

to cultural relations to which the United States may become a party; it will draft or review correspondence with foreign governments, American diplomatic and consular officers and all other correspondence pertaining to these activities; it will collaborate with the Office of Education and other government departments and agencies, the National Committee on Inter-American Intellectual Cooperation, other educational and cultural organizations and institutions and foreign missions in Washington.

The Division of Cultural Relations will function under the general supervision of the Under Secretary of State and in close cooperation with the geographical divisions.

Mr. Ben M. Cherrington has been appointed Chief of the Division of Cultural Relations.

The symbol designation of the division shall be RC.

The chief clerk and administrative assistant will provide the essential clerical assistance and equipment for the new division, within the limits of appropriated funds.

The provisions of this order shall be effective on July 28, 1938, and shall supersede the provisions of any existing order in conflict therewith.

THE MACDONALD OBSERVATORY OF THE UNIVERSITY OF TEXAS

DR. OTTO STRUVE, director of the Yerkes Observatory of the University of Chicago and joint director of the MacDonald Observatory, situated on Mount Locke in the Davis mountains, has reported to the University of Texas that the polishing of the 82-inch mirror for the MacDonald Observatory of the university has been completed and it "can be safely accepted." Dr. Struve wrote:

Tests made on October 15 indicate that the great 82-inch mirror is finished. The surface is a paraboloid of 319.66 inches focal length and the actual figure of the glass does not depart from the mathematical shape by more than about one millionth of an inch. This extraordinary degree of perfection is the outcome of exactly four years of gruelling work of grinding and polishing on the part of C. R. Lundin, optician for the Warner and Swasey Company of Cleveland, Ohio. During the past four years astronomers of the University of Chicago's Yerkes Observatory have made many accurate tests of the mirror. But only now are they fully satisfied that the new mirror will be as perfect as their investigations require.

The mirror will next be coated with a thin layer of highly reflecting aluminum. Before it is shipped to Fort Davis, two small convex mirrors must be completed, but optical experts believe that this should not require more than a few weeks' work. Shipment will be made before the end of December, and astronomical research with the large telescope will be commenced about the first of next year. By next spring all remaining tests should be completely finished.

The 82-inch mirror is at the present time the second largest finished astronomical mirror in the world. It is surpassed only by the 100-inch mirror at the Mount Wilson Observatory, Pasadena, Calif. After the completion of the 200-inch mirror of the California Institute of Tech-

nology, the Texas mirror will rank third in the entire world. It is of interest that the three largest astronomical mirrors are all in the United States. The fourth and the fifth are located in Canada, at the University of Toronto Observatory and the Dominion Observatory in Victoria, B. C. The sixth mirror in size is again in the United States, at the Perkins Observatory of Ohio Wesleyan University. A 76-inch reflector is now under construction for the Radcliffe Observatory in South Africa. The University of Michigan is contemplating the construction of a reflecting telescope of more than 90 inches in diameter. The disc for this mirror has already been cast, but no optical work has been started.

WORK OF THE GRAY HERBARIUM OF HARVARD UNIVERSITY

It is reported in *The Harvard Alumni Bulletin* in an account of the work of the Gray Herbarium that, beginning in early April, 1937, Professor Merritt L. Fernald, '97, director of the herbarium, started field work in Virginia, and made six trips, the last in October, into the coastal plain south of the Rappahannock. This work, made possible through a generous and anonymous gift from a friend of the herbarium, and carried out with the cooperation of Bayard Long, of the Academy of Natural Sciences of Philadelphia, is greatly altering the understanding of the history of life in eastern North America. The fourth paper resulting from the Virginia work, "Local Plants of the Inner Coastal Plain of Southeastern Virginia," with 137 pages, 15 plates and 59 maps, was issued last winter; the fifth paper, of similar extent, is now being issued.

The senior curator, Charles A. Weatherby, has continued his critical studies of tropical American ferns, resulting from his prolonged visit to the European herbaria, where he made detailed notes on, and photographs of, historical type-specimens from which American species were early described. The junior curator, Dr. Lyman B. Smith, has devoted much time and energy to the collection and organization of authentic specimens for distribution to the principal herbaria of the world in the "Plantae Exsiccatae Grayanae."

During last winter and spring, Dr. Eric Hultén, curator of the herbarium of the University of Lund, spent many weeks at the Gray Herbarium, working on his projected flora of Alaska. Dr. Hultén's intensive knowledge of northern floras and the problems of northern biogeography made him a stimulating contributor in the weekly conferences of advanced students. Dr. Harold A. Senn, national research fellow, has completed his detailed study of the genus *Crotalaria*. His extended and important taxonomic monograph and cytological studies will be published as a "Contribution" from the Gray Herbarium. Professor L. O. Gaiser, of McMaster University, whose cytological work on the American genus *Liatis* is throwing

light on its complications, spent much of the summer studying and annotating the material at the herbarium.

Professor Liberty Hyde Bailey, whose first work on the genus *Carex* was published by the herbarium in 1886, made a visit to the herbarium in September, studying, in his eighty-first year, the intricate sources of cultivated plants. Professor Bailey is the only living associate of Asa Gray.

Dr. Kenneth F. Baker, of the experiment station of the Pineapple Producers Cooperative Association of the Hawaiian Islands, *en route* to tropical South America to study and collect wild species of the pineapple group, spent several days in consultation with Dr. Smith, one of the world's authorities on this family of plants, and will later have the assistance of Dr. Smith in interpreting his results. Ernest Rouleau, curator of the herbarium of the University of Montreal, spent the summer at the Gray Herbarium as a special research fellow, studying herbarium technique.

THE EASTERN SHADE TREE CONFERENCE

A MEETING will be held at the New York Botanical Garden in Bronx Park on December 8 and 9 to consider problems arising out of the damage done to trees during the hurricane of September 21. The call for the meeting is being issued by Dr. William J. Robbins, director of the Botanical Garden, at the request of a committee composed of W. O. Filley, forester at the Connecticut Agricultural Experiment Station; Dr. B. O. Dodge, plant pathologist at the garden; and Dr. E. P. Felt, director and chief entomologist at the Bartlett Tree Research Laboratories. Mr. Filley will serve as temporary chairman of the meeting, which will be opened with a short address by Dr. Robbins.

The loss of a million or more good trees in the eastern states during the hurricane which swept up the coast and across New England is the motive of the gathering, which is to be known as the Eastern Shade Tree Conference. The aim is to study the selection and culture of more sturdy, storm-proof trees; to propose a program of rehabilitation of damaged trees; and to endeavor to gain a greater control over tree diseases and pests for the protection of trees in future years.

Some of the special problems incidental to the damage wrought by the hurricane include more concentrated attention to the pests of trees which are increasing in this area. Of special importance is the Dutch elm disease, which is carried by a beetle which breeds in weak or unhealthy trees. Half a dozen other ravaging insect and fungous pests will be taken under consideration at the conference. The problems connected with them are outlined by Dr. Felt as follows:

The gipsy moth, a serious pest of shade and forest trees, has been slowly extending its range westward and has now become abundant in several localities in western New England close to or near the barrier zone. The control of this insect is becoming a general problem.

The European spruce sawfly, a recently introduced species established over much of New England, has caused serious damage to spruce forests in limited areas in Maine, New Hampshire and Vermont and may develop as a destructive pest of Norway spruce.

The Japanese beetle has been steadily extending the range of serious infestation in New Jersey and adjacent areas and is now becoming extremely abundant and injurious in southeastern New York and southwestern New England.

The elm leaf beetle has defoliated many trees in the Hudson River Valley and in New England during the past 40 years. It is more than probable that this insect has played an important part in weakening many of the shade trees which were badly damaged by the hurricane. This is also true of canker worms and forest tent caterpillars.

The willow scab fungus is a disease which has killed many thousands of willow trees in the East. Its control is another of the serious problems for the tree owner. There are, in addition, the Sphaeropsis on Austrian pine and the Cytospora of the Norway and Colorado blue spruces.

THE AMERICAN ORNITHOLOGISTS' UNION

THE fifty-sixth annual meeting of the American Ornithologists' Union was held at the U. S. National Museum, Washington, D. C., from October 17 to 21, 1938, with a registered attendance of two hundred and thirty-three. Fifty-nine scientific papers were read—many illustrated by color slides or films. The three days of program sessions included a like number of evening entertainments; open house at the museum, the annual dinner and business meetings of various sections. On Friday the more than two hundred ornithologists in attendance visited the agricultural research center at Beltsville, Md. Many remained on Saturday for a conducted tour of the National Zoological Park.

Officers elected for the new year were as follows: *President*, Dr. Herbert Friedmann, Washington, D. C.; *Vice-presidents*, Dr. J. P. Chapin, New York City; Dr. J. L. Peters, Cambridge, Mass.; *Secretary*, Dr. Lawrence E. Hicks, Columbus, O.; *Treasurer*, Ruderford Boulton, Chicago; *Council*, W. L. McAtee, Washington, D. C.; John T. Zimmer, New York City, and Robert T. Moore, Pasadena.

The Brewster Medal award was made to Dr. Thomas S. Roberts for his volumes on "The Birds of Minnesota." One fellow, Dr. Ira N. Gabrielson, Washington, D. C.; two honorary fellows, Eliot Howard, of England, and Jacques Berlioz, of France, and six corresponding fellows, K. A. Hindwood, Australia; Konrad Lorenz, Austria; Wilhelm Meise, Germany; R. E. Moreau, Tanganyika, Africa; Ernst Shuz, Germany; N. Tinbergen, Netherlands, were elected.

In addition to 337 new associate members, eight new members were named: Thomas T. McCabe, Harold Michener, Gayle B. Pickwell, E. Lowell Sumner, Jr.,