

THE FIFTH INSTAR NYMPH OF *LOPHOPS CARINATA* KIRBY

(Homoptera: Lophopidae)

by

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ABSTRACT

The fifth instar nymph of *Lophops carinata* was described and illustrated in order to extend our knowledge of nymphs of Fulgoroidea. It is hoped that it will be useful to all those who are also interested in this insect.

Body yellowish brown. Face with many black stripe-like markings on laterofrontes, large one below eye and on postclypeus. Wing pads with inner side black. Legs pale yellowish, femora each with 4 longitudinal black markings, tibiae each with 4 ring-like markings. Abdomen with lateral two-fifths black.

Head including eyes distinctly narrower than pronotum. Vertex longer in middle line than wide at base about 1.2:1; apical margin transverse, lateral carinae nearly straight and elevated, without submedian carinae, median carina simple and feebly. Eyes hemispherical in dorsal view. Frons strongly produced forward beyond level of anterior margin of eyes, with short and distinct median carina. Frons in ventral view, with interfrons strongly elevated, longer in middle line than wide at widest portion about 2.2:1, widest near middle point between eye and frontoclypeal suture; lateral carinae angulated at apical fourth, with two median carinae, near straight, parallel, and widely separated each other; interfrons much wider than laterofrons, laterofrons in lateral view with 4 sensory pits near lateral carina basally, with about 10 pits along median carina. Postclypeus slightly wider at base than wide of frons at apex, longer in middle line than wide at base. Rostrum stout, reaching to hind coxae, relative length of each segment about 1.9:1.4:1. Ocelli present. Antennae short, basal segment wider than long, second segment longer than first about 2.8:1. Pronotum with lateral carinae strongly elevated, each side with 6 pits, one at inner side of lateral keel, one at apex, four lateral. Mesonotum with lateral carinae elevated, straight, parallel with median line, with two pits on each outer side, outer one slightly higher, anterior wing pads each with two ridges, inner one near middle, outer one along lateral margin at basal two-thirds, with 2 pits at middle along inner side of lateral ridge. Metanotum with lateral carinae slightly elevated, obliquely protruding apical ends near middle line, with 2 pits at each outside. Forelegs with femora and tibiae strongly compressed and expanded, femora with expanding portion wider than main body at apex, tibiae with median ridge. Mid-legs moder-

ately compressed and expanded, femora with expanding portion as wide as main body at apex, tibiae with middle ridge slightly above. Hind tibiae each with two lateral spines, upper one below middle, lower one near apex, with many teeth at apex, arranging in two rows; first tarsal segment with 3 apical teeth, 2 inner, 1 outer; second tarsal segment very small without tooth.

Abdomen with tergite V bears 2 pits each side, tergites VI-VII: 3 pits, tergite VIII: 1 + 3; tergite IX: 1 dorsal, tergite IX in caudal view bears 3 pits on dorsolateral angle, 1 on lateral side below middle, 1 near first area of wax gland pore and 1 on top at anal ring. Anal ring small, U-shaped, inner side with a pair of subulate-like anal comb. Areas of three pair wax gland pore, upper one on outer oblique plane of a protuberance which near by anal pore, middle one circular, far below surface, lower one the largest, kidney-shaped. All wax gland pores hexagonal.

Length of body: 5.0 mm

Width of body: 2.7 mm

Length of antenna: 0.2 mm

Specimens examined: Fifth instar nymphs: 2, Wufeng ( 五峯 ),  
Hsinchu Hsien, 24-VI-1985, S. C. Tsaur; 1, Puli ( 埔里 ),  
Nantou Hsien, 18-VII-1985, S. C. Tsaur.

Distribution: Taiwan, Mainland China, Japan, Philippines, Sri Lanka, Java, India.

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## 脊粗脚飛蝨之第五齡若蟲(同翅目：粗脚飛蝨科)

曹 順 成 楊 仲 圖

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脊粗脚飛蝨第五齡若蟲，頭長，額隆起。側額區具14對，前胸具6對，中胸4對，後胸2對感覺窩。前、中足、腿節、脛節側扁，脛節具中脊。第5腹節具2對感覺窩，6~7節各3對，8節4對，9節背面1對，後面6對，肛孔下方具三區泌臘孔。

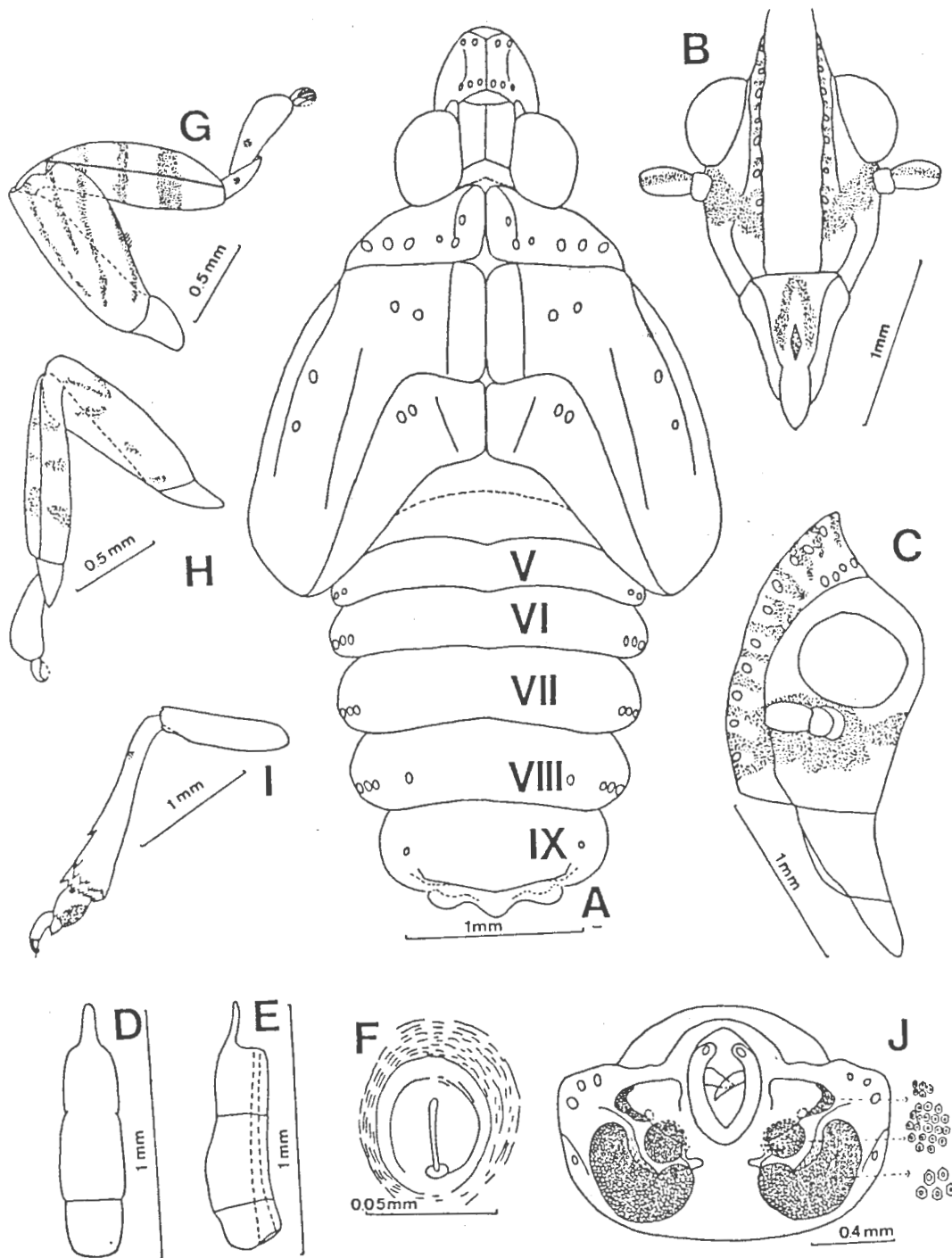


Fig. *Lophops carinata* Kirby. A, Fifth instar nymph, dorsal view; B, Head, ventral view; C, Head, lateral view; D, Rostrum, ventral view; E, Rostrum, lateral view; F, Sensory pit; G, Fore leg; H, Middle leg; I, Hind leg; J, Ninth abdominal segment, caudal view.

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