

This is a two year species. In most cases the eggs were laid near the ground, and the larvae on hatching, bore directly into the bark from the underside of the eggs, filling the empty shells with excrement, then burrowing downwards into the roots where they pass the first winter, the following spring they start making spiral mines around the limbs and extending upwards for a considerable distance before reaching maturity, when they extend their mines into the wood and make their pupal cells near the outer wood, from which they emerge the following year. These mines are rather difficult to distinguish, and as the plant is a rapid grower, the new wood grows over the larval mines, causing a slight swelling on the outside, which is scarcely noticeable. When these mines are examined, those made by the larvae during the first year are covered with new wood, and represented by a raised spiral ring on the wood, while the mines made during the second year are only covered by a thin filament of wood, allowing the dark borings in the mines to be readily seen through the new wood.

This species seems to be apparently free from natural enemies in the localities where the writer made observations, as no evidence of parasites was found in any of the mines.

In some sections a great many of the plants have been killed by this beetle, but where the plants were only slightly infested, the mines were soon overgrown, without any noticeable injury to the plants.

A DIVING WASP.

By A. N. CAUDELL.

The following is an extract from my Entomological Journal:

“Monday, July 4, 1921.—A blazing hot day, but I went picnicking to Great Falls, on the Maryland side of the Potomac. Very disagreeable weather, but in spite of the heat I secured a few desirable insects and made some interesting observations. Before crossing the swinging bridge I found a pair of green stone flies mating on the ground and after crossing the bridge I took a nymph of *Pterophylla camellifolia* on a large oak leaf but a few feet from the ground. Among other insects taken was a female psammocharid wasp which Mr. Rohwer identified later as *Anoplus illinoiensis* Robt. I first observed this wasp on a flat stone barely rising above the surface of a stagnant pool of water, about three inches in depth, lying near the river. The wasp was lying on one side and kicking the hind legs as if severely injured. Soon it dragged itself a few inches and turned over on the other side and kicked the legs, mostly the long hind ones, with which it rubbed the end of the abdomen,

but still giving the appearance of being hurt. I watched it fully a minute, wondering what ailed it, when it suddenly righted itself and ran rapidly and nervously about, showing it was not in the least injured. But it almost immediately went through the same performance of lying on the side and kicking the legs, the posterior ones moving the most. Soon it again got to its feet and ran to the edge of the stone where a large leaf was floating flat on the surface of the water. To my surprise it deliberately crawled beneath this floating leaf and out of sight. I failed to see just when or where it emerged but soon it was again on the stone and going through its queer actions. Then, after taking a short but very active flight for a few feet, it did the most interesting thing of all. It alighted near the edge of the same stone and crawled deliberately down the edge into the water, which, as stated before, was about three inches deep, and ran across the bottom, moving freely but not nearly so fast as when on top of the rock in the open air. It crossed the narrow channel to another stone, a distance of about one-half foot, where it came to the surface by climbing up the edge of that stone.¹ After again going through its kicking performance it flew across the pool with the legs and apparently the tips of its wings touching the surface of the water. It then ran along for some distance on the surface of the pool somewhat after the manner of a water-strider, but the wings, I think, vibrating rapidly all the time. Fearing it would leave the vicinity I then swatted it with a bunch of weeds, as I had no net, knocked it down and caught it, injuring it somewhat in doing so."

The above notes were written the same day the observations were made, and essentially as here presented.

BOOK NOTICE.

An Introduction to Cytology.—By Lester W. Sharp. New York, McGraw-Hill Book Co., 1921.

Intended, on the animal side, as supplementary to Wilson's well known work, this book brings into one volume the more recent phases of both plant and animal cytology. For this reason it will be of special interest to the entomologist whose field includes not only the nature of the insects themselves but their relation to the tissues of the plants on which they feed. —EDITOR.

¹This probably explains why its emergence from beneath the floating leaf was unobserved, as it probably went to the bottom of the pool on that occasion, and perhaps ran around to the opposite side of the stone before coming to the surface.