SCIENCE

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BOTANY IN JAMAICA.

BY JAMES ELLIS HUMPHREYS.

We are apt to think, when speaking of American botany and botanists, only of those of the United States and Canada, assuming that our southern neighbors, both continental and insular, have not yet reached that stage of civilization that encourages the cultivation of the sciences. And so far as those regions are concerned which have felt the influence chiefly of Latin civilization, this is measurably true. But some of the neighboring islands have been under Anglo-Saxon rule for two centuries or more, and have felt different influences. Not, indeed, that their people, as a class, have been much affected by contact with their rulers, but in the British islands the mother country has especially fostered botanical study from an early time, and British residents have carried with them the scientific impulse.

Jamaica has been a British colony for fully two hundred years, and it is now more than one hundred since its first botanic garden was established at Bath. At first privately supported, it afterward received spasmodic government support. But eventually the site was abandoned and a new location was chosen beside the Wag water and among the beautiful hills of the interior nineteen miles north of Kingston. From this time the support of the government was constant and effective, and the Castleton garden grew steadily in consequence, under competent directors sent out from England. It has now an especially notable collection of palms and orchids, besides its economic collection.

Meantime the Hope Gardens, near Gordon Town, and six miles from Kingston, begun for private pleasure when the island was in the full tide of its prosperity from the profits of sugar and rum, have been taken up by the government and are destined to be the chief botanical centre of the island. This collection is newer than that at Castleton and therefore does not possess as many fine specimens and, in some other respects, does not equal it. But most of the propagating and active work of the department is now done at the Hope Gardens. As must inevitably be the case with most government establishments, the chief work of the Botanical department of Jamaica, as of other British colonies, is economic, the study of the useful plants of the colony, their propagation and products. Its work is at present ably directed by Mr. William Fawcett, F. L. S., formerly of the British Museum.

A third establishment in charge of the department is the experimental *Cinchona* plantation far up the Blue Mountains. Here, also, is the official residence of the Director, in an almost ideal location and climate. Indeed, it is said, to quite justify the enthusiasm of an admirer, who called it "the loveliest spot in the British empire."

This place, called Cinchona, can be reached only by a narrow bridle-path that runs twelve miles upward into the heart of the mountains from Gordon Town.

The department issues a periodical bulletin of the results of its work.

Ever since the time of Patrick Bowne and Sir Hans Sloane, the higher plants of the island have found devoted students. And among them must be specially mentioned Grisebach, whose "Flora of the British West Indies," London, 1863, remains the only hand-book of the subject. But the Thallophytes of the region have received little attention and offer a very attractive field.

The wife of the present energetic governor of the island, Sir Henry Blake, some time since proposed the raising of a fund to establish a permanent marine biological laboratory as a memorial to Columbus, who landed on the island on his second voyage. The idea is an admirable one, but the project remains, so far as can be learned, *in statu quo*. A small and well-equipped laboratory at a suitable point on the island, open to the zoölogists and botanists of the world, might be of the greatest service in affording means for the collection and preservation of the numberless tropical forms of life in which Jamaica and the surrounding waters abound. A party of zoölogists from the Johns Hopkins University has this year, for the second time, established a temporary laboratory at Port Henderson on Kingston harbor; but I understand that this choice of a location has been largely governed by the presence of suitable accommodations. It will be agreed that, in determining the site for a permanent laboratory, the abundance of available vegetable, as well as animal, life should be consulted. After a somewhat careful examination of the marine flora of the easterly part of the island, as far west as St. Ann's Bay, the writer can say that several of the ports on the north side are far more favorable, botanically, than Kingston harbor. And perhaps no region is, on the whole, more favorably situated or richer in its vegetation than the neighborhood of Port Antonio. This port has more frequent communication with the United States than even Kingston, from its extensive fruit trade. And the journey from Europe to Jamaica is less monotonous and less expensive, as well as quite as quick, *via* the United States, as by the Royal Mail from England.

Another factor of considerable importance lies in the much cooler and more healthful climate of the north side of the island, as compared with the south side.

In Jamaica, then, the botanist finds evidences of past and present activity in certain lines, and the sympathy and aid of fellow workers. It is much to be hoped that he may soon be able to find, also, the laboratory facilities, which will enable him to study to the best advantage the unsolved problems of tropical vegetation.

INTRODUCTION OF WEEDS IN GRASS SEED.

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In the course of some experiments on forage plants, which were begun last season on the Station grounds, quite a large quantity of grass and clover seed was purchased from various seedsmen, principally from Hendersons, of New York. At the time of sowing some of the packages were found to contain more or less seed of various weedy plants. The plots were watched closely, and the following plants were found to have been introduced:

Cruciferae.—Nasturtium palustre, (L.) D. C.; Sisymbrium officinale, (L.) Scop; Camelina sativa, (L.) Crantz; Brassica arvensis (L.) B. S. P.; Brassica alba, (L.) Gray; Brassica nigra, (L.)Koch; Brassica campestris, L.; Erysimum cheiranthoides,L.; Erysimum orientale (?) L.; Diplotaxis tenui-