A NEW CECIDOMYIID INFESTING BOX-ELDER (*Negundo aceroides*).

BY C. P. GILLETTE, AMES, IOWA.

**Cecidomyia negundinis n. sp.**

**Galls.** — The galls (G) are produced from terminal buds on all parts of the tree. Each is made up of a number of transformed leaves and petioles arranged in pairs in which the two leaves are opposite. They are sub-globular in outline and vary from less than one half of an inch to nearly an inch in diameter. The outer basal portion of the gall is formed by an enormous enlargement of the bases of the petioles of two leaves which unite and form a receptacle like the cup of an acorn holding the inner portions of the gall. In the central part of the gall, the leaf blades may be entirely involved or their tips may be partially expanded.

**Gall-flies.** — Females, dry specimens. **Eyes** large, coal black and coarsely granulated; **antennae** one-half the length of the insect, 13-jointed, first joint globular, remaining joints cylindrical, second and third joints contracted in the middle, pedicels of joints short, about one-quarter the length of the joints, all of the joints moderately set with hairs the longest of which nearly equals the joints in length. **Thorax** very dark brown, opaque, and naked except two rows of long gray hairs in longitudinal grooves running from collar to scutellum and similar hairs at the sides of the thorax; scutellum of the same color as the mesothorax and with a few long gray hairs. Beneath the wings it is yellowish. **Dorsum** dark brown, sides of **abdomen** and venter light yellow; abdomen sparsely set with gray hairs above and below. **Ovipositor** yellowish brown and in specimens taken while ovipositing, it is exserted one

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1 Read before the Iowa academy of science, 5 September 1890.
and one-half times the length of the insect. Legs rather pale, tibiae and tarsi infuscate, rather densely set with silvery hairs. Wings beautifully iridescent and rather sparsely set with long gray pubescence, fringed all the way around; costal and first longitudinal nervures rather heavy and united at the apex of the wing as one continuous vein. The little cross vein between the first and second transverse nervures and the outer or upper branch of the fork in the third transverse nervure are almost obsolete and scarcely visible except in favorable light. Length of dry specimens one and one-half mm. Length of fresh specimens two mm.

The eggs (E) are a bright orange color, .4 mm. in length and much elongate. Some are straight, others are variously bent and all are pointed at one end and often with a short pedicel attached.

This insect is decidedly an injurious species. Trees upon the College campus that were the most severely attacked by this fly the past summer have had not more than half of their normal amount of foliage this year.

On the 18th of April, last, the writer noticed the flies abundant among the branches of the trees and the process of egg-laying was carefully watched with a hand lens. The females were so intent in their duties for the propagation of the species that they were not easily disturbed. They do not pierce the bud scales but work their long slender ovipositors far down between the scales and there deposit a large nest of eggs, sometimes forty or more in a place. By separating the scales the clusters of eggs can be plainly seen with the naked eye. The irritation set up by these eggs and the maggots that hatch from them aided, perhaps, by a poisonous secretion from the mother insect causes the abnormal development of the part. The galls all die a few weeks later when the maggots leave them. These dead galls turn black and remain upon the trees giving them an unsightly appearance.

PREPARATORY STAGES OF CERURA MULTISCRIPITA, RILEY.

BY HARRISON G. DYAR, RHINEBECK, N.Y.

Egg. Slightly more than hemispherical, the base flat, dead sordid white, covered with many short dark brown hairs irregularly laid on and distributed also on the parts of the leaf adjoining. Diameter 1.3 mm. Laid in groups of five or less on the under surface of a leaf. These eggs had hatched when found, the larva having emerged from a hole in the side, leaving the rest of the shell intact.

First stage. Head subquadrate, depressed at the vertex, black and shining. Width, .6 mm. Body furnished with