quate for it such as had been presented through the generosity of Mr. Yapp. The first Astronomer Royal, Flamsteed, was appointed at a salary of £100 a year, out of which he had to provide his own instruments. The new instrument had a larger aperture and a greater light-collecting power than any other instrument the observatory possessed. It was about as large as could be used with advantage in the English climate.

The telescope had been presented in commemoration of the work of Sir Frank Dyson as Astronomer Royal in directing the work of the observatory for nearly twenty-five years. During the war came the development of the generalized theory of relativity. That could only be tested by astronomical observations, and, in particular, one of the most important tests could only be made at the time of the total eclipse of the sun.

Sir Frank Dyson knew that this was to happen in May, 1919, and that it would possibly be the most favorable opportunity for making that particular test. It was then about the darkest time in the whole of the war. But not daunted by that, he set to work immediately to prepare plans and organize expeditions, so that if the war ended in time those expeditions could be sent out. As a result they did go, one from that observatory and one from Cambridge, and brought back results which settled conclusively that the predictions of the generalized relativity theory were practical.

THE LEON MANDEL GUATEMALA EXPEDITION OF THE FIELD MUSEUM

KARL P. SCHMIDT, F. J. W. Schmidt and Daniel Clark, who returned in April from Guatemala, to the Field Columbian Museum, Chicago, report the success of several of the objects of the Leon Mandel Guatemala Expedition. Emmet R. Blake, ornithologist, remained in the field until June 1 in order to conclude studies on the distribution of Guatemalan birds.

According to the *Bulletin* of the Museum, the expedition obtained specimens and accessory material for exhibition groups of three of the most characteristic and interesting of Central American birds—the toucans, the giant oriole, and the quetzal. Two species of toucans, with their brilliant colors and grotesquely enlarged beaks, were found feeding in great flocks on fruit trees in the forest. The giant orioles drape whole trees with their woven hanging nests which are from three to six feet in length. Their colonies are a remarkable feature of the tropical landscape, and specimens of the nests as well as the birds were collected. Special permission was granted by President Jorge Ubico, of Guatemala, to collect the quetzel, which enjoys special protection as the national bird of Guatemala. This most brilliant of all the trogons was formerly so persecuted for its plumes that it has become one of the rarest of birds. Specimens were found in the cloud forest on the slopes of the Volcano Tajumulco in western Guatemala, and a small series was collected for the exhibit planned for the Proposed Hall of Foreign Birds.

The scientific results of the expedition in the accumulation of representative collections from this rich territory are as valuable as the materials obtained for the exhibition halls. The collection of reptiles and amphibians will enable Assistant Curator Karl P. Schmidt to conclude his project for a comprehensive list of the Central American forms undertaken under the joint auspices of Field Museum and the John Simon Guggenheim Foundation.

Specialization on certain groups of small mammals and the employment of a wide variety of methods of collecting produced interesting results, especially with bats and certain rodents. The collections of these mammals obtained by Mr. F. J. W. Schmidt include some of the rarest of Central American species as well as several forms hitherto unknown.

Previous expeditions to Guatemala under the auspices of the Field Museum worked in limited areas. The larger personnel of the present expedition has made possible more comprehensive work in this territory.

THE ESTABLISHMENT OF A WILD-LIFE DEMONSTRATION AREA

PREPARING to set landowners an example in wild-life restoration, the U. S. Department of Agriculture has decided to devote 800 acres on its Beltsville (Md.) Experiment Station to the development of wild-life resources and the demonstration of management practises. The Bureau of Biological Survey will be in charge.

Typical of areas on many farms, the tract comprises cultivated sections, abandoned crop lands, timber and marshes. A small stream with several branches runs through the area. Already there are foxes, opossums and raccoons; squirrels, rabbits and other rodents on the tract. More than fifty species of birds nest there.

In treating this tract as a demonstration area the Biological Survey plans to construct two simple dams that will impound water for wild fowl and also for muskrats and beavers. Wild-life food plants found on the area will be encouraged, others have been planted, and studies will be made of other means for the restoration, increase and conservation of the wild life of the region.

The department in its program of demonstrating wild-life management is first appraising conditions on the area. Soil-cover (including cover for game) and soil surveys have been made, and a topographic survey is nearing completion. Results of these surveys are being recorded on maps.

The bureau is taking a census of the wild life on the tract. Soon after the demonstration area was established, Arthur H. Howell, of the survey, counted the

birds. Based mainly on the songs of the males, his estimate showed that the breeding birds on these 800 acres include about 275 pairs of 51 species. In timber Mr. Howell noted 159 pairs of 28 species. In grassy fields he counted 38 pairs of 13 species. Slashings, he found, contained 42 pairs of 5 species; 20 pairs of 2 species were in swampy thickets; 12 pairs of 4 species in orchards or dooryards, and one pair in a marsh. Only one species of game bird has thus far been noted—4 pairs of bobwhites breeding in grassy fields.

The bureau has planted lespedeza, soybeans, millet and other food and cover plants to make the area more attractive for upland-game birds. Provision will also be made for propagating these birds in captivity for later release.

The two ponds for waterfowl to be created by building dams will be about a mile apart. The impounded water in each case, it is expected, will cover 18 acres.

By impounding water the bureau will also furnish suitable surroundings for muskrats and beavers—valuable fur bearers that contribute to the income of farms where they are encouraged. At the site of one of the projected ponds, workers have planted willows to furnish food for beavers, and additional provisions will be made for improving the food supply for fur animals. The area will include units for the production of fur animals in captivity.

The demonstration area will also serve as a wild-life experiment station. The results, it is expected, will be of value not only to farmers undertaking game management, but also to federal and state agencies in the administration of wild-life refuges. Specialists of the bureau will experiment with various methods of game-management and will study the factors influencing the abundance of wild life—including predators, rodents and diseases. Plans are being made for a central laboratory for detailed investigations, and provision will be made for keeping birds and animals under observation. This tract is typical of the areas on thousands of farms, and the bureau intends to show how such a piece of land can be made of great value in furthering the national program of wild-life restoration.

THE NATIONAL RESEARCH COUNCIL OF THE PHILIPPINE ISLANDS

THE National Research Council of the Philippine Islands was created in 1923 by the Philippine Legislature, under Act 4120. The council has been constituted as follows:

EXECUTIVE BOARD

Chairman: Dr. Manuel L. Roxas, under-secretary, Department of Agriculture and Commerce, Commissioner of Research, acting director, Bureau of Plant Industry.

Vice-chairman: Dr. Bienvenido M. Gonzales, dean, College of Agriculture, University of the Philippines.

Executive Secretary: Dr. Patrocinio Valenzuela, associate professor, School of Pharmacy, University of the Philippines.

Members: Arthur F. Fischer, director, Bureau of Forestry; acting director, Bureau of Science; *chairman,* Division of Agriculture and Forestry. Dr. Eduardo Quisumbing, chief, National Museum, and curator, Philippine National Herbarium, Bureau of Science; *chairman,* Division of Biological Sciences. Angel S. Arguelles, assistant director, Bureau of Science; *chairman,* Division of Chemical and Pharmaceutical Sciences. Hermenegildo B. Reyes, professor of mechanical and electrical engineering, College of Engineering, University of the Philippines; *chairman,* Division of Engineering and Industrial Research. Dr. Antonio G. Sison, professor of medicine, College of Medicine and Surgery, University of the Philippines; *chairman,* Division of Medical and Veterinary Sciences. Dr. Victor Buencamino, director, Bureau of Animal Husbandry; *chairman,* Division of Government, Foreign and Educational Relations. The Reverend Miguel Selga, director, Weather Bureau; *chairman,* Division of Physical and Mathematical Sciences.

SCIENTIFIC NOTES AND NEWS

DR. JOSEPH S. AMES, president of the Johns Hopkins University, formerly professor of physics and for four years provost of the university, has announced his intention to retire at the close of the next academic year.

DR. JAMES SOMERVILLE MCLESTER, professor of medicine at the University of Alabama, was chosen at the recent Cleveland meeting president-elect of the American Medical Association by a margin of fourteen votes. Dr. McLester received eighty-five votes in the House of Delegates against seventy-one for Dr. Hugh S. Cumming, surgeon-general of the United States. Dr. McLester will take office next year, succeeding Dr. Walter L. Bierring, of Des Moines, who was elected a year ago. Dr. Dean DeWitt Lewis, surgeon-in-chief of the Johns Hopkins Hospital and professor in the university, was the retiring president.

ADDITIONAL members of the Science Advisory Board, created by an executive order of President Roosevelt on July 31, 1933, have been appointed as follows: Dr. Roger Adams, president-elect of the American Chemical Society, professor of organic chemistry and chairman of the department of chemistry of the University of Illinois; Dr. Simon Flexner, director of the labora-