

but walked past and back and forth and was on both sides of the leaf. The ants were somewhat inquisitive but did not trouble the larva, nor were they disturbed by it. This went on for about 15 minutes, when I removed the larva.

I put the next sized larva (2nd moult) on same leaves, and the ants were agitated, ran about gesticulating, but paid more attention to their cows than to the larva. I put this larva on a plum leaf by a large colony of aphides, at which were a dozen of the black ants. The ants sprang at it, bit at it everywhere, especially trying to get a hold under the edge of the body, where the surface is naked, or at the joints of the segments, or at 2, which being bent over the head is more exposed than any other segment. One determined fellow seized on 2 and was hardly to be dislodged, was at last by violent jerking of the head, but wounded the larva so that blood flowed. When the attack was at the joints the larva squirmed so as to tighten the joints just there. These attacks were simultaneous and by at least six ants at a time. The larva crawled away and the assailants mostly dropped off. I thought it best to come to the rescue, else I should lose the larva.

I then put the largest larva (3rd moult) amongst the same excited ants, and they attacked it in same manner, but seemed unable to make impression on it. The hairs protected the whole upper side more sufficiently. The larva crawled up and down and over the leaf, followed by some of the ants, who attempted to seize it at every vulnerable part. But no harm was done. I repeated the experiments the next day, and came to the conclusion that the willow ants were mild-tempered, and seemed unlikely to hurt a larva; but that the black ones were fierce and would attack wherever they saw their enemy.

Now it may be that the butterfly avoids the fiercer ants and the aphides they guard, and therefore that the larvae are not to be looked for on certain plants. There is room for farther observation on this point.

I had noticed that whenever one of these larvae was removed by forceps a thread held it to the object, and I watched when making the experiments related to see if the ants would force the larvæ to drop from the leaf. But they did not drop. I shook the largest larva out of the box till it let out a thread a length of four inches. Then held the box to see if the larva would climb the thread, which it did, in about 20 minutes. It twisted its body into a spiral and whirled about so fast that I could not bring the lens to bear, but I could see that jaws and feet were active.