

ners of eyes of females rounded. Size and shape of lateral ocelli as in fifth instar nymphs; median ocellus smaller than lateral ocelli. Antennae: pale, 6-segmented. Thorax: thoracic notal shield light brown with uniform minute black stippings; elevation of median carina greatly produced and prominent; paired dorsal spines distinct and subequal in length to posterior elevation of median carina; anterolateral corners brown, spinous; lateral spines well developed, sharply pointed, brown at apex; size of lateral extensions of notal shield as in fifth instar nymphs. Hind wing pads poorly developed, lobe-like as in Figure 12 A. Sternum light brown, darker at lateral margins. Legs: yellowish-brown; a dark brown macula near base of dorsal surface of tibiae; tarsi with a median transverse brown band, inner margins with one row of small spines. Abdomen: terga 1-5 pale, tergum 6 light brown, anterolateral margins of each segment dark brown; mid-dorsal elevations on terga 7-9 prominent, pale; posterolateral spines present on segments 6-9. Abdominal sterna 1-6 brown, remainder of segments pale; a brown macula present near anterolateral corners of sterna 7-9; subanal plate triangular apically. Caudal filaments: basal 1/3 and apical 1/2 of caudal filaments brown, remainder paler; apical 2/3 of caudal filaments fringed with long hairs.

Ecdysis of the sixth instar occurred in 11-14 days, averaging 12.5 days.

Seventh Instar Nymphs (Fig. 11 C): Body length of male 3.10-4.40 mm; width of head 0.90-1.30 mm; thoracic notal shield: length 1.70-2.40 mm, width 2.50-4.20 mm; caudal filaments 0.80-1.50 mm. Body length of female 3.20-4.50 mm; width of head 1.00-1.40 mm; thoracic notal shield: length 1.70-2.40 mm, width 2.80-4.20 mm; caudal filaments 0.80-1.50 mm. Head: light brown except posterolateral areas near base of compound eyes brown; a transverse ridge present between compound eyes near posterior margins of vertex; a prominent black macula near anterior base of compound eyes; anterior projection of frontal process of head more prominent than that of the sixth instar nymphs; basal 1/3 of frontal prominence overlapped dorsally by frontal projection of head; anterolateral corners of genae angular. Compound eyes: grayish-black; eyes of males larger than those of females with the inner posterolateral corners of eyes of females smooth and rounded. Size and shape of lateral ocelli as in sixth instar nymphs. Antennae: pale; 6-segmented. Thorax: thoracic notal shield light brown with distinct black tubercles; elevation of median carina more developed than that of the sixth instar; dorsal spines prominent and cone-shaped; anterolateral corners brown and spinous; posterior 2/3 of lateral margins of shield crenulate, more prominent near base of lateral spines; basal 2/3 of margins of lateral spines serrate; lateral extensions a little more distinct and prominent than those of the sixth instars. Hind wing pads small with three distinct longitudinal tracheae as in Figure 12 B. Sternum light brown; lateral margins darker. Legs: color pattern as in sixth instar nymphs except for the presence of minute brown stippings on coxae, trochanters, and femora of prothoracic, mesothoracic, and metathoracic legs; a distinct dark brown macula near base of dorsal surface of tibiae; inner margins of tibiae and tarsi with one row of small spines; apex of tarsal claws reddish-brown. Abdomen: abdominal terga 1-5 pale; posterolateral areas of tergum 6 brown and covered with minute hairs; a continuous dark brown median line on terga 7-10, interrupted posteriorly on each tergum; anterior margins of terga 7-9 with a pair of broad, dark brown, transverse maculae which extend almost to median line. Prominent elevations or projections arise from mid-dorsum of terga 7-9; posterolateral spines present on segments 6-9. Sternum covered with setae; base of setae dark brown; sterna 1-6 brown, remainder of sterna yellowish-brown; a distinct dark brown macula near anterolateral corners of sterna 7-9; subanal plate as in sixth instar. Caudal filaments: basal 1/3 and apical 1/2 of caudal filaments smoky-brown, remainder pale; posterior 2/3 with long hairs.

Molting of the seventh instar occurred in 12-15 days, averaging 13.2 days.

Eighth Instar Nymphs (Fig. 11 D): Body length of male 3.70-5.50 mm; width of head 1.20-1.50 mm; thoracic notal shield: length 2.20-2.80 mm, width 3.20-4.70 mm; caudal filaments 1.30-1.70 mm. Body length of female 3.90-5.60 mm; width