

and destructive in Illinois than the Entomophthora, although seemingly less so at present than the bacterial form.

It now seems likely that these diseases, occurring as they do spontaneously over a large area, will soon suppress what has probably been the longest-continued destructive outbreak of the

chinch bug known in the history of that insect. Their present activity is illustrated by the fact that in a single field in Southern Illinois dead chinch bugs imbedded in this mold were found by an assistant, Mr. John Marten, so numerous as to suggest a recent flurry of snow.

NOTES ON THE WHITE ANT, FOUND ON THE BAHAMAS.

BY CHARLES J. MAYNARD, NEWTONVILLE, MASS.

Among the many objects of interest that engage the attention of the Naturalist on the Bahamas perhaps the most striking are the nests of the White Ants. The first that I saw was in the vicinity of Nassau in a cultivated field. It is the custom among the natives upon clearing away any portion of the low growth of trees, that occupy the land before it is tilled, to leave certain ones which serve for bean polls, or as a support for the stem of the yam which climbs to a considerable height. The tree usually selected is the gumbo limbo, that has long naked branches, the twigs of which are only scantily supplied with leaves. These trees are so very often chosen by the ants as a support that it is not infrequent to see two or three nests in one field placed on them. The color of these domiciles is nearly black and as they are often of a large size they form conspicuous objects, even when seen from a distance.

The nest, of which I have spoken, was placed upon a limb some three feet

from the ground, was about four feet high by some two feet in diameter and was very nearly of the form of an old fashioned bee hive. This object in the midst of the field presented such a singular appearance that it was only upon close observation that I convinced myself that it was not something made by the owner of the field, and placed there by him for some purpose.

Subsequent observation showed that the ants prefer to build in openings, and that the gumbo limbo is a favorite tree on which to place their nests; this may be explained by the fact that the trunks of these trees are covered with a smooth bark thus rendering the covered passages that the insects build between the ground and nests more easy of construction than on rougher material. There are two reasons, that appear plausible, why the ants prefer open fields to less exposed and more shady locations; the first of which is that they like the hot sunshine and free circulation to dry the moist material which is used in the

construction of the nests, second the materials from which they gather their building supplies, and which consists of dead wood, palm leaves, boards, shingles, etc., etc., are much more abundant in the fields than elsewhere. In fact so universally are these situations chosen that I do not now remember ever having seen a nest in any other place.

The nests, as related, are most often placed in trees, generally low and near the trunk, but I have occasionally seen them among the branches. I have also seen them on stumps and even on rocks, although this support is rarely used.

In form, the nests are, as remarked, hive-shaped whenever the basal support is large, but if it be small the ants will then build around it, producing another hive-shaped structure with its base upward which, resting against the base above, results in an oval-shaped nest. Sometimes, owing to the situation, irregularly formed nests are seen, but there is always a tendency to assume the hive shape. The nests are composed of various galleries about .20 of an inch high and about the same width, of varying length, opening into others in many directions, thus the whole system forms an exceedingly complicated labyrinth, the clew of which is difficult to find, but which appears to be perfectly understood by the insects. From the nests to the ground and whenever the passages cross rocks, the surfaces of which are exposed, and this frequently occurs even at a considerable distance from the nests, the road ways by which the ants travel are

always covered. These thoroughfares are of sufficient width to allow the insects to pass freely at all points, and upon breaking down any portion of a gallery they may be seen hurrying in both directions.

Whenever their passage ways are broken open some of the ants at once begin to repair it, and this brings me to the material used in building, and the method of depositing it. Fibers, gathered from dead wood, leaves, etc., and mixed with enough earth to give it a dark color form the principal portion of their building material. How this is applied, was for a long time, a mystery to me, for although I had seen many hundred nests it was not until Dec. 19th of last year that I chanced upon one of them upon which visible labor was being performed. I was passing a nest that stood on the margin of a field on Andros, when, attracted by its size, it being the largest that I had ever seen, measuring six feet in height by four and a half in diameter, I turned aside to examine it, and perceived that a circular piece some six inches in diameter was being built on one side. Something over two inches of the outer margin of this portion had been completed, leaving a circular hole in the centre. On this portion the ants were at work, standing around the unfinished margin as close together as possible without interfering with one another's movements. The workers are constantly changing, as one disappeared another took its place. Upon appearing each ant had its jaws filled with

building material and as it reached the wall it turned and exuded a drop of mucilaginous fluid from the abdomen then whirled instantly about and deposited its fibers upon it as it lay on the wall, mixing and moulding the mass with its jaws. This pulp had about the consistency of papier mache and was readily manipulated forming a wall of about the thickness of heavy writing paper. This hardens rapidly, but remains pliable for some time, thus the walls on the extreme outer edge of the newly erected portion could be bent without breaking, whereas the older portions are quite brittle.

As the orifice on which the ants were employed grew smaller, fewer and fewer could find room, yet there was no crowding, each keeping his accustomed distance from his fellows, so one after another they disappeared, as I watched, until but one was left to complete the minute hole remaining.

These ants are very destructive to buildings, especially to the small houses of the negroes, and when they have once obtained a foothold the house is doomed. I knew of a small house in the neighborhood of Nassau that had not been occupied for a year or two that was

two-thirds devoured by them. There was a nest on the roof, supported by the rafters, around which all the shingles had disappeared, while others were much eaten and all the posts were thickly perforated with their galleries. Such was the speed with which the ants worked, through industry and numbers, that the eroded surfaces appeared quite fresh, being of nearly the color of newly cut wood. The owner of this house informed me that he had destroyed every trace of the nest many times only to see it rebuilt, as fast as the ants could construct it.

[NOTE. Unfortunately Mr. Maynard did not preserve specimens of this termite for identification and Dr. Hagen in his *Monographie der Termiten* does not mention any species from the Bahamas. In 1883 Mr. B. H. Van Vleck collected large numbers of *Eutermes ripperti* at Nassau, and Mr. Maynard's observations undoubtedly refer to this species, which is common upon many of the West Indian islands and in South America. See, *Proc. Bost. Soc. Nat. Hist.*, December 1877 v. 19, p. 267-274 for Notes on the tree nests of Termites in Jamaica by H. G. Hubbard.—S: H.]

WALCKENAER'S NAMES OF AMERICAN SPIDERS.

BY JAMES HENRY EMERTON, BOSTON, MASS.

Mr. Henry C. McCook has called attention in the Proceedings of the Philadelphia Acad. of Nat. Sciences to the names of American spiders published by Walckenaer, and the necessity of

using them in place of latter names given by Hentz and others.

There is no doubt that as far as these names can be identified with certainty and shown to be the oldest, they ought



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