

**DESCRIPTION OF THE FIFTH INSTAR OF APACHE DEGEERII
(HOMOPTERA: FULGOROIDEA: DERBIDAE)**

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Apache degeerii (Kirby) ranges from Maine south to Florida and west to Iowa and Texas; it has also been recorded from British Columbia and Washington (Metcalf 1945, Wilson and McPherson 1980). This derbid has been recorded from oak, beech, maple, and hickory (Swezey 1904); otherwise no information on its biology is available.

The immatures of *degeerii* have never been described. In fact, to my knowledge, neither descriptions nor illustrations of immature Derbidae have been published. Derbid nymphs have been collected in rotting wood or under bark and are believed to feed on fungi (O'Brien, pers. comm.). Recently, two *degeerii* specimens were loaned to me for description and illustration. One specimen was an adult male that had almost entirely emerged from its attached nymphal skin; the other was a fifth instar nymph. The fifth instar was identical to the molted skin attached to the adult.

The collecting data for both specimens are: Florida, Wakulla Co., 2 mi. north Panacea, 6 April 1973, C. W. and L. B. O'Brien collectors, under bark of *Quercus*.

DESCRIPTION OF FIFTH INSTAR

Measurements of the pinned nymph were made with an ocular micrometer. Body length was measured from the tip of the vertex to the tip of the abdomen, width was measured across the widest part of the body, thoracic length was measured along the midline from the anterior margin of the pronotum to the posterior margin of the metanotum.

Fifth instar (Fig. 1). Length 4.25 mm; thoracic length 1.50 mm; width 2.25 mm.

Form elongate, slightly dorsoventrally flattened, widest across metathorax. Body yellowish brown to dark brown.

Head dark brown. Vertex subpentagonal, narrowing apically, deeply concave medially, lateral margins strongly carinate. Frons ovoid, narrowing apically and basally, slightly wider than long, broadest just beneath eyes (which are not visible in frontal view), lateral margins strongly convex, each lateral margin carinate (outer carina) and paralleled by a second carina (inner carina) ca. $\frac{1}{2}$ - $\frac{2}{3}$ the distance from midline to outer carina; inner carinae meeting apically; notched medially at frontoclypeal juncture; with two irregular rows of pits between inner and outer carinae. Clypeus yellowish, dark brown laterally and apically; narrowing distally, consisting of a subconical, basal postclypeus and an elongate subconical distal anteclypeus. Beak apparently three-segmented, yellowish-brown with darker apex; extending to 2nd abdominal sternite; segment 1 covered by anteclypeus, segments 2 and 3 subequal. Eyes dark reddish brown, somewhat reduced. Antennae encased in sockets, apparently reduced to knoblike protrusions.

Thoracic nota dark brown with yellowish markings; divided by mid-dorsal line into three pairs of plates. Pronotum with anterior margin extending to level of posterior margin of eyes; each plate subrectangular, median and posterior areas highly elevated and bordered by strong carinae, median area subpentagonal and bearing a row of three pits, posterolateral area leaf-shaped and bearing a row of three pits; anterior margin broadly curved laterally, with a row of indistinct pits near margin; posterior margin highly sinuate. Mesonotum with median length ca. 1.5 times that of pronotum; each plate with a longitudinal oblique carina near midline, a longitudinal carina in median $\frac{1}{3}$, a longitudinal pustule-bearing partial carina extending onto wingpad ca. $\frac{1}{2}$ distance from midline to lateral margin, and an oblique longitudinal pustule-bearing carina extending almost to apex of wingpad in lateral $\frac{1}{4}$; wingpad extending to tip of mesonotal wingpad and almost to posterior margin of fourth abdominal tergite; with indistinct pits just lateral to carina in median $\frac{1}{3}$ and bordering lateral

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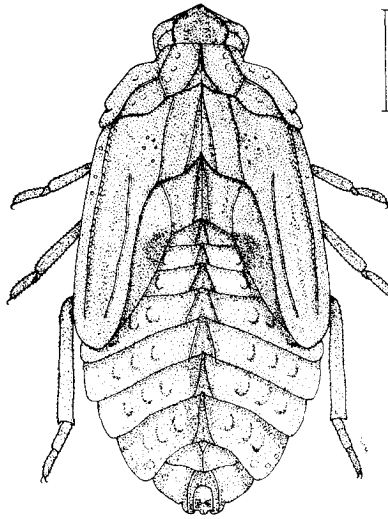


Fig. 1. Fifth instar of *A. degeerii*. Vertical bar = 1.0 mm.

margin of wingpad. Metanotum with median length ca. $\frac{3}{4}$ that of mesonotum; each plate with a longitudinal carina near midline and a slightly concave longitudinal carina in median $\frac{1}{3}$. Pro- and mesocoxae elongate, posteromedially directed, procoxae somewhat dorso-ventrally flattened; metacoxae smaller, hidden behind enlarged cuplike trochanters; remaining segments of legs bearing short setae. Metatibiae lacking lateral and apical spines. Pro- and mesotarsi two-segmented, segment 1 wedge-shaped, segment 2 subconical and curved with a pair of slender brown claws and pale pulvillus apically. Metatarsi three-segmented, segments 1 and 2 subcylindrical and lacking spines, segment 3 similar to segment 2 of other legs.

Abdomen nine-segmented, widest across segments 4 and 5, tergites brown, sternites yellowish. Tergites 1-7 each divided by a middorsal longitudinal membrane into right and left tergal plates; each side of tergal plates with the following features: tergites 1-7 each with a longitudinal carina near midline, tergites 2-3 each with one knoblike pit-bearing protrusion, tergites 4-7 each with 3-4 knoblike pit-bearing protrusions (only three are prominent) and 2-3 additional pits near lateral margin. Segment 8 with tergite reduced, with a longitudinal median carina; segment 9 with tergite curving around lateral margins to ventral side, ventral surface with seven pits on each side; segment 9 surrounding a pair of ventral sclerotized paddle-like structures and a dorsal peg-like structure. Abdomen lacking enlarged wax glands.

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