

## STUDIES ON IDIOCERINAE LEAFHOPPERS:

XIII. *Idioceroides* Matsumura and *Anidiocerus*,  
a new genus from Taiwan (Agallinae: Idiocerinae)<sup>1</sup>By J. Maldonado Capriles<sup>2</sup>

**Abstract:** Examination of Matsumura's type of *Idioceroides tettigoniformis* revealed that this species is not an idiocerine and herein is moved to Agallinae where it probably belongs. The genitalia and some anatomical details of this species are illustrated. A new genus, *Anidiocerus*, is described to include another species from Taiwan with the habitus somewhat similar to some *Idiocerus* and to *Idioceroides*. The Idiocerinae are redefined.

## IDIOCERINAE REDEFINED

Because of the momentary difficulty I had in placing *Idioceroides* I think it is helpful to redefine the Idiocerinae.

Idiocerinae: head clearly wider than pronotum, the appendix of the forewing large, the body slender and wedge-shaped, frons expanding dorsad, vertex relatively short and between 5 to 13 x wider than median length, anterior and posterior margins of vertex evenly curved and parallel or very nearly so, ocelli in front and usually almost halfway between eye and middle of vertex and not too high on the face, anterior margin of pronotum not extending beyond anterior margins of eyes, frontal suture ending between antennal pit and ocellus, forewing bare between veins; style slender with apophysis simple and curved outward, or, apophysis straight with curved process on inner apical margin extending upward and outward and reaching down towards outer margin that extend as an outer shelf.

The prontal suture extending beyond the antennal pit has been used by DeLong (1948) to separate Idiocerinae (as Eurymelinae in his paper) from Bythoscopinae and Agallinae as in both it ends at the antennal pit. The length and position of this suture is of generic importance in Idiocerinae. The large appendix of the forewing easily separates Idiocerinae from these 2 subfamilies.

In the descriptions that follow, 12.5 micrometer units are equivalent to 1 mm.

## AGALLINAE

*Idioceroides tettigoniformis* Matsumura, 1912      FIG. 1-10

This species was described in "Die Acocephalinen und Bythoscopinen Japans," *Sapporo Col. Agr. J.* 4: 279-326. Examination of the male type shows that this species does not belong in Idiocerinae because of the very narrow appendix of the forewing (FIG. 4) and the ocelli are too high on the face. These characters seem to place it in the Agallinae. FIG. 1-10 show details of the morphology. The fine transverse striations of the vertex and the arcuate striations of the frons are not shown; other parts of the head are shagreen.

## IDIOCERINAE

## ANIDIOCERUS Maldonado, new genus

Vertex finely striate in ♀, shagreen in ♂; other parts of head of ♂ shagreen. Upper extremities of postclypeus well defined and reaching ocelli in almost a straight line; lateral margin of postclypeus

<sup>1</sup>Part of the specimens examined are results of field work supported by a grant to Bishop Museum from the U.S. National Institutes of Health (AI-01723).

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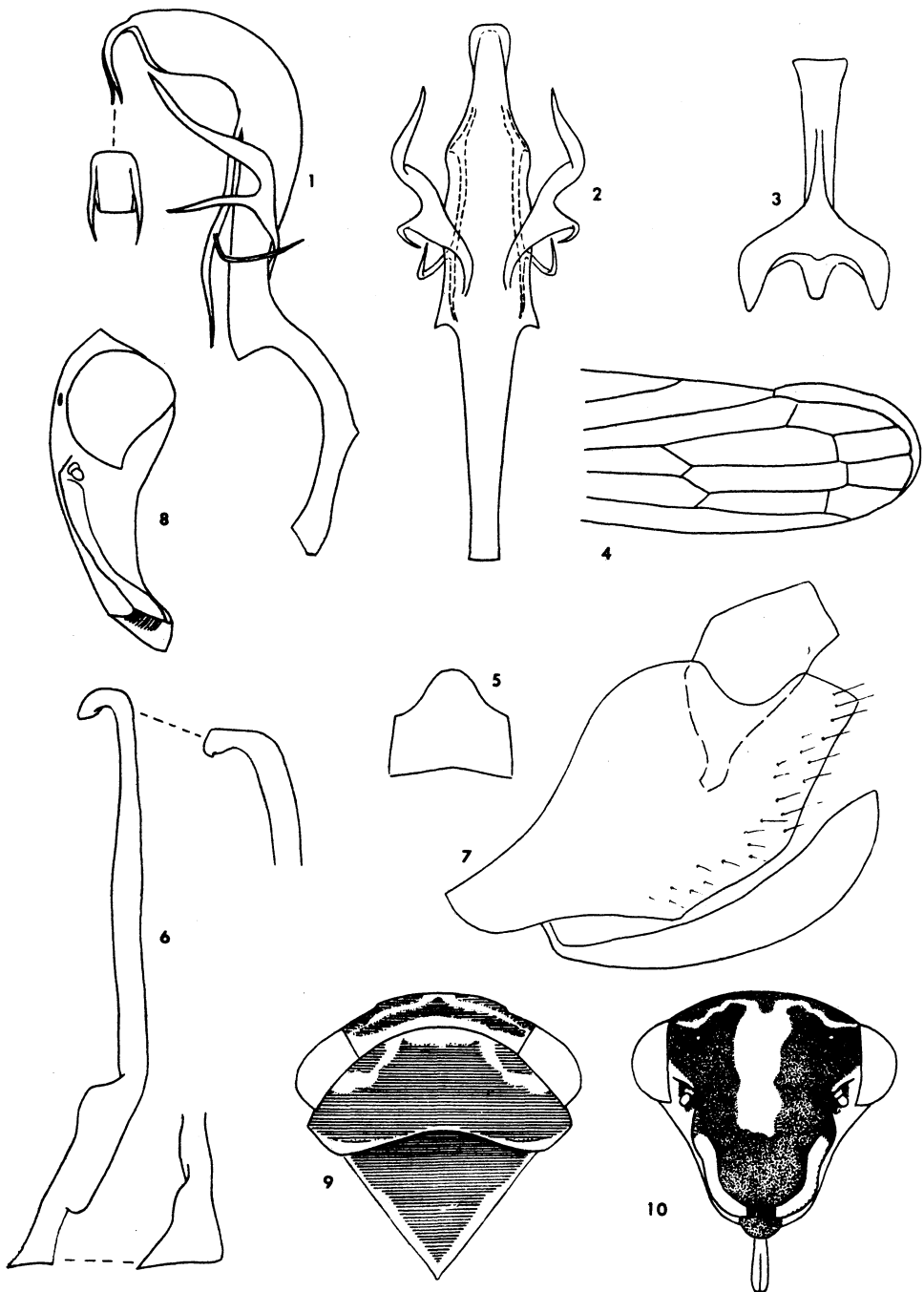


FIG. 1-10. *Idioceroides tettigoniformis* Matsumura, ♂. (1) aedeagus, lateral; (2) aedeagus, caudal; (3) connective, caudal; (4) part of forewing; (5) valve; (6) style, and detail of base and apex; (7) genital capsule, lateral; (8) head, lateral; (9) head, pronotum, and scutellum; (10) head, frontal.

slightly angled at upper end of lora. Filament of antenna clubbed in ♂, hair-like in ♀. Distance between ocelli slightly less than 2x the distance from ocellus to eye. Distance from, post-clypeus to anteclypeal suture 2x as long as anteclypeus, about as wide as long. Anteclypeus bell-shaped. Lora slightly elevated above surface of gena, semicircular. Vertex 8x as wide as long; anterior and posterior margins slightly closer medianly than next to eye. Pronotum with posterior margin concave; slightly over 4x as long as vertex. Scutellum triangular, level with pronotum, not much wider than long, slightly longer than length of pronotum and head combined. Forewing with 2 anteapical cells; 4 apicals, the 1st and 4th wider than 2nd and 3rd, 2nd and 3rd wider apically than basally, as in FIG. 11. Apical spines of metafemur 1 + 2. Hind tibia flattened, very slightly curved; 7–9 strong spines on upper front margin, 18–20 finer ones on lower anterior and upper hind margins, and 30–35 hair-like spines on lower posterior margin. Male and ♀ with the same basic color pattern, ♀ with less extensive black or brown areas; forewing translucent; appendix, first 3 apical cells, and costal cell fuscous, outer apical hyaline, other cells with a brownish tinge.

Genitalia ♂: valve rectangular, apical margin straight; aedeagus long, slightly curved cephalad, flattened laterally, with 2 fine filaments arising well before apex and pointing upward (FIG. 16), gonopore opening apically; socle small and flattened laterally; pygofer subtriangular, without transverse membranous area near middle, with a large quadrangular flap-like appendage on upper caudal angle, with minute microsetae near apical margin; style slender, apophysis strongly curved outwardly and with a few short conical spines on inner margin at about midlength; plates elongate, spatulate, with abundant long fine pilosity on upper margin and somewhat shorter on apical 1/2 of lower margin; anal or 10th segment well developed.

♀: 7th sternum shorter than wide, rectangular, apical margin convex; pygofer with 2 or 3 small inconspicuous spines on inner margin near apex; ovipositor straight, slightly surpassing pygofers, and reaching to base of apical cells.

Type-species: *Anidiocerus variabilis*, n. sp.

The generic name means "not *Idiocerus*."

The habitus of this genus is similar to that of *Idiocerus* and some *Idioscopus*; their ♂ genitalia, however, are different. The genitalia of these 3 genera are compared in TABLE 1. I am not considering the species of *Idioscopus* from Madagascar (Freytag & Knight, 1966) in this comparison as they may belong in undescribed genera.

TABLE 1. Comparison of ♂ genitalia of *Idiocerus*, *Anidiocerus* and *Idioscopus*.

	<i>Idiocerus</i>	<i>Anidiocerus</i>	<i>Idioscopus</i>
apophysis of style	usually with strong apical and a row of finer subapical spines along outer margin, sometimes bare; curved outwardly	unarmed, very small conical spines on inner margin at about midlength; strongly curved outwardly.	usually bare or with fine spines along outer margin and above; angled outwardly
aedeagus	0 or 2 strong preapical spines pointing downward; large socle	2 preapical filaments pointing upward; socle small	2 pairs of long apical filaments drooping caudally; socle elongate
pygofer on lateral aspect	semicircular or rhomboid without apical appendage or membranous suture	truncate-triangular with flap-like appendage, without membranous suture	rectangular, well developed membranous suture, no such appendage

### *Anidiocerus variabilis* Maldonado, n. sp.

FIG. 11–21

♂. Vertex with hind margin, inner margin of eye, and narrowly along median line, yellowish; vitreous areas well developed; anterior margin with small black squarish spot between vitreous area and yellow mesad of eye (FIG. 20). Face mostly yellow (FIG. 19); a small black oval spot above ocellus, a transverse blackish brown band above and another below each ocellus. Postclypeus with a line of brownish spots arranged in a curve each side of median line. Postclypeus brownish, apex lighter. Lora yellowish, upper 1/2 of inner margin blackish brown. Gena orange-yellow below eyes, blackish along sides of postclypeus, and fuscous along lateral margin. Antennal fossa orange. Beak blackish. Pronotum black, fuscous along median line and hind margin or black less and fuscous more extensive. Scutellum mostly black, a spot extending from midlength of lateral margin to disc, and apex orange, or, black areas less extensive (FIG. 13). Forewing-clavus: along inner margin to about midlength or to near apex, claval vein to near apex, and commissural suture except at base and apex, blackish brown, apex of claval vein and base and apex of commissural suture, ivory, areas between veins

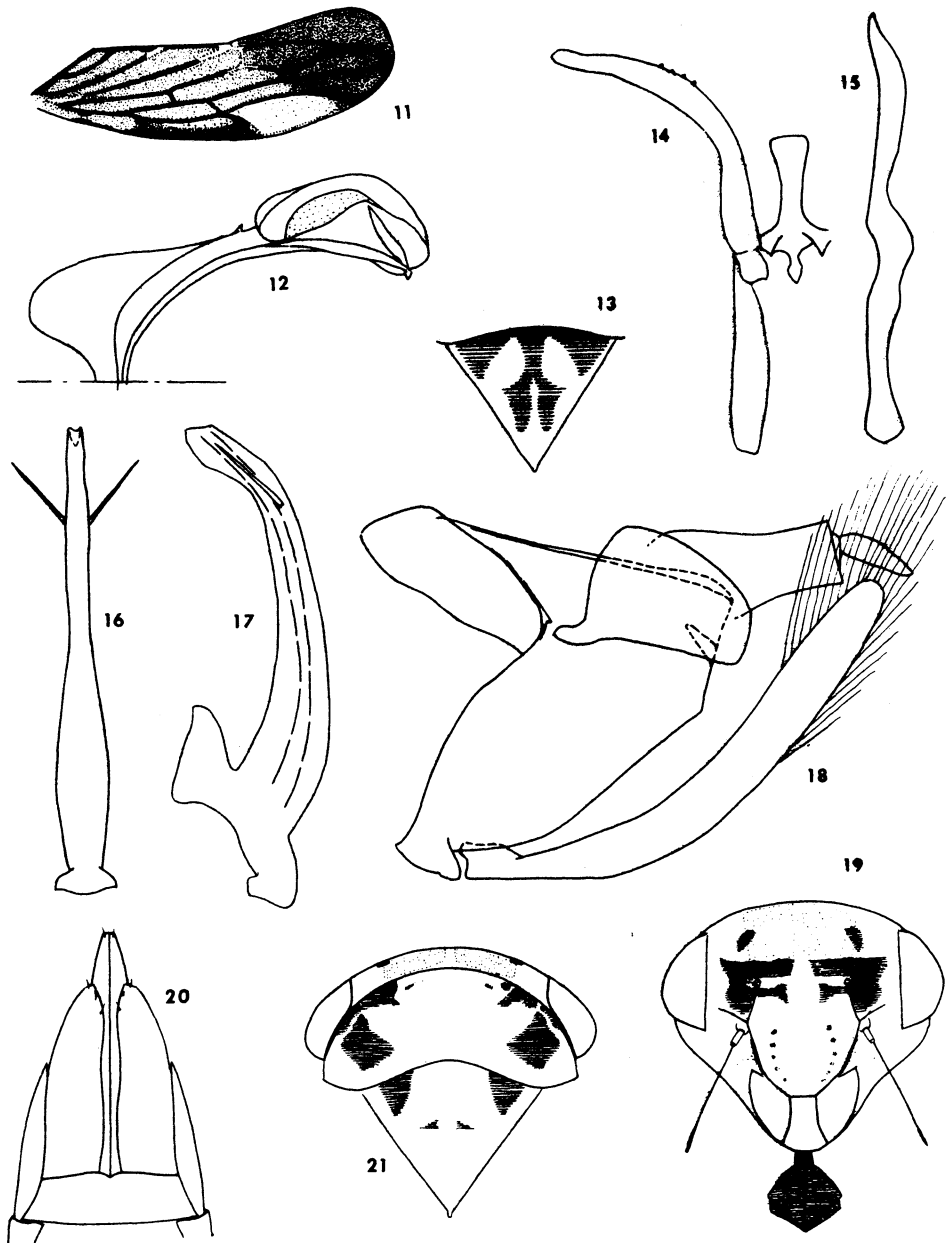


FIG. 11-21. *Anidiocerus variabilis* n. gen. n. sp. (11) forewing, ♂; (12) upper margin of pygofer, dorsal, ♂; (13) scutellum, ♂; (14) style and connective, dorsal, ♂; (15) style, lateral, ♂; (16) aedeagus, caudal, ♂; (17) aedeagus, lateral, ♂; (18) genital capsule, ♂; (19) head, frontal, ♂; (20) head, pronotum, and scutellum, ♀; (21) tip of abdomen, ♀.

fuscous; corium: veins dark brown except for some ivory near base of 1st apical cell, costal cell brown on apical 1/2, outer apical cell hyaline, remaining apical cells and appendix brownish. Legs fuscous, hind femur below and hind tibia above brownish in part; claws black. Abdominal sterna blackish brown with yellow or orangeish yellow apical margin. Pygofer reddish brown on lower 1/2, upper 1/2 yellow basally and black dorsally.

Vertex shagreen; anterior and posterior margins very slightly closer on median than next to eyes (2:2.2); 8x as wide as long (16:2). Head wider across eyes than long (24:21). Postclypeus with upper margin nearly straight to ocellus; lateral margin roundly angled at about midlength. Anteclypeus bell-shaped, wider near apex than at base (4:3), longer than wide (5:4). Lora semicircular, slightly elevated above level of gena. Filament of antenna clubbed apically. Beak expanded apically (FIG. 19). Pronotum shagreen, posterior margin broadly concave; about 2.5x as wide as long (22:9). Scutellum wider than long (16:13). Forewing with 2 subapical and 4 apical cells. Spines of hindfemur and hindtibia as described for genus. Length 5.5 mm.

Genitalia as in FIG. 12, and 14 to 18.

♀. Vertex as in ♂; face fuscous, the pattern of lines and spots less striking and smaller. Anteclypeus, lora, and gena fuscous; gena, close to postclypeus and below antennal fossa, narrowly blackish. Pronotum light fuscous, with 3 + 3 small brown spots before anterior margin and an irregular brown spot on disc behind each eye, or, the spots larger and coalesced (FIG. 21). Scutellum with a triangular brown spot near each lateral angle, with or without 2 small spots on disc. Forewing fuscous, translucent; veins on clavus, apex and base of preapical cells, base of 2 innermost apical cells, ivory; other veins or part of veins, brown. Legs uniformly fuscous, claws blackish. Thorax laterally fuscous, a brownish, round medium-sized area above meso- and metacoxa. First 2 abdominal sterna yellowish, remaining sterna and genital segments fuscous.

Vertex finely transversely striated; anterior and posterior margins slightly closer medianly than adjacent to eyes (2:2.2); 8x as wide as long (16:2). Head slightly wider across eyes than long (23.5:22). Lora, postclypeus, and anteclypeus shaped as in ♂; anteclypeus slightly longer than width near apex (5:4.5). Beak straight. Pronotum shagreen; 1.6x as wide as long (21:13.5). Scutellum wider than long (15:12). Forewing venation and spines of hind femur and tibia as in ♂. Length 5.9 mm.

Holotype ♂ (BISHOP 10,218), TAIWAN, Alishan, Chiayi Hsien, 2400 m, 12–16.VI.1965, T. Maa & K. S. Lin collectors. In Bishop Museum. Allotype ♀, same data. In Bishop Museum. Paratypes: 9 ♂♂ and 3 ♀♀, same data; 2 in collection of the author, 1 in USNM, others in Bishop Museum.

The trivial name *variabilis* makes reference to the great variability of the color pattern of the species. Because of the external resemblance of this species to some species of *Idiocerus* it should be pointed out that its coloration is different from all known *Idiocerus*.

*Acknowledgments:* I am indebted to Dr J. L. Gressitt, Bernice P. Bishop Museum, Honolulu, Hawaii, for the loan of material including the new genus and species. Also I wish to thank Dr S. Takagi, from the Entomological Institute of the Faculty of Agriculture, Hokkaido University, Sapporo, Japan, for the loan of Matsumura's type.

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