

Article IX.—ANTS FROM THE AZORES.

BY WILLIAM MORTON WHEELER.

The Azores have acquired a peculiar interest in the study of chorology as types of what Wallace called "oceanic" in contradistinction to "continental islands." This eminent naturalist, in his volume on 'Island Life' (p. 246 *et seq.*), has shown that the fauna of these islands is almost exclusively European in character, notwithstanding the fact that they are situated nearly 900 miles from the coast of Portugal and are enclosed by the 1000 fathom line, "while a depth of 1800 fathoms is reached within 300 miles in all directions." "These islands," he says, "lie in the course of the southwesterly return trades and also of the Gulf Stream, and we should therefore naturally expect that American birds, insects and plants would preponderate if they were conveyed by the regular winds and currents, which are both such as to prevent European species from reaching the islands. But the violent storms to which the Azores are liable blow from all points of the compass; and it is evidently to these, combined with the greater proximity and more favorable situation of the coasts of Europe and North Africa, that the presence of a fauna and flora so decidedly European is to be traced."

Wallace's views were based mainly on the plants, birds and beetles collected in the Azores. I was therefore very glad of an opportunity, while on a trip to Europe during the past summer, to collect ants in San Miguel, the largest island of the group. The steamer stopped for only part of a day at Ponta Delgada, and I hastened to the open country near the fortress of San Blas west of the quaint little town. My search for Formicidæ proved to be rather disappointing, however, as a three hour's scrutiny of the surface of the soil yielded only the following four well-known species:

1. *Ponera eduardi* Florel.—A single colony comprising six or seven workers nesting under a large stone.
2. *Monomorium carbonarium ebeninum* Florel.—Two colonies, under stones.
3. *Tetramorium caespitum* (L.).—Very common under stones, blocks of larva, etc., and also in nests with diffuse or multiple craters. This species was represented by two varieties, one larger and darker, like the form common in rich moist soil in Europe, and the other smaller and redder, like the variety met with on xerothermic hillsides in Switzerland and Italy.
4. *Lasius niger* (L.).—Like the preceding very common under stones and blocks of larva and running over the ground in files. All the specimens

seen belonged to the typical, large, dark-colored European form, with hairy legs and antennal scapes.

Three of these species are clearly of European origin, and one, the *Monomorium*, is of neotropical provenience. It has been recorded from Madeira, however, and may have spread to the Azores from this island. *Ponera eduardi* also occurs in Madeira, the Canary Islands and along the entire shore of the Mediterranean. In all probability there are several other species of ants in the Azores, but the few above recorded certainly confirm the conclusions reached by Wallace from a study of the plants, birds and beetles.