any preceding one, which is particularly gratifying when the contemporary labor of the *Arcturus* is considered. Five important technical papers have appeared in *Zoologica,* the society's publication, consisting of monographs on the "Ecology of a Quarter of a Square Mile of Jungle," the "Variegated Tinamou," "the "Membracidae," the "Termites," and the "Isopods." These form one complete volume of *Zoologica,* Volume VI, containing over five hundred pages. A volume of popular essays, "Jungle Days," has also been published by Putnam's, while additional monographs on the life history of the three-toed sloth and the fish of Kartabo are already in type.

Among other gifts, fifty Isopods, including two types, and five hundred and eighty Lepidoptera have been given to the American Museum; a summary of the Coleoptera taken in the quarter of a square mile shows 1,093 species and 4,006 specimens.

The third division of this report deals with zoological work at Kartabo by the University of Pittsburgh. Under an agreement the university operated the station in British Guiana during the summer of 1925, opening it on June 8, and closing September 15. The matter for this report is furnished by Dr. S. H. Williams, who was in charge of the university class. The party, under his direction, consisted of twenty students representing ten American colleges and universities, and Howard E. Enders, professor of biology at Purdue University, as associate.

The policy of administration was one of conservation rather than exploitation. Many phases of life were studied and coincident ecological observations were carefully made. Specialized studies were as follows:

Serpents: Twenty-seven species were recorded, together with many notes on their habits, their arboreal, terrestrial and burrowing adaptations.

Spiders: A great variety of forms were collected and observations on their habits made. Attempts to study the virulence of the tarantulas were frustrated by total failure to induce the captives to bite.

Geoplanidae: A comprehensive survey of the Geoplanidae was carried on, but it is impossible yet to estimate the number of species secured.

Mollusks: Twenty-three species of land Gastropods were found and their habitats recorded. The aquatic forms are very scarce, not many species of either Gastropods or Pelecypods being found. The number of species and specimens was comparatively small, but the intensive study, in which every collecting device was used, was ecologically important.

Trichoptera: These were scarce in the months of June, July and August. Many larvae of *Heliopsyche* and *Hydropsyche* were taken along the river shores. Twelve species were taken. Efforts to raise adults in laboratory tanks and in mesh traps placed in the localities where larvae were found proved disappointing.

Hemiptera: Almost three hundred species of these, exclusive of the Membracidae, were collected.

Coleoptera: About six hundred species of beetles were taken, many of them being new to the previous collections.

Diptera: Two hundred species of dipterous insects (exclusive of the Tipulidae) were collected during the summer.

Lepidoptera (*Heterocera*): A rough estimate of the species collected places them at one hundred and fifty. No systematic collection of butterflies was made.

Parasites: Ectoparasites were collected extensively. All birds and animals, including monkeys, sloths and ant-eaters, were examined for Mallophage, Acarinids and ticks, and the entrails of all animals killed were examined for endoparasitic forms. Wasps were examined for Strepsiptera, and beetles for mites. In the last two cases the families and genera were, wherever possible, carefully recorded for comparison with our northern forms. Ticks, chigoes, bête-rouge and warble-flies were collected from rats, toads, monkeys —and the members of the party.

A systematic collection of Odonata was made for Dr. Hugo Kahl, of the Carnegie Museum.

In addition to the above a fresh-water porpoise was secured by great good fortune. It was the third specimen to reach the United States and will be reported in a special paper.

During the summer Professor H. D. Fish, head of the department of zoology of the University of Pittsburgh, visited the station to see what repairs and additional equipment would be necessary if the opportunity for further use should be offered.

The summer was a profitable one, and the possibilities for further studies in this spot are practically unlimited.

WILLIAM BEEBE

NEW YORK ZOOLOGICAL PARK

THE BROOKLYN BOTANIC GARDEN

THE Fifteenth Annual Report of the Brooklyn Botanic Garden for 1925 has just been published. For the past fifteen years the people of Brooklyn, and in fact of all five Boroughs of Greater New York, have watched this institution grow from anticipations and blue prints to one of the leading scientific and educational institutions of the city.

In the matter of its educational work the Brooklyn Botanic Garden is a pioneer, and its educational program is now more extensive than that of any other botanic garden. Over 4,000 adults and children were registered in its various classes during 1925. The attendance of visiting classes from the public and pri-

vate schools was over 58,000, and the attendance at Botanic Garden classes was 30,000. The teaching of nature study and botany in our city schools was enriched by the supply of plant material to over 2,200 teachers in quantity sufficient for the instruction of over 162,000 pupils.

The Brooklyn garden is in correspondence with 110 foreign gardens and has sent over 3,200 packages of seeds from these institutions. In return the local garden has received seeds from these institutions. The plants raised from these seeds are annually enriching the plantations and have made the collections at the Brooklyn Garden one of the richest in number of varieties in the entire country.

The director calls special attention to the effective work which the Botanic Garden is doing for wild flower conservation, in cooperation with other organizations. This included securing the passage of legislation by the State Legislature so as to include various wild flowers in the conservation law, the growing and distribution of wild flowers now in danger of extinction, and the preservation of the wonderful weeping beech at Flushing, in Queens Borough. This is considered to be the largest and most beautiful specimen of this species of tree in the world. It would have been cut down to make way for an apartment house had not the Botanic Garden and other organizations supported the Park Commissioner of Queens in a campaign to save the tree.

The report includes an account of the important investigations in progress at the garden along the lines of plant breeding, plant diseases and the vegetation of Long Island. Of special popular interest is the progress being made in the study of the destructive chestnut tree disease. This disease started in New York City and so it is eminently fitting that studies looking toward its control or eradication should be made by a city institution. It has been estimated that the loss to this city alone, by the destruction of the chestnuts in parks and the watershed of the City water supply, amounted to not less than one million dollars.

Dr. Gager, the director of the garden, also calls attention to the disastrous effect on the trees of the garden and of all the city parks, especially the evergreen trees, by the soot and fumes produced by the burning of oil and soft coal during the past winter. The seriousness of this menace to all city trees can hardly be exaggerated.

Attention is also called to the increasingly large service which the garden is rendering to industrial and commercial concerns through its bureau of information. The information thus supplied by the Botanic Garden has resulted in the saving of thousands of dollars by these concerns.

The garden library contains the richest collection on Long Island of books on horticulture, gardening, and all aspects of plant life, including current numbers of about 800 periodicals on these subjects.

Since the Botanic Garden authorities assumed supervision of this part of the old East side lands the assessed valuation of the property, as noted by the director, has increased from $2,400,000 in 1913 to $7,000,000 last year. The value of all adjacent property has been correspondingly advanced by the development of the beautiful garden and its educational and scientific opportunities. Nearly one half the Botanic Garden budget for 1925 was obtained from private funds, much of which had to be secured by the uncertain method of solicitation of contributions.

Last May, after a thorough inspection of the Botanical Garden, its activities, equipment, finances and administration, Mr. John D. Rockefeller, Jr., offered personally to give $250,000 to the endowment fund provided the Garden authorities would secure an equivalent amount before the close of 1926. Mr. A. M. White is chairman of a special committee which has in charge the raising of this fund. This is a relatively small amount for these days, and especially considering the importance and extent of the Botanic Garden's work, and there should be no difficulty of going over the top with a wide margin.

SCIENTIFIC EVENTS

THE HARVARD EXPEDITION TO AFRICA

AN expedition to study diseases in Africa and to throw light on little-known forms of life left on May 15, headed by Dr. Richard P. Strong, director of the Institute of Tropical Biology and Medicine, Harvard University. The expedition is the first sent by the Harvard Medical School to Africa. Special attention will be given to the study of sleeping sickness and the effects of certain drugs on this disease. An entomologist, two zoologists, a bacteriologist, a clinician, a botanist and a photographer will make up the contingent of white men. Three hundred natives, to be picked up on arrival at Monrovia, will be taken along as porters.

Dr. Strong has made the following statement regarding the plans of the expedition according to an associated press dispatch:

> The African expedition, which is a continuation of the Amazon expedition of 1924–1925, will take a year and is certain to result in the discoveries of some new diseases, as we shall be penetrating country, studying men and plant and animal and insect life which have never yet been surveyed in this way.
>
> The expedition will sail for Great Britain, where it will be outfitted, a task requiring about a month. We have