

# **1214 Using wing pad characteristics and head capsule width to distinguish nymphal instars of the cotton fleahopper (Miridae: Hemiptera)**

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Studies of the cotton fleahopper, *Pseudatomoscelis seriatus* (Reuter), often require the ability to distinguish between the five nymphal instars. The only guideline for distinguishing instars, based on wing pad characteristics, was published in an experiment station bulletin in 1929. Although accurate and detailed illustrations were provided, access to this antiquated publication is limited, and inexperienced observers may have difficulty discerning the wing pads on earlier instars. The objectives of this study were to present additional guidelines for distinguishing instars based on head capsule widths, and to provide illustrations to reiterate the differences in wing pad characteristics among instars. Both field-collected and laboratory-reared nymphs were measured to establish robust ranges of head capsule widths. Overall, the mean and range (mm) of head capsule widths observed for first, second, third, fourth, and fifth instars were 0.26 (0.200-0.280), 0.34 (0.313-0.375), 0.42 (0.381-0.463), 0.51 (0.450-0.569), and 0.60 (0.550-0.669), respectively. Given that the ranges of first, second, and third instars did not overlap, the respective ranges reported herein should be useful for distinguishing these earlier instars.