

eyes of males larger than those of females; inner margin of posterolateral corners of eyes of males angular; inner margin of posterolateral corners of eyes of females rounded. Ocelli obscured and marked by the absence of black tubercles over the area. Antennae: yellowish, 8-segmented; basal segment washed with brown. Thorax: color and markings of thoracic notal shield of males as in ninth instar nymphs, light brown in females except the anterior 1/2 near median carina washed with brown; numerous dark brown tubercles; elevation of median carina and paired dorsal tubercles as in Figure 13 X; lateral borders of shield crenulated, serrated at base of lateral spines; lateral spines pale, reddish-brown at apex; margins of lateral spines serrate. Hind wing pads as in Figure 12 E. Sterna light brown with numerous black setae. Legs: yellowish-brown except base of coxae washed with brown; margins of legs as in ninth instar nymphs. Abdomen: color pattern of terga 1-5 and markings of tergum 6 as in ninth instar nymphs; terga 7-10 light brown with numerous setae; base of setae dark brown, tuberculated; a prominent continuous dark brown median line on terga 7-10, interrupted posteriorly on each tergum; anterior margins of terga 7-9 with a pair of dark brown transverse maculae that extend almost to median line; elevations at mid-dorsum of terga 7-9 keel-shaped, approximately equal to 1/2 length of their respective terga; lateral borders of terga 6-9 weakly crenulated, crenulation weakest on tergum 6; posterolateral corners of terga 6-9 with spines more prominent than those of ninth instar nymphs. Sterna light brown, lightly washed with dark brown, with prominent black setae; sterna 1-7 with a minute network of black stipplings; black macula near anterolateral corners of sterna 7-9 more prominent than in ninth instar nymphs; subanal plate more deeply cleft than that of ninth instar. Caudal filaments: pale, except base of cerci light brown; basal 1/2 of median filament reddish-brown; posterior 2/3 of caudal filaments with long brownish hairs.

The tenth instar molted after 15-18 days, averaging 16.8 days.

Eleventh Instar Nymphs (Fig. 14 C): Body length of male 6.60-8.10 mm; width of head 2.00-2.20 mm; thoracic notal shield: length 3.90-4.80 mm, width 5.50-6.10 mm; caudal filaments 2.00-2.30 mm. Body length of female 6.70-8.50 mm; width of head 2.10-2.30 mm; thoracic notal shield: length 4.00-5.30 mm, width 5.70-6.30 mm; caudal filaments 2.00-2.40 mm. Head: color and markings as in tenth instar nymphs; dark brown tubercles on head of females more abundant than in males; genae expanded, anterolateral corners rounded and weakly crenulated; frontal process of head as in Figure 14 C, a distinct median carina on vertex and extended through base of frontal process of head, continuous posteriorly to median carina of thoracic notal shield. Compound eyes: black, eyes of males larger than those of females, inner margins of posterolateral corners of compound eyes of males as in Figure 14 C; inner margins of posterolateral corners of compound eyes of females rounded. Ocelli obscured. Antennae: yellowish, 9-segmented. Thorax: thoracic notal shield light brown, with numerous dark brown tubercles, fewer tubercles in males than in females; elevations of median carina and paired dorsal spines as in Figure 13 XI; lateral borders of shield crenulated, serrated at base of lateral spines; color and markings of lateral spines and lateral extensions as in tenth instar. Hind wing pads pale, light brown at margins (Fig. 12 F); base of hind wing pads of nymphs reddish-brown. Sterna light brown with small, black tuberculated setae. Legs: yellowish-brown except coxae washed with smoky-brown; margins of legs brownish; outer surface of femora with black tuberculated setae; apex of tarsal claws reddish-brown; a prominent dark brown macula near base of dorsal surface of tibiae; tarsi with a median, transverse, dark brown band; inner margins of tibiae and tarsi with one row of sharply pointed spines. Abdomen: terga 1-5 pale; posterior 1/2 of tergum 6 dark brown with black tubercles at posterior margins, almost black at basal 1/2 of pyramidal structure, dorsal concavities of pyramidal structure pale; terga 7-10 light brown with numerous black tuberculated setae; a prominent continuous dark brown median line on terga 7-10, interrupted posteriorly on each tergum; anterior margins of terga 7-9 with a pair of dark brown transverse maculae; median, dorsal elevations of terga 7-9 keel-shaped, approximately equal to 1/2 length of their respective terga; lateral