

*BOTANY AT THE CUBAN EXPERIMENT
STATION.*

THE organization of the botanical work at the Estacion Central Agronomica de Cuba is now far enough advanced to justify a brief account of our facilities and plans for future work. At least three of the departments of the station will be of interest to botanists. The horticultural department is under the charge of Professor C. F. Austin, late of the Maryland Agricultural Experiment Station, with E. W. Halstead, of New Mexico, as assistant. Among the interesting lines of work begun by this department may be mentioned the trial of a large line of temperate fruits, vegetables and ornamentals in order to note their behavior under tropical conditions and to determine which among them can be profitably grown in Cuba. The native Cuban varieties will also be collected and grown for the purpose of comparative studies and to furnish the basis for the selection of improved strains. Attention will be given to the introduction of promising novelties from other tropical countries with a view to building up a living collection of as many as possible of the economic plants that will thrive under the conditions prevailing at this place. This department too will be charged with the care of the living collections of Cuban plants that are of botanical interest only. It is hoped in the course of time to have living specimens of many of the more interesting native plants. An abundance of land is available for these purposes, and propagating sheds, cheese-cloth tents and other appliances are being provided.

The department of vegetable pathology is of course largely botanical, though as here constituted it includes economic entomology. It is in charge of Dr. Mel T. Cook, of Indiana, with Mr. W. T. Horne, of Nebraska, as assistant. The department is provided with a roomy laboratory which is to be shared by the bacteriologist of the animal industry department. It is equipped with the necessary apparatus for rearing and studying disease-producing organisms of all kinds, whether animal or vegetable, including the usual list of glassware, sterilizers, incubators, micro-

tomes and microscopes, besides a complete Zeiss micro-photographic outfit.

The botanical department proper is in charge of Professor C. F. Baker, of Pomona College, California, with Mr. Percy Wilson, of the New York Botanical Garden, as assistant. It is provided with an abundance of room for laboratory and museum purposes. The furnishings include herbarium cases of native hard-woods. The library already contains many of the more important general works, and a special effort is being made to get together as complete a collection as possible of books relating to tropical American botany. The private libraries of Professor Baker and of the writer are also on deposit and are accessible. These include several thousand additional titles. Through the generosity of the New York Botanical Garden and the purchase of Mr. Heller's private collection of West Indian plants, the herbarium already comprises several thousand mounted sheets of West Indian plants that have been determined at the leading herbaria. According to arrangements with Professor Baker, his private herbarium containing over a hundred thousand specimens is deposited at the station and is available for study. This collection is notably rich in tropical American plants containing more or less complete sets of the collections of Sentenis and Heller in Porto Rico; Otto in Trinidad and Cuba; Ehrenberg, Pringle, Schiede, Seler and Purpus in Mexico; Brandegee in Lower California; Baker in Nicaragua; Moritz in Colombia; Schomburgh in Guiana, and Sello in Brazil. Work in collecting the local flora has been actively pushed since the first of July, and much valuable material has already been secured. Plans are being matured for extending this work to other parts of the island in the near future. Particular attention will, of course, be given to all questions connected with economic botany, including forestry problems, study of the native grasses and legumes and of troublesome weeds, and the gathering together for the living collections of native medicinal plants or those yielding fibers, resins, gums or other possible commercial products. At all times, however, the work will be directed towards a

complete botanical survey of the island, since the fact is fully appreciated that the natural plant covering of a region is closely correlated with its agricultural possibilities. As one of the results of this survey it is planned to publish an illustrated flora of Cuba. Work towards that end has already been begun, and it is proposed to prosecute it as rapidly as circumstances will permit. In this connection it will be necessary for the botanist to visit the larger American and European herbaria where types of Cuban plants are likely to be found.

There are, however, numerous smaller collections, both public and private, which contain interesting Cuban material. Where it is possible to secure the loan of such material it will be thankfully received and carefully returned. A large quantity of duplicate material is being collected with which to repay such courtesies and to offer in exchange for other tropical American plants. It will not, however, be the policy of this institution to offer sets of such material for sale.

An available tropical laboratory has long been the dream of American botanists. Within the last few months this dream has been realized by the arrangement between the Jamaican government and the New York Botanical Garden for the use of the *Cinchona* plantations. It is now possible to offer the use of a second tropical laboratory. We feel that the occasional residence among us of active botanists from other institutions, bringing, as they will, fresh suggestions and inspiration, would be of the greatest benefit to us. We, therefore, freely offer the use of our facilities to any properly accredited botanist who cares to make use of them for any line of botanical investigation, stipulating only that arrangements be made long enough in advance to avoid possible conflicts. Persons desiring to do much microscopic work should bring their own instruments with them. Santiago de las Vegas is situated twelve miles south of Havana in a rolling, open country. There are four trains a day to and from Havana over the Western Railroad. The elevation is only about one hundred and fifty feet. The conditions are, therefore, absolutely different from those in *Cinchona* with its rugged mountains

and five thousand feet of elevation, and a residence at one of them will only sharpen the appetite for experiences at the other.

F. S. EARLE,

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THE INTERNATIONAL CONGRESS OF ARTS
AND SCIENCE.

WE hope to print later an account of¹ the work of the International Congress of Arts and Science, held last week at St. Louis, and we have already printed the program and a description of the aims of the congress by Professor Münsterberg, who was chiefly responsible for its plan. In the last issue will be found the address of the president and in this issue the address before the department of physical science; others of the important addresses will appear subsequently. These articles and addresses give an adequate impression of the work of the congress, and only a few words are needed at this time.

It was the unanimous opinion of nearly all those present that the congress was successful and successful beyond the anticipations that had been formed. There has perhaps never been assembled together a group of scholars so notable, and the addresses were real and in some cases important contributions to science. With the possible exception of the 'Encyclopædia Britannica,' the addresses when published together will give the best review that has ever appeared of contemporary science and scholarship. There were about a hundred foreign delegates, each a leader in his science. A selection of names must be almost at random, but it may be questioned whether there were ever before gathered together in one room men of science and scholars so eminent as Poincaré, Darboux, Picard, Boltzmann, Ostwald, van't Hoff, Ramsay, Moissan, Backlund, Arrhenius, Murray, Penck, Zirkel, de Vries, Giard, Delage, Hertwig, Waldeyer, Seler, Höff-