

bay, extending over several square rods, several thousands of these bees were nesting. The appearance of their burrows was the same as that already described.

To the writer these studies revealed some very interesting facts:

First: In their natural state these bees are subjected to from seven to twenty inches of rainfall during the winter. The majority of these cells in the laboratory were allowed to become dry within a few days after sealing and never received any moisture other than that which they could get from the air in an ordinary school room, yet these bees seemed to emerge normally and at approximately the same time as control specimens which were watered several times.

Second: Those left in broken cells, some of which were allowed to lie on dry sawdust in no cell at all, emerged normally, differing in this respect from *Xylocopa orpifex* and *X. varipuncta*, which were subjected to the same test and which failed to emerge normally when left out of contact with an enclosing cell wall.

Third: Several larvæ were left exposed during the entire season in a cabinet in which were kept chemicals, including HCl, HNO₃, and NH₄OH, and tho kept in stoppered bottles the fumes from these chemicals were plainly perceptible each time I opened the cabinet. These specimens all emerged normally in the spring.

The distribution of this species as given by Lutz and Cockerell in their forthcoming catalog is as follows:

Anthophora stanfordiana Cockerell, 1904 c, p. 32. ♀, ♂; Stanford University, California; V; Nests. Viereck, 1905, p. 314. Corvallis, Ore.; III, V, VI (Cordley). Kellogg, American Insects, 1908, p. 516. Description of Nest. Bray, Pomona Journal Zoöl., 1917, p. 93. Claremont, Calif.; V; at *Amsinckia intermedia*.

COLEOPTERA ASSOCIATED WITH *POLYPORUS* *VERSICOLOR* L. IN NEW JERSEY.

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The following notes relate to observations made during a year's collecting on the sporophores or fruiting bodies of *Polyporus versicolor* L., in various parts of New Jersey. Eighty percent of some

fifty species of polypores found in New Jersey were observed to be infested by insects and *Polyporus versicolor* appeared to attract the largest number of species all of which belonged to the Coleoptera.

This polypore is extremely common in most parts of New Jersey, occurring on all kinds of dead wood, many stumps being completely covered by it. According to Murrill¹ it also causes a serious root-rot in many trees and is a wound parasite in *Catalpa*. The pileus or shelf-like part of this fungus is thin and leathery, densely imbricate, variable in color and marked by narrow multicolored zones of various colors ranging from white to yellow, brown, reddish, greenish, blackish, etc. The context or inner substance of the pileus is white and it is this portion which appears to furnish most of the food for insects although at times the entire fungus is riddled.

It is difficult to explain why *versicolor* harbors so many insects unless it is the qualities of the context which attract them. Other polypores having a much thicker and fleshier context attract considerably fewer species. Altogether twenty-four species of Coleoptera, representing thirteen families, were found associated with *versicolor* as shown by the following table:

COLEOPTERA ASSOCIATED WITH *POLYPORUS VERSICOLOR*.

<i>Family.</i>	<i>Species.</i>	<i>Location.</i>
Carabidæ	<i>Tachys flavicauda</i> Say	on
Scaphidiidæ	<i>Scaphidium 4-guttatum</i> Say	on
Erotylidæ	<i>Megalodacne fasciata</i> Say	in
Mycetophagidæ	<i>Mycetophagus flexuosus</i> Say	in
Histeridæ	<i>Hister lecontei</i> Mars.	in
itidulidæ	<i>Phenolia grossa</i> Fab.	on
	<i>Rhizophagus bipunctatus</i> Say	in
Trogositidæ	<i>Tenebriodes corticalis</i> Melsh.	on
Bostrychidæ	<i>Endecatomus rugosus</i> Rand.	in
Cioidæ	<i>Cis fuscipes</i> Mell.	breeds in
	<i>Cis wenzeli</i> Dury	breeds in
	<i>Xestocis levettei</i> Csy.	in
	<i>Sulcacis lengi</i> Dury	breeds in
	<i>Strigocis opacicollis</i> Dury	in
	<i>Octotemnus lævis</i> Csy.	in
	<i>Ennearthron oblongus</i> Blatch.	in
Scarabæidæ	<i>Onthophagus hecate</i> Panz.	on

¹ Northern Polypores, p. 6, 1914.

Tenebrionidæ	<i>Hoplocephala bicornis</i> Oliv.	in
	<i>Hoplocephala viridipennis</i> Fab.	in
	<i>Boletotherus bifurcus</i> Fab.	on
Melandryidæ	<i>Penthe obliquata</i> Fab.	on
	<i>Eustrophus bicolor</i> Say	on
	<i>Orchesia castanea</i> Mels.	in
Anthribidæ	<i>Euparius marmoreus</i> Oliv.	in

This table also indicates whether the species were found in, on or actually breeding in the fungus. Probably all of the *Cioidæ* mentioned develop in the fungus and it is believed that the remainder of the species mentioned except those belonging to predaceous groups such as the *Carabidæ* and *Histeridæ* are fungus eaters. In fact, in addition to the *Cioidæ* listed, such species as *Mycetophagus flexuosus*, *Phenolia grossa*, *Hoplocephala bicornis*, *H. viridipennis*, *Boletotherus bifurcus* and *Euparius marmoreus* were observed feeding on the context.

Most of the species listed were taken during the summer months but many of the *Cioidæ* can be found in the partly eaten fungus during the winter either in the larval or adult stages or both. Some of the other species can be found overwintering in the fungus or beneath the bark of fungus covered logs. Except for a species of thrips and several Hymenopterous parasites of beetles, only Coleopterous insects were found on or in *Polyporus versicolor* although other species of polypores were found to be inhabited by a few members of the *Lepidoptera*, *Diptera* and *Hemiptera* in addition to *Coleoptera*.

HEMIPTERA COLLECTED IN WESTERN NEW ENGLAND, CHIEFLY FROM MOUNTAINS.

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An opportunity of collecting in new localities was lately afforded me, when, through the kindness of Mr. C. S. Neumann of New Britain, Conn., I took part with my colleagues Professors Gorokhoff and Kennedy in an automobile trip through northwestern Massachusetts and southern Vermont. The non-entomological members of the party good naturedly consented to frequent pauses



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