A COCCID-FEEDING MOTH

Holcocera iceryælla (Riley)
(*Blastobasis iceryælla* Riley)

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During the summer of 1915 the writer was able to make a number of observations on a coccid-feeding moth which occurs in considerable numbers on the campus of the University of California. This insect was sent to Dr. C. V. Riley who published a description and short report in 1886.¹ During the winter of 1914 Mr. E. P. Van Duzee of the Station Staff called attention to the small hibernating larvæ beneath the old shells of the European peach scale, *Lecanium persicæ* (Fab.). From these caterpillars adults were reared the following spring and forwarded to the Bureau of Entomology, United States Department of Agriculture, Washington, D. C., and were determined by Mr. August Busck.

The caterpillars are small, averaging about 6 mm., but some attain a length of 10 mm. The color is dark reddish-brown with the dorsum noticeably dusky or black. There are several conspicuous narrow whitish lines on the dorsum and the body is covered with numerous short irregular lines of the same color. The tubercles and hairs are also white. Pl. 28, fig. 2 shows the markings fairly well. The prothoracic shield and head are very dark brown or black. The moths average about 9 mm. to the tips of the wings, but the body is only about half as long. The color is ashy-gray due to a mingling of light and dark scales as shown in Pl. 28, fig. 1. Near the middle of the front wings the black scales form an oblique transverse line which is bordered anteriorly by a light-colored line of about the same width. The posterior portions are much darker than the remainder because of the presence of numerous larger black patches. The under surface of the front wings and all of the hind wings are light, the fringes being yellowish. The body is silvery-gray with the posterior part of the abdomen sometimes dusky. The legs and antennæ are light gray with dusky markings.

¹ Report of the Commissioner of Agriculture, pp. 484-486, 1886.

EXPLANATION OF PLATE 28

Fig. 1. Adult of *Holcocera iceryælla* (Riley). Enlarged. (Original. Photo by Dept. Scientific Illustration, Univ. of Cal.)

Fig. 2. Larvæ of *Holcocera iceryælla* (Riley). Enlarged. (Original.)

Fig. 3. Branch of laurel or sweet bay tree, *Laurus nobilis* Linn., showing infestation of greedy scale, *Aspidiotus camelliae* Sign., and the webs of the larvæ of *Holcocera iceryælla* (Riley).

The exact food habits of the caterpillars are difficult to ascertain and the writer is not sure just how much of the diet consists of the old dead bodies, the waxy scales, etc., and how much of the living coccids. Dr. Riley records the black scale, *Saissetia oleæ* (Bern.) and the cottony cushion or fluted scale, *Icerya purchasi* Mask., as hosts. To this list may be added the European peach scale, *Lecanium persicæ* (Fab.), already referred to, the greedy scale, *Aspidiotus camelliae* Sign., and Baker's mealy bug, *Pseudococcus bakeri* Essig. Large numbers of the caterpillars were taken from beneath the dead and living scales of the European peach scale and it was apparent that they were feeding upon the dead shells as well as upon the eggs and the young, but there was no evidence of their having devoured more than half-grown scales. The larvæ were found in the greatest numbers upon a laurel or sweet bay tree, *Laurus nobilis* Linn., which was severely infested with the greedy scale, but there was no evidence of their having served as a check to ravages of the scale.

Probably for protection the larvæ spin extensive webs into which are often incorporated bits of leaves, bud scales and other refuse. The webs are often quite compact and may be numerous enough to cover a considerable area. They are to be found in the forks of the limbs, leaf and bud axils, and in fact anywhere the scale insects abound in any considerable numbers. Within or beneath these webs the larvæ live and eventually pupate and do not ordinarily leave them except when one endeavors to remove them by force. They then wriggle exceedingly violently and often escape completely.

Mr. C. J. Pierson, a graduate student of the University succeeded in rearing a number of adults from caterpillars which were taken from the egg masses of Baker's mealy bug.

A HANDY FIELD AND LABORATORY BINOCULAR MAGNIFIER

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Several years ago while visiting the eminent Coccidologist, Mr. E. Ernest Green, at the Royal Botanical Gardens, Perideniya, Ceylon, the writer's attention was drawn to a simple binocular magnifier adapted for attaching over the eyes. The binocular shown in the accompanying illustration, which was secured from a firm in London, has proved of such value for the observation of insects under conditions requiring low magnification, both in the field as well as in the laboratory, that it has appeared advisable to bring it to the attention of others.