demonstration activities on private land areas, the service is conducting erosion control work on four large areas of federal and public land. These projects are the Navajo Indian Reservation of 17,000,000 acres in New Mexico and Arizona; the upper Gila River watershed, including the San Pedro and Santa Cruz tributaries, comprising 13,900,000 acres in New Mexico and Arizona; the Rio Grande watershed above Elephant Butte Reservoir, embracing 14,300,000 acres in New Mexico, and the entire Shoshone Indian Reservation of 2,400,000 acres in Wyoming.

RESEARCH PROGRAM OF THE FOOD AND DRUG ADMINISTRATION

AT the request of Secretary of Agriculture Wallace, the National Academy of Sciences, through its president, Dr. Frank R. Lillie, has appointed a committee for the purpose of reviewing the research program on the toxicity of lead and arsenic now under way in the Food and Drug Administration. The committee appointed by Dr. Lillie, that recently held its first meeting in Washington, consists of Professor A. J. Carlson, of the University of Chicago, *chairman;* Professor C. K. Drinker, of Harvard University; Dr. Ludvig Hektoen, McCormick Institute for Infectious Diseases and chairman of the National Research Council; Professor H. C. Sherman, of Columbia University, and Professor Torald Sollmann, of Western Reserve University School of Medicine.

The problem of the degree of toxicity of lead and arsenic occurring in the form of spray residues on fruits and vegetables has long been a troublesome one. Fruit and vegetable growers are obliged to use lead arsenate sprays to guard their crops against insect pests. Such sprays are useless unless they are sufficiently poisonous to destroy the insects. The residues remaining, if in sufficient quantity, are also dangerous to consumers. There is no difference of opinion among scientific men as to the poisonous character of both lead and arsenic. Authorities differ only upon the amounts of these poisons which may be consumed without damage to health.

The Food and Drug Administration of the Department of Agriculture has for years been carrying on a campaign under the Food and Drugs Act to remove from the market consignments of fruits and vegetables bearing what are considered dangerous amounts of poisonous residues. Other bureaus of the department have developed washing methods and appliances for

the removal of excess residues before the products are shipped, and these are in very general use, particularly in the apple industry. The present tolerances were adopted on the basis of advice given by a committee of toxicologists called together for consultation about ten years ago. That committee, in recommending the tentative tolerances which are essentially those now in effect, recommended further researches to fill out some of the gaps in scientific knowledge of the subject and determine more conclusively than has heretofore been possible at what figure permanent tolerances for lead and arsenic should be set to guarantee public health protection.

With an increase in appropriation for the enforcement of the Food and Drugs Act granted to the department two years ago by Congress, the Food and Drug Administration organized a Division of Pharmacology under the leadership of Dr. Edwin E. Nelson, who was furloughed by the University of Michigan, for the purpose of selecting competent personnel and formulating a comprehensive program of research on the toxicity of lead and arsenic as well as on other problems. Having completed the organization of the division, Dr. Nelson returned to the University of Michigan on October 1, where he is now professor of pharmacology. He continues to assist the division, however, in a consulting capacity. Dr. Nelson was succeeded as chief of the division by Dr. Herbert O. Calvery, biochemist. The division consists of twelve technically trained men, including eight biochemists and nutritionists, three pharmacologists and one pathologist.

As the first and most important subject for consideration by the new division, Dr. Nelson and Dr. Calvery outlined the research project for the study of the toxicity of lead and arsenic, which will be continued over a period of some years, with the objective of giving a scientific answer to the question as to what are safe tolerances for these poisonous substances.

THE ANNUAL MEETING OF THE GEOLOGICAL SOCIETY OF AMERICA

THE forty-ninth annual meeting of the Geological Society of America was held at the Netherland Plaza Hotel, Cincinnati, from December 29 to 31.

Nearly six hundred persons registered for the meeting. The scientific program carried one hundred and fifteen titles, and the programs of the associated societies, the Paleontological Society and the Mineralogical Society of America, were also crowded.

The address of the retiring president, Dr. Walter C. Mendenhall, entitled "Outline of the Evolution and Present Status of Geology in North America," was delivered on the evening of December 29.

The annual dinner was held on the evening of the thirtieth. The ninth award of the Penrose Medal of the Geological Society of America was made at this time, the recipient being Professor Arthur Philemon Coleman, professor emeritus of the University of Toronto. The presentation address was made by Professor George D. Louderback, chairman of the Medal Award Committee.

On the afternoon of December 30, Dr. Isaiah Bowman made a radio address over Station WLW, entitled "Geology in the Evolution of Culture."

The officers of the society for the year 1937, elected at the annual meeting, are as follows:

President, Charles Palache
Past-President, Walter C. Mendenhall
Vice-Presidents, W. O. Hotchkiss, Charles Camsell, G. D. Harris, W. S. Bayley
Secretary, Charles P. Berkey
Treasurer, Edward B. Mathews
Councilors, Hoyt S. Gale, Chester R. Longwell, M. M. Leighton, Joseph T. Singewald, Jr., Walter H. Bucher, Russell S. Knappen, E. L. Bruce, Joseph Stanley-Brown, G. F. Loughlin

The following geologists were elected foreign correspondents:

Lucien Cayeux, Paris, France
Arthur Holmes, Durham, England
Louis de Launay, Paris, France

The following is the list of newly elected fellows:

John Emery Adams, Midland, Texas
John Hodgdon Bradley, Jr., Los Angeles, California
Carl Colton Branson, Providence, Rhode Island
Roland Wilbur Brown, Washington, D. C.
Edwin Harris Colbert, New York, N. Y.
George Vibert Douglas, Halifax, Nova Scotia
Lloyd Wellington Fisher, Lewiston, Maine
Paul Pavel Goudkoff, Los Angeles, California
Philip Krieger, New York, N. Y.
William Christian Krumbein, Chicago, Illinois
Ralph Maxwell Leggette, Jamaica, New York
Evans Blackmore Mayo, Bishop, California
Simeon William Muller, Stanford University, California
William Thomas Nightingale, Rock Springs, Wyoming
Henry Staats Sharp, New York, N. Y.
Victor Timothy Stringfield, Washington, D. C.
Charles Vernon Theis, Albuquerque, New Mexico
Norman Edward Weisbord, Sumatra, Netherland East Indies
Alice Evelyn Wilson, Ottawa, Canada

THE AWARD OF THE PERKIN MEDAL OF THE SOCIETY OF CHEMICAL INDUSTRY

THE William H. Perkin Medal of the American Section of the Society of Chemical Industry was presented to Thomas Midgley, Jr., vice-president of the Ethyl Gasoline Corporation, at a meeting on January 8 at the New York Chemical Club.

The medal was presented to Mr. Midgley "for dis-