

DISTRIBUTION AND IDENTIFICATION OF THE BLUE ALFALFA APHID

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Since its discovery in California in March 1975, the blue alfalfa aphid has been found to be generally distributed in California. It is now known to occur in the following counties: Fresno, Imperial, Kern, Madera, Merced, Riverside, Sacramento, San Bernardino, San Joaquin, Santa Barbara, Siskiyou, Tulare, Yolo, and Yuba. The blue alfalfa aphid is known, also, to be established in Arizona and Nevada.

A very useful characteristic for field identification is body coloration, which is bluish green for the blue alfalfa aphid and yellowish green or light green for the pea aphid. Other diagnostic characters for field identification are the coloration of the third antennal segment of nymphs and adults, and the coloration of the thoracic area of the winged forms. The third antennal segment of the pea aphid shows a narrow dark band at the tip, whereas that of the blue alfalfa aphid is uniformly brown. The color of the thoracic area of the winged form is dark blackish brown for the blue alfalfa aphid and light brown for the pea aphid.

Microscopic examination of the head shows that the head of the pea aphid is larger and the hairs on the head are shorter than that of the blue alfalfa aphid (Figures 1-4).

Comparison of parts of the body of the winged forms (Figures 5-12) and the wingless forms (Figures 13-20) of the pea aphid and the blue alfalfa aphid shows that, in general, the body parts of the pea aphid are longer than those of the blue alfalfa aphid. The cauda of both winged and wingless forms of the pea aphid have more hairs and have shorter hairs at the tip than that of the blue alfalfa aphid. Finally, the base of antennal segment 6 is over twice as long as the last rostral segment for the pea aphid and only a little longer for the blue alfalfa aphid.

These are only some of the characters that can be used, most of the time, for the identification of the blue alfalfa aphid. There are many exceptions, for genus Acyrtosiphon is composed of many closely related, highly variable species.

Explanation of Figures

Figures 1-4. Head of adults: 1. Pea aphid, wingless. 2. Blue alfalfa aphid, wingless
3. Pea aphid, winged. 4. Blue alfalfa aphid, winged.

Figures 5-12. Body parts of winged adults (left, pea aphid; right, blue alfalfa aphid) 5,6
Cauda: 7,8. Cornicle: 9,10 Antenna: 11,12. Rostrum.

Figures 13-20. Body parts of wingless adults (left, pea aphid; right, blue alfalfa aphid)
13,14. Cauda: 15,16. Cornicle: 17,18. Antenna: 19,20. Rostrum.

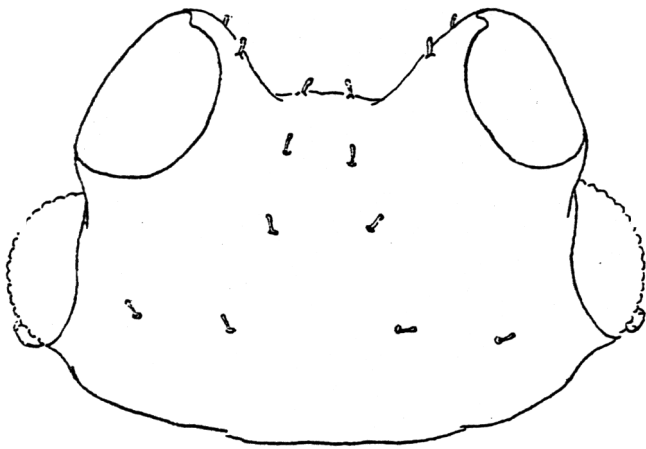


Figure 1. Pea aphid (P) wingless

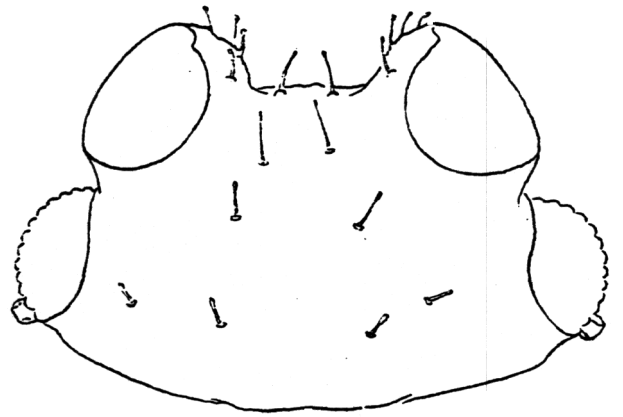


Figure 2. Blue alfalfa aphid wingless

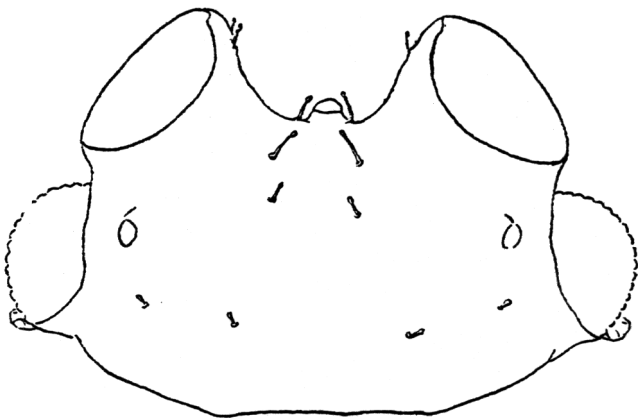


Figure 3. P.A., winged

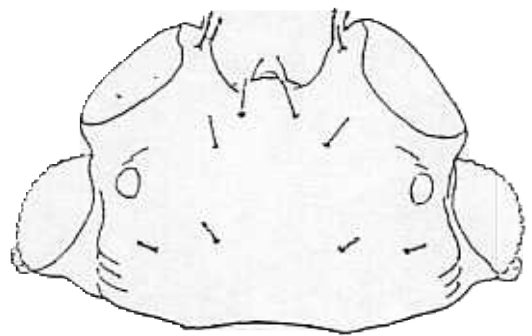
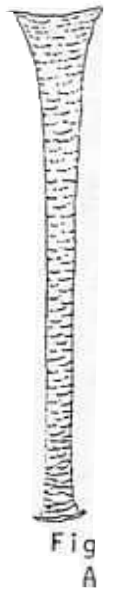
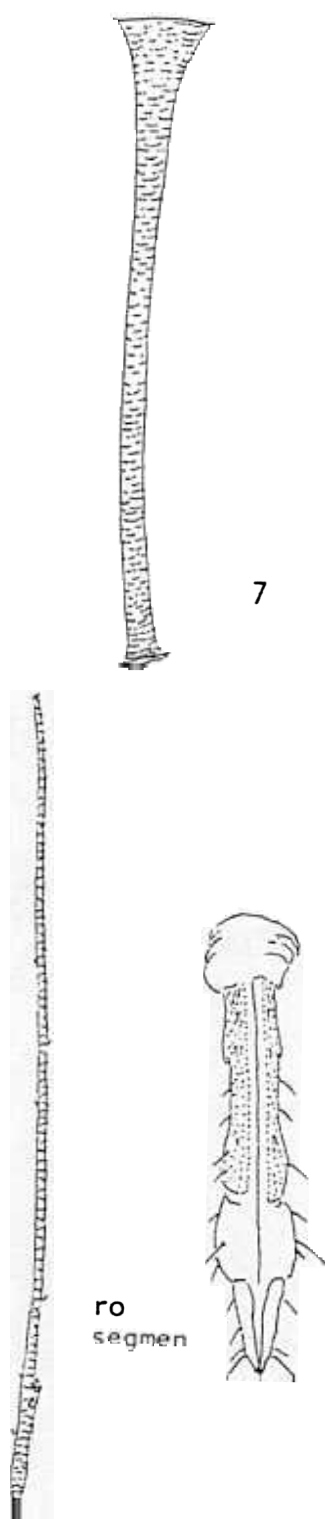
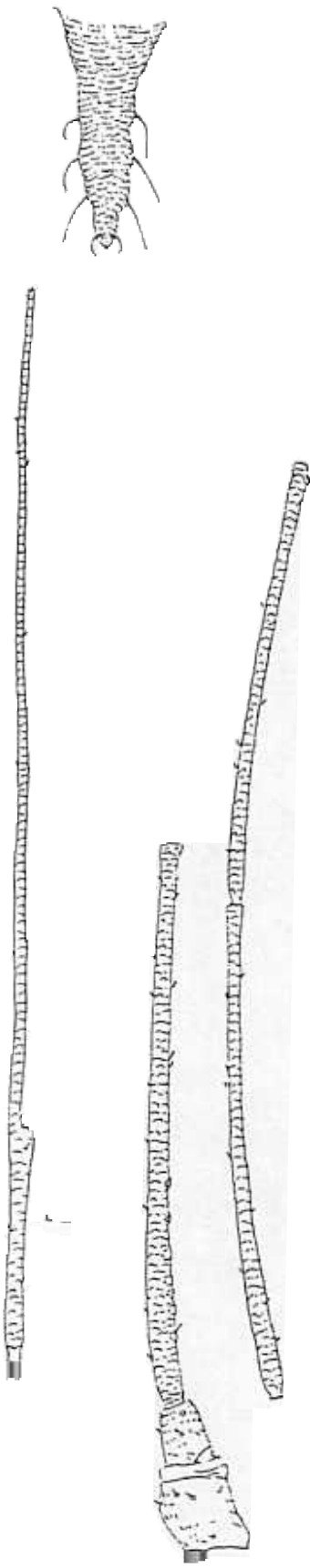
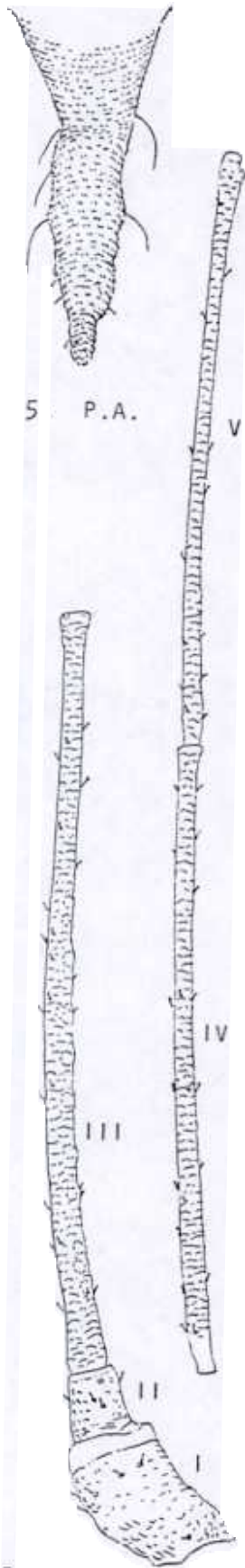
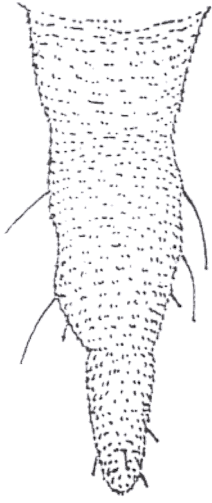


Figure 4. Blue alfalfa aphid winged





3. P.A.

