

Ants Attracted to Naphthalene on Malaita¹

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On the island of Malaita, British Solomon Islands, the ant *Iridomyrmex myrmecodiae* Emery was attracted to naphthalene in very large numbers. This small ant is of importance to coconut and other palms and also to other plants, such as cacao, as well as to the *Myrmecodia* plant which provides cavities in which the ant nests. In the Solomons this ant drives from the palms beneficial ants such as *Anoplolepis longipes* (Jerd.) and *Oecophylla smaragdina* (Fabricius), which reduce populations of the coreid bug, *Amblypelta coccophaga* China, which causes coconut nutfall. This ant is a vicious biter and is disliked as much as, or more than, the *Oecophylla* by those who climb coconut palms.

At Auki on the west coast of Malaita, during September 18–22, 1957, *Iridomyrmex myrmecodiae* was invading a concrete and cement-brick house in great numbers, attracted to insect and plant specimens in various stages of sorting and drying when these were not over the drying fire. Lindane powder, chlordane emulsion, and naphthalene were used to combat or repel the ants. The naphthalene was of two brands, one white, brought from Honolulu, the other pink, obtained at Honiara; and both were in flake form. Naphthalene was put with all the insect specimens layered in cellucotton in pill boxes and cigar boxes, and it was noticed that the ants entered these when lindane was not sprinkled about. Also, it was noticed that the naphthalene containers and spilled naphthalene attracted many ants. Then tests were made, with both kinds of naphthalene, to test whether naphthalene alone actually attracted the ants. A book case top and a table top were completely cleared and cleaned and naphthalene was placed on them in the bottom of otherwise empty, new sliding pill boxes slightly open at one end. These continued to attract ants until one pill box was nearly full of dead ants, estimated at 10,000 in number, or about ten times in bulk the amount of naphthalene in the pill box. Also, naphthalene was thinly sprinkled on parts of the table tops. The naphthalene alone constantly attracted ants, which would pick up flakes of naphthalene in their jaws, wander about a few moments, and then fall and die until there were great numbers of dead ants on the table tops. By application of the chlordane

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emulsion at bases of doors and windows, large piles of dead ants accumulated, both inside and outside, adjacent to the walls. These piles included over one million ants. *Myrmecodia* plants were abundant on trees about the house, which was on the top of a small hill partly covered with secondary forest.

In the meantime a large pill box nearly full of pink naphthalene, stored in a cupboard, was invaded by such numbers of ants that the box had to be placed very near the drying fire to keep further ants away, and the ants that entered the box became inseparably mixed with naphthalene.

During a trip into the interior of Malaita, when the drying fire was discontinued, ants entered the boxes of partially dried specimens containing naphthalene and died there, requiring a further clean-up and drying.

After lindane was mixed with the naphthalene, no further serious trouble was had with the ants, in the interior or on return to Auki.

It should be noted that this ant did have the tendency to continue to come to a place where food had been, but had been cleaned up. However, it did not continue to be so attracted ceaselessly as it did to naphthalene, and did not enter empty boxes in numbers.

Though the same ant is abundant on Guadalcanal and Bougainville, as well as New Britain, it was not found to be attracted to naphthalene or into houses in the manner experienced on Malaita. Residents of Auki stated that the new concrete houses are badly invaded by this ant, whereas the old wooden houses are not invaded. Phillips (BULL. ENT. RES. 47(3):575-595, 1 pl., 1956) notes the superabundance of this ant on Malaita, correlating with the worst coconut nutfall picture in the Solomons.

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