

Although adults have been collected from a large number of plants and are believed to breed on *Ulmus* sp., there is no published evidence that any of these plants, other than Ohio buckeye, serve as true breeding hosts. Knight (1941) observed this species on elm leaves curled by aphids, where it fed to some extent on honeydew; less often, he observed it feeding on the eggs of the elm leaf beetle, *Pyrrhalta luteola* (Muller).

*Fifth instar* (Fig. 3). Length 2.15–2.64 ( $N = 10$ ), width 0.87–1.18. Elongate oval, uniformly green, setigerous spot near apex of antennal segment I, basal annulus on antennal segments II and III, setigerous spot located anteriorly near apex of pro- and mesofemora, metafemora with 2 setigerous spots near apex, 1 anteriorly and a smaller 1 posteriorly, and spots at base of spines on tibiae fuscous. Densely clothed with pale recumbent setae. Head: width 0.55–0.62; vertex 0.31–0.37. Rostrum, length 0.80–0.96, extending to between metacoxae. Antennae: segment I, length 0.16–0.19; II, 0.49–0.55; III, 0.40–0.45; IV, 0.32–0.36. Pronotum: length 0.35–0.39, width at base 0.64–0.75. Wing pads reaching to or slightly beyond abdominal segment IV, dorsal scent gland opening slitlike. Parempodia to setiform, parallel.

#### *Orthotylus aesculicola* Blinn

This orthotyline was originally described from material collected in Columbia (Boone Co.), Missouri, on Ohio buckeye by Blinn (1987), who illustrated the adult and male genitalia.

*Fifth instar* (Fig. 4). Length 3.09–3.81 ( $N = 8$ ), width 0.96–1.16. Elongate slender, uniformly green to yellowish green, head tinged with orange near eyes. Sparsely clothed with pale, recumbent setae. Head: width 0.73–0.76; vertex 0.35–0.44. Rostrum, length 0.98–1.11, extending to apex of mesocoxae. Antennae: segment I, length 0.33–0.38; II, 1.02–1.09; III, 0.69–0.75; IV, 0.49–0.56. Pronotum: length 0.38–0.45, width at base 0.75–0.85. Wing pads reaching abdominal segment IV, dorsal scent gland opening slitlike, anterior area tinged with orange (faded in preserved specimens). Parempodia fleshy, convergent apically.

#### Seasonal History

Sampling results are given in Figures 5 and 6. Figure 5 gives the percentage of all stages of each species relative to the total number of Miridae collected per sampling date. Figure 6 shows the immatures and adults of each species separately as a percentage of the total immature, and adult catch, respectively, per sampling date.

The life cycles of these 3 species are similar and can be summarized as follows. All three species were present from late March or early April to the end of May, with almost complete overlap among the species (Fig. 5). Overwintering eggs begin to hatch from late March to early April, coinciding with leaf flush and the onset of flowering. All instars of these species are active feeding stages, and development takes place during a time when the host plant is producing new growth and flowers. Early instars (I–III) of both *L. aesculi* and *O. aesculicola* were observed feeding on the expanding leaflets and flowers where, with their uniform green color, they resembled the color of the young foliage and flowers. Later instars (IV–V) and adults of *L. aesculi* and *O. aesculicola* were observed feeding on both the flowers and leaves at about equal frequencies, with the former species preferring the flowers and the latter species the underside of leaves. Feeding by *M. modestus* was not observed.