breed of cattle. This specimen was presented to Mr. Godfrey Buckley by the late Lord Ferrers, the owner of Chartley Park till 1903. Chartley Park was formed by enclosing about 1,000 acres of the forest of Needwood in the reign of King Henry III, when a number of half-wild cattle, which then roamed throughout the district, were driven in and enclosed in the park. It is proposed to exhibit this head in the North Hall, adjacent to the last pure bred white bull which was killed in 1910 and is now on exhibition in the museum collection.

Colonel H. McMicking has presented a small collection of Ungulate heads from Somaliland, containing some good Oryx (Beisa) skulls, and also two very fine specimens of Soemmerring's Gazelle. There are also two examples of the rare Dibatag or Clarke's Gazelle (*Ammodorcas clarkei*), which species was the subject of sympathetic treatment by the recent International Conference for the Protection of the Fauna and Flora of Africa.

Two important additions have recently been made to the beetle collections in the Department of Entomology—namely, the Donisthorpe collection of British Coleoptera and an Australian collection purchased from Mr. W. du Boulay.

The former contains upwards of 22,000 specimens, and is of special interest in that it is accompanied by the most complete set in existence of the numerous British insects (mainly beetles) and other arthropods that live in association with ants and are known as myrmecophiles. The du Boulay collection, which numbers only 352 specimens, consists, however, entirely of beetles actually found inhabiting ants' nests in various parts of Australia by Mr. du Boulay over a period of 16 years, and is representative of about 60 species many of which were first discovered by the collector, whose family for several generations has actively investigated the insect fauna of Australia.

During the 12 months that have elapsed Mr. R. E. Turner, working in South Africa, has collected and presented to the museum over 8,000 insects of various kinds, principally small bees and wasps, and from the mountains of New Guinea Miss L. E. Cheesman has collected for the museum upwards of 18,000 specimens, a high proportion of which will undoubtedly prove to be of great interest.

The Council of the South Australian School of Mines and Industries has presented an end-slice of a large mass (2,520 lbs.) of meteoric iron found in 1909 at Murnpeowie, South Australia, previously represented in the collection only by a cast of the whole mass.

The King has placed on loan in the department of botany a further 14 specimens of Nepal plants presented to him by the Maharajah of Nepal. The plants were collected by Professor K. Sharma.

The late Mr. Ashley H. Maude bequeathed to the department his herbarium of about 5,000 sheets of flowering plants. These are chiefly European, but Algeria, Cape Colony and the Canary Islands are also represented.

PROPOSED ANIMAL BUILDINGS IN THE PARKS OF NEW YORK

ACCORDING to *The Museum News,* architects' plans for new animal buildings to be erected in Central Park, New York, at a cost of more than $400,000, have been completed by CWA engineers and draughtsmen and transmitted to Robert Moses, park commissioner. The plans include an open square with a seal tank in the center and cages on the four corners for the more active animals. The old arsenal building will be on the east of the square and a new restaurant on the west. Animal houses on the north and south sides will be connected by arcades. Structures included in the plan are a monkey house, lion house, antelope house, bird house, cage for small horned animals, bear pit, garage and comfort station. Work has already been begun on the project.

At Prospect Park in Brooklyn six brick buildings will be constructed around a seal pool. These will house lions, monkeys, birds and horned animals. In addition there will be a large domed building for the hippopotamus and elephants, a large cage for hawks and eagles and a bear's den. A restaurant will occupy one corner of the gardens. The buildings will be situated off Flatbush Avenue on the site of the old duck pond.

In Staten Island buildings will be erected on land bequeathed to the city by Julia Oliver Hardin and known as the Clarence T. Barrett Park. The center building, two stories high and of stone, will contain the curator's office and an aquarium. There will also be a biological laboratory and lecture hall. Two wings on either side will house birds and mammals and a wing at the rear will contain reptiles. Rooms are provided for hobby clubs and for school classes. The project, which will cost $150,000, will be under the direction of the Staten Island Zoological Society. It is expected to be ready this summer.

THE FISHERY SURVEY IN PUERTO RICO

AFTER spending two months in conducting a survey of fish cultural possibilities in Puerto Rico, at the request of the Puerto Rican Commissioner of Agriculture and Forestry, Dr. S. F. Hildebrand, senior ichthyologist of the Bureau of Fisheries, returned to Washington on March 25. As a result of the survey, which covered the entire island, Dr. Hildebrand

recommends the introduction of a number of valuable food and game fishes from the United States and the construction of a hatchery for their propagation.

Owing to the density of population of Puerto Rico there is a scarcity of food and the people living inland, particularly, are unable to secure food sufficiently rich in proteins. In his report to the Commissioner of Fisheries, Dr. Hildebrand states:

Puerto Rico has a considerable number of rather long, permanent streams, the longest and largest ones being the Rio Anasco, the Rio Grande de Arecibo, the Rio Manati, the Rio la Plata and the Rio Grande de Loiza.

Several streams have been dammed, creating reservoirs, used in part for irrigation and in part for hydroelectric purposes or both. The larger permanent reservoirs are: Gujataca, Cavite, Patillas, Guoyabal, Guineo and Comorio.

There are now no fishes of importance in the fresh waters of Puerto Rico. The lower stretches of the streams, up to an elevation of about 1,500 to 2,000 feet, are inhabited by the following species: The "dajoo," a fresh water mullet (*Agonostomus monticola*), which is of limited economic importance; 5 species of gobies, only 1 of which, the guovina (*Gobiomorus dormitor*), is of slight economic importance; a small top minnow (*Poecilia vivipara*), and the fresh-water eel (*Anguilla rostrata*), which is scarce. Above an elevation of about 2,000 feet no fish are present.

All the permanent streams and reservoirs examined, exclusive of Gujataca Reservoir, appear to possess physical and biological conditions which are suitable for the support of several species of American food and game fishes. The temperature of the waters is not excessively high. The upper stretches of the streams in some instances are low enough for trout. One reservoir (Guineo), located at an elevation of about 3,000 feet, too, appears to be cool enough for trout. The waters at lower elevations appear to be suitable for American warm-water fish, such as bluegills, crappies, catfish, etc.

All the streams up to the highest elevation reached (about 3,000 feet), and all the reservoirs (exclusive of Gujataca) are abundantly stocked with crustaceans, chiefly shrimp, and insects. Therefore, ample food for fish is present.

A small shipment of American fish, consisting of bluegill, sunfish, crappie and bullhead catfish, was introduced in two reservoirs (Cavite and Comorio), in about 1913. The fish survived and have multiplied, showing definitely that the conditions are suitable for these species of American fishes.

SYMPOSIUM IN THEORETICAL PHYSICS AT THE UNIVERSITY OF MICHIGAN

THE Symposium in Theoretical Physics at the University of Michigan will be held between the dates of June 25 and August 17. Throughout the eight weeks' session Professor George Gamow, of the Technological Institut of Leningrad, will lecture on the problem of the nucleus. Professor Gamow, on leave of absence from Leningrad, has been spending the past year at Paris, Cambridge and Copenhagen and will present, in addition to his own contributions, the most recent views developing in these centers of nuclear research.

"The Theory of the Positron" will be discussed by Professor Oppenheimer, of the California Institute of Technology. His lectures given in the first month of the session will treat the recent developments in the relativistic quantum mechanics stimulated by the discovery of the positron. Supplementing these lectures will be a series of lectures by Professor Uhlenbeck, of Michigan, on "The Dirac Theory of the Electron." These will also be given during the first half of the session.

Professor Ernest O. Lawrence, of the University of California, will present in lectures given during the second half of the session the methods and recent experimental results on nuclear disintegration by bombardment with fast particles.

A series of special lectures will also be given during the second month on "The Problem of Cosmic Rays," Professor Arthur H. Compton, of Chicago, lecturing on July 26 and 27, and Dr. Thomas H. Johnson, of the Bartol Research Foundation, initiating a series of six lectures to be given during a two-week period beginning on July 23. Among these special lectures will be several by Professor Dennison, of Michigan, on the problem of molecular structure as studied through infra-red absorption spectra.

Throughout the summer symposium courses on quantum mechanics will be given by Professors Uhlenbeck and Dennison and on Line Spectra by Dr. Robert Bacher.

The formal lectures will be supplemented by a series of informal seminars throughout the session under the personal direction of Professors Gamow, Uhlenbeck and Dennison.

The summer meeting of the American Physical Society will be held at Ann Arbor on June 29 and 30, during the first week of the session. Additional information regarding the symposium or about living quarters for either the symposium or meeting of the Physical Society may be had by addressing the director of the Physical Laboratories, University of Michigan, Ann Arbor, Mich.

NATIONAL RESEARCH FELLOWSHIPS IN THE BIOLOGICAL SCIENCES

THE annual meeting of the Board of National Research Fellowships in the Biological Sciences, for the award of appointments for 1934–35, was held in Washington, D. C., on March 24 and 25. Sixteen reappointments and twenty-five new appointments were made as follows: