

STUDIES ON IDIOCERINE LEAFHOPPERS

XXI. Color variations of *Idioscopus clypealis* (Homoptera: Cicadellidae)

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Abstract. *Idioscopus clypealis* shows sexual differences in coloration of the face. Females usually have 4 spots, 2 or none may occur occasionally. The normally unspotted face of males can have 2 or 4 spots present. In both sexes the postclypeus is normally unmarked. Specimens of both sexes from New Britain present a black longitudinal band on the postclypeus and specimens from eastern New Guinea may have a brownish, diffuse, somewhat similar band. Variations of the color of the anteclypeus also occur.

Idioscopus clypealis (Lethierry), a minor pest of mango trees, occurs westward to at least West Pakistan and eastward to the Philippine Islands. In Maldonado Capriles (1964) I point out that the coloration or markings on the head of this species are variable. Thanks to the courtesy of the late Dr J.L. Gressitt I had the opportunity to study small series of specimens belonging to the Bernice P. Bishop Museum from Laos, Vietnam, the Philippine Islands, New Britain, and eastern New Guinea Island. I have specimens from West Pakistan and India in my collection.

The purpose of this paper is to detail some recurring variations in the markings of the head of specimens from the above-mentioned localities and at the same time indicate that these variations do not merit subspecific names. In every case discussed below, typical forms were found among the specimens studied.

Females. The face of the typical form has 2 large spots above and 2 smaller between the ocelli, and the anteclypeus is black (Fig. 5). The 4 spots may be absent; occasionally only the interocellar pair is present. The relative size of the 2 pairs of spots can be inverted and be as in the male in Fig. 5 or all 4 spots can be quite small. The few females from New Britain have the blackish postclypeus described below for males. Specimens from eastern New Guinea have some brown on the postclypeus but in their case the band is diffuse and never sharply defined as in the specimens from New Britain. The anteclypeus may not be totally black. This last character is further discussed below.

Males. The face of males is usually unspotted (Fig. 4) and the anteclypeus black. Eleven of 12 specimens from Vientiane, Laos, have 2 large black spots high on the face (Fig. 1); the remaining specimen lacks these spots. This color form is absent from all other localities. Only 1 specimen from New Britain has 2 interocellar spots and all but 1 have a median longitudinal black band on the postclypeus (Fig. 7).

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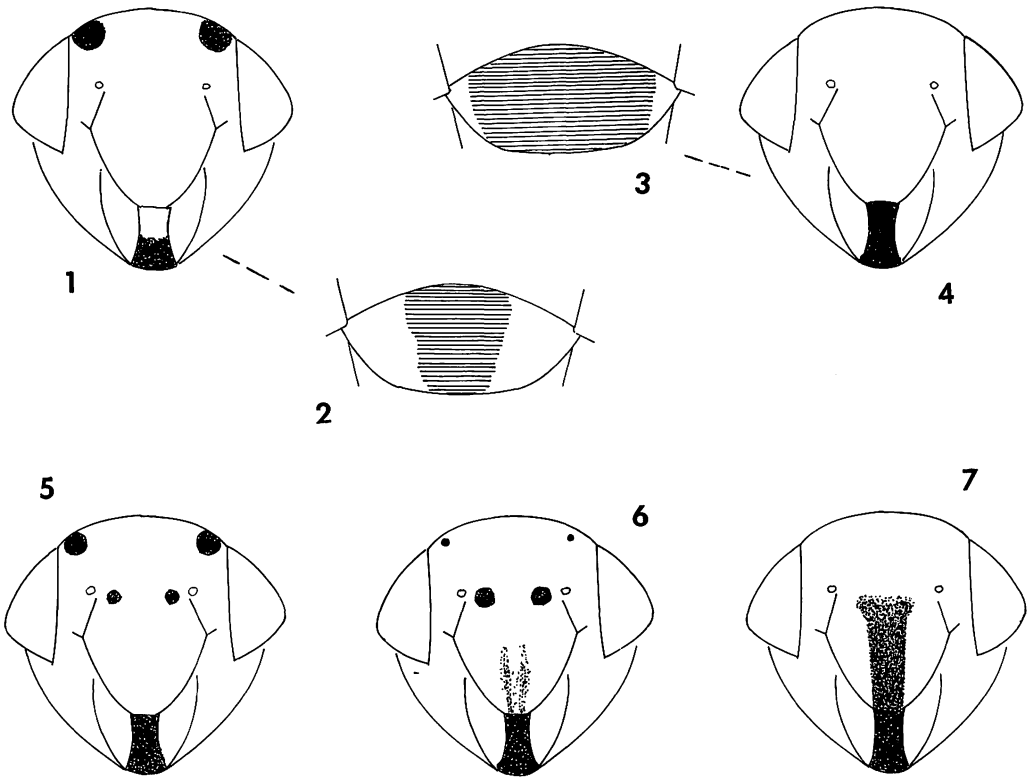


FIG. 1-7. *Idioscopus clypealis*: 1, face, ♂, from Laos; 2, subgenital plate of same specimen; 3, subgenital plate, ♂, from Philippine Is; 4, face, ♂, typical color pattern, same specimen as preceding; 5, face, ♀, typical color pattern, from Philippine Is; 6, face, ♂, Port Moresby, Papua New Guinea; 7, face, ♂, New Britain.

Specimens from Port Moresby, eastern New Guinea, show 4, 2, or no spots on the face. Two of these have a brownish median longitudinal band on the postclypeus; in a few others this band is poorly defined (Fig. 6) and in all cases never as black and sharply defined as in the specimens from New Britain. The genitalia are similar in these color varieties.

There is quite a direct relationship between the extent of black on the anteclypeus and the extent of black on the 7th sternum of the female and the subgenital plate of the male. Fig. 2 and 3 (subgenital plates of males) show that if the anteclypeus is not extensively black the area of black on the plates is reduced. If the anteclypeus is uncolored, the plate is as in Fig. 2.

Considering the variations mentioned above, couplet 2 of my key (Maldonado Capriles 1964) must be modified as follows:

- 2. Face: ♀ usually with 4 spots; ♂ usually without spots; pronotum unspotted; postclypeus yellowish, usually unmarked, in some areas with a longitudinal brown or black band (Fig. 5, 6) **Idioscopus clypealis**
 Face irregularly marked with brown or black; pronotum with dark markings 3

Besides the characters mentioned in the modified couplet, high contrast between the yellowish head and pronotum and the bronzy or brownish forewings usually shows in specimens of *I. clypealis*. Except for the black frons of New Britain specimens and the brownish frons of some specimens from eastern New Guinea, the face of males is yellowish or light colored. A few species of *Pedioscopus* have 4 black spots on the face; however, these have longitudinal stripes on the forewings. The face of *Wilomatia liepai* Webb (1938: Fig. 563) is quite similar to that of *I. clypealis* from New Britain (Fig. 7).

SUMMARY

A series of recurring variations to the usual male and female color patterns of the face of *Idioscopus clypealis* are pointed out. Even though some of these variations are geographically isolated, typical forms are found in the same localities. I recommend that names not be assigned to these color forms.

LITERATURE CITED

Maldonado Capriles, J. 1964. Studies on Idiocerinae leafhoppers. II, The Indian and Philippine species of *Idiocerus* and the genus *Idioscopus* (Homoptera: Cicadellidae). *Proc. Entomol. Soc. Wash.* **66**(2): 89–100.
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