

STUDIES ON IDIOCERINE LEAFHOPPERS

XX. *Gressittocerus* and *Dolichopsцерus*, new genera from New Guinea (Homoptera: Cicadellidae)¹J. Maldonado Capriles²

Abstract. *Gressittocerus* and *Dolichopsцерus*, new idiocerine genera from New Guinea, are described. Both genera have quite long faces, and as a result in each the anteclypeus is under the thorax and the beak reaches at least the midlength of the abdomen. The first genus has the 3rd apical cell quadrangular and the latter triangular and with a basal stem. These genera are compared with allied taxa and 27 figures illustrate anatomical details.

The material discussed below was loaned to me for study by the late Dr J.L. Gressitt, Bernice P. Bishop Museum, Honolulu, Hawaii (BPBM). Holotypes and allotypes are deposited in BPBM; paratypes are in BPBM, the National Museum of Natural History (NMNH), and my collection. The systematic position of the 2 genera described below was determined by running them in Webb's key to the genera of Australian Idiocerinae (Webb 1983). Measurements are given in mm.

***Gressittocerus* Maldonado, new genus**

Type-species: *Gressittocerus elongatus*, n. sp.

Vertex, other parts of head, pronotum, and scutellum smooth. Head strongly bent under thorax, beak reaching well beyond base of abdomen. Upper extremities of postclypeus well defined, almost reaching or reaching inner margin of ocellus of corresponding side. Filament of antenna lost. Ocelli apart at $1.5 \times$ distance from ocellus to eye. Postclypeus elongate, from ocelli to margin of anteclypeus $2 \times$ as long as wide. Anteclypeus elongate, slightly narrower basally than before apex, sides slightly concave. Lora level with gena, very short, extending from apex of anteclypeus to apex of head. Vertex narrower medially than next to eye. Pronotum with posterior margin shallowly and broadly concave, anterior margin strongly convex, nearly $5 \times$ as long as median length of vertex. Scutellum wider than long, slightly longer than length of pronotum and vertex combined. Forewing with no anteapicals, 2 open subapical cells (Fig. 7); 4 apicals, 3rd narrowed basally, 4th widest. Hind femur with 2 apical spines; hind tibia with strongest spines on row 2 and finest on row 4. Coloration: hemelytra with blackish costal margin; veins and cells concolorous, with brownish tinge; abdominal sterna brownish; face above and pronotum brown, pronotum and face above ocelli spotted yellowish; other parts mostly yellowish. Relatively small, about 4.0.

Genitalia. ♂: valve somewhat semicircular, with U-shaped notch on apical margin; pygofer with fold on upper $\frac{1}{2}$; aedeagus vertical, semicircular, gonopore opening near apex, without

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appendages, socle short, vertical, at about midlength of aedeagus (Fig. 1); subgenital plate spatulate, 2 masses of long hairs on upper margin and 1 laterally past midlength; connective flattened; style with long, sharp, glabrous apophysis and base. ♀: 7th sternum rectangular, apical margin biconvex; pygofer smooth, on ventral aspect narrowing to a sharp apex; ovipositor straight, surpassing apex of pygofers.

The smooth vertex, quadrangular 3rd apical cell, brown and spotted coloration of face and pronotum, and 2 open subapical cells put *Gressittocerus* close to *Candulifera* Webb in Webb's (1983) key to the Australian Idiocerinae. The elongate face, elongate anteclypeus, very short lorae, upper fold of pygofer, slightly different aedeagus, and socle differentiate *Gressittocerus* from *Candulifera*.

The genus is dedicated to the late Dr J.L. Gressitt, who did so much to foster the knowledge of Pacific insects. The ending *cerus* (antenna) is used in many generic names of this subfamily.

***Gressittocerus elongatus* Maldonado, new species**

Fig. 1-11

♂. Face above light brown, remainder yellow stramineous except for a black spot near outside margin of each ocellus; anteclypeus with apical $\frac{1}{2}$ blackish brown; vertex light brown with an abundance of yellowish spots. Genae and lorae yellow. Eyes reddish black. Pronotum same coloration as vertex. Scutellum with brown triangular spot on each basal angle, each side of median line with brownish area finely spotted with yellow and ending with an ocellate spot (Fig. 8), other parts yellowish. Pleurae yellowish, a brown semilunar spot caudad of procoxae. Legs and beak yellow, hind leg with apex of tibia, apex of 2nd tarsal segment, and all of 3rd tarsal segment black. Abdominal sterna brown, finely margined with yellow; last sternum grayish, valves blackish brown. Hemelytra translucent, with brownish tinge, costal margin to base of outer apical cell blackish, crossveins and veins of outer apical cell brown, others concolorous with blade.

Head strongly bent under thorax, apex of postclypeus almost level with apex of scutellum; apex of beak reaching level of base of outer apical cell. Face long (Fig. 9), from upper margin of crown to apex of anteclypeus $1.3\times$ as long as wide across eyes (2.00:1.60); postclypeus elongate, from ocelli to apex $1.7\times$ as long as greatest width (1.85:1.60); distance between ocelli as described for genus; upper extremities of postclypeus nearly straight, reaching inner margin of ocellus of corresponding side. Lora very short. Vertex slightly longer near eyes than medianly (1.50:1.30), width of vertex 0.80. Pronotum: length 0.55, width 1.50, posterior margin shallowly concave. Scutellum wider than long (1.14:0.90), longer than vertex and pronotum combined, not tumid. Forewing as in Fig. 7. Hind tibia flattened; spines as follows: row 1, 21, fine; row 2, 7, strong; row 3, 10, fine; row 4, ca. 37, hairlike. Genital segments as in Fig. 1-6.

♀. Same coloration as ♂; abdominal sterna yellowish; 7th sternum brownish; pygofer pale brownish basally, blackish apically; ovipositor same color as pygofer, free end blackish. Head elongate; from top of crown to apex of anteclypeus $1.3\times$ as width across eyes (2.15:1.75); ocelli apart at $2\times$ distance from ocellus to eye (0.50:0.25); upper extremity of postclypeus nearly straight, reaching inner side of ocellus of corresponding side; postclypeus almost $2\times$ as long as greatest width (1.25:0.65), lateral margins bracket-shaped; anteclypeus longer than wide (0.45:0.27), widest before apex, lateral margins concave on basal $\frac{1}{2}$, convex on apical $\frac{1}{2}$; apex of beak surpassing 7th sternum. Vertex longer at margin of eye than medially (0.15:0.10), width 0.90. Pronotum: length 0.55, width 1.56. Scutellum: width 1.31, length 1.00. Length 4.4 mm. Seventh sternum as in Fig. 11.

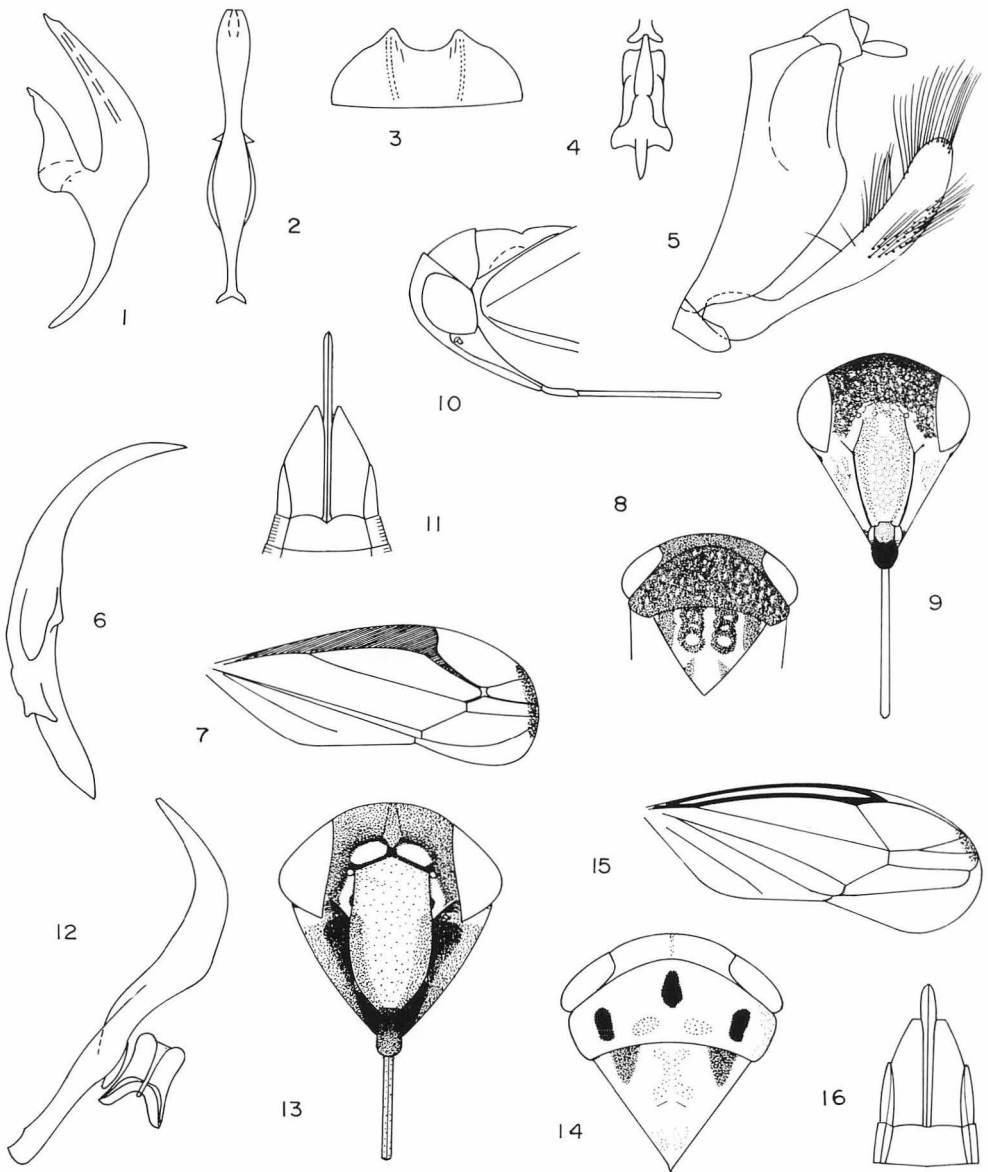


FIG. 1-16. 1-10. *Gressittocerus elongatus*, ♂: 1, aedeagus, lateral; 2, aedeagus, caudal; 3, valve; 4, connective, dorsal; 5, genital capsule and plate, lateral; 6, style, dorsal; 7, forewing; 8, anterior portion of body, dorsal; 9, face, frontal; 10, anterior portion of body, lateral. 11, *G. elongatus*, ♀, apex of abdomen, ventral. 12-15, *Dolichopsцерus spectrum*, ♂: 12, style and connective, dorsal; 13, face, frontal; 14, anterior portion of body, dorsal; 15, forewing. 16, *D. spectrum*, ♀, apex of abdomen.

Holotype ♂, PAPUA NEW GUINEA (SE): Cape Rodney, II–IV.1960, malaise trap (J.L. Gressitt) (BPBM 13,320). *Allotype* ♀, same data as holotype (BPBM). *Paratypes*: 13, PAPUA NEW GUINEA: Brown Riv, Karimui, Cape Rodney, Madang, and Maprik; and IRIAN JAYA: Hollandia (2 NMNH, 2 author's collection).

The trivial name refers to the very elongate face, typical of the genus. The generic characters and the spotted pronotum and upper part of head identify this species.

***Dolichopsцерus* Maldonado, new genus**

Type-species: Dolichopsцерus spectrum, n. sp.

Yellowish or stramineous, ornamented with brownish dots and irregular short lines. Head, pronotum, and scutellum smooth. Head strongly bent under thorax, beak reaching to at least midlength of abdomen. Upper extremities of postclypeus almost reaching inner margin of ocellus of corresponding side. Filament of antenna lost. Ocelli apart at 2 or 3× distance from ocellus to eye. Postclypeus elongate, 2× as long as distance between ocelli. Anteclypeus elongate, 2 or 3× as long as wide at base, sides nearly straight, slightly wider at about midlength. Lora level with gena, relatively short. Vertex with anterior and posterior margins parallel. Pronotum with hind margin shallowly and broadly concave, about 3× as long as length of vertex. Scutellum wider than long, slightly longer than length of vertex and pronotum together. Forewings with no anteapical cells, 2 open subapicals; 4 apical cells, 3rd triangular and with a stem, 4th widest. Hind femur with 2 apical spines; hind tibia with strongest spines on row 2, hairlike on row 4. Hemelytra translucent, with brownish tinge, veins brown, costal area darkened, apex near 3rd apical smoky.

Genitalia. ♂: valve broad, rectangular; pygofer with fold at about midlength; plate spatulate or slightly deeper after midlength, with a heavy bunch of long hairs arranged in lines near base, these groups very conspicuous and divergent when seen from behind, hairs scattered in irregular fashion toward apex of plate; aedeagus nearly perpendicular, narrower towards apex, its base as seen from behind expanded or not; socle long, narrow, stemming from base of aedeagus; connective flattened; style with a long sharp glabrous apophysis and similar but shorter base. ♀: 7th sternum rectangular, caudal margin shallowly medially notched; pygofers smooth; ovipositor slightly surpassing apex of pygofers.

Dolichopsцерus is allied to *Gressittocerus*; the small lorae, the medianly shorter vertex, the quadrangular 3rd apical cell, the lack of aligned hairs on the subgenital plate, and the more elongate aedeagus of *Gressittocerus* separate it from *Dolichopsцерus*. As *Dolichopsцерus* has a triangular 3rd apical cell and an open 2nd subapical cell, it runs to *Balocha* Distant in couplet 25 of Webb's (1983) key to the Australian Idiocerinae. In *Balocha* the pygofer does not have a fold and the aedeagus is heavily clubbed, a totally different pattern. *Angusticella* Maldonado, 1972, from the Philippine Is, has similar forewings, but its vertex is shagreened, the pygofer does not have a fold, the subgenital plate is long, narrow, and without a mass of long hairs near its base, and the internal genitalia are quite different. *Dolichopsцерus* literally means "antenna on an elongate face."

***Dolichopsцерus spectrum* Maldonado, new species**

Fig. 12–19

♂. Head: base color yellowish; face: an ivory subrectangular spot above and another below each ocellus on the outside of each upper extremity of postclypeus, both spots surrounded by

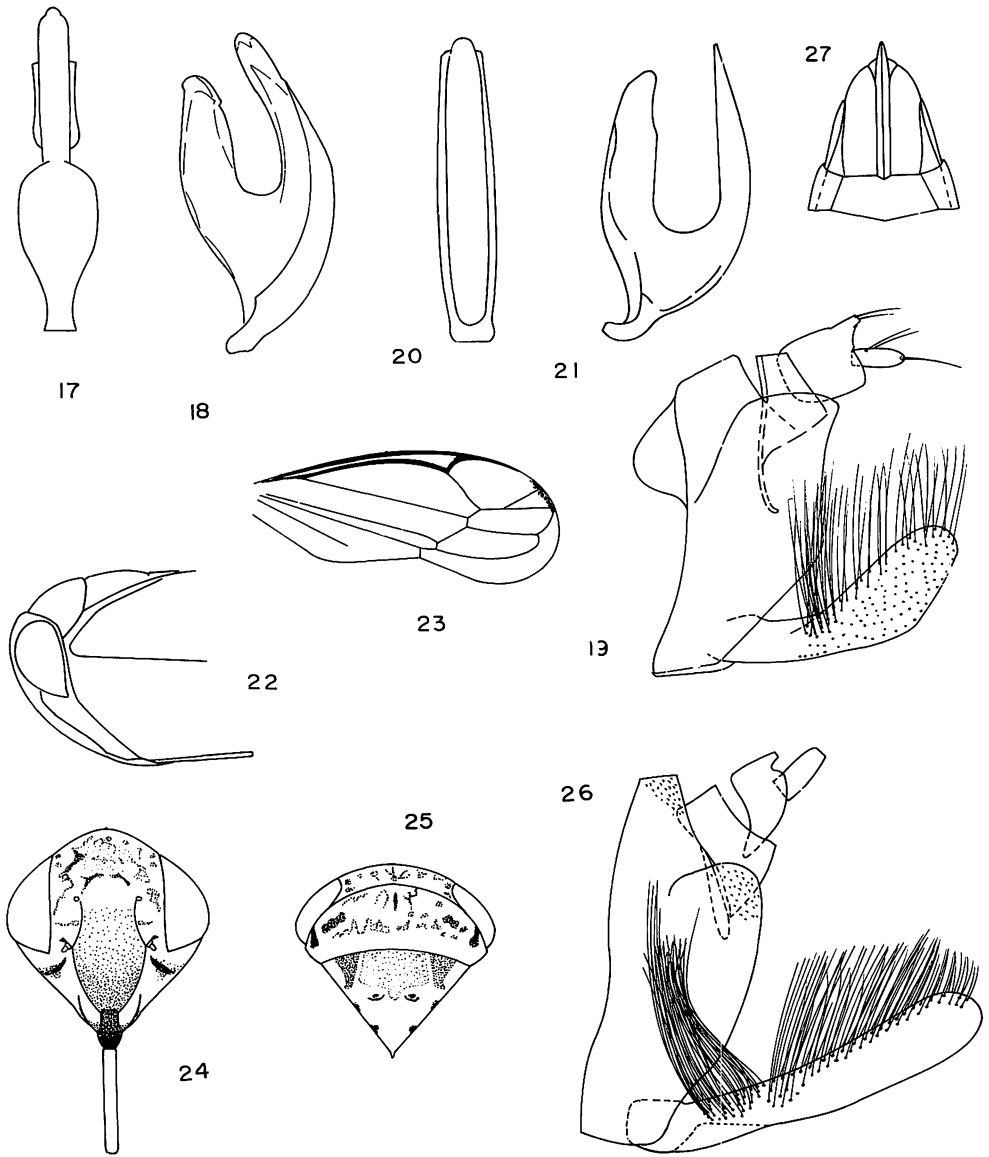


FIG. 17-27. 17-19, *Dolichopsцерus spectrum*, ♂: 17, aedeagus, caudal; 18, aedeagus, lateral; 19, genital capsule, lateral. 20-26, *Dolichopsцерus variegatus*, ♂: 20, aedeagus, caudal; 21, aedeagus, lateral; 22, anterior portion of body, lateral; 23, forewing; 24, face, frontal; 25, anterior portion of body, dorsal; 26, genital capsule, lateral. 27, *D. variegatus*, ♀, apex of abdomen.

black (Fig. 13); postclypeus margined above narrowly and laterally broadly with light brown; anteclypeus brownish; lora brownish apically; gena mostly black on inside, antennal pit black. Vertex brownish along median line; pronotum with 3 oval black spots and light brown transverse oval spot each side of median longitudinal spot (Fig. 14). Scutellum with a brownish triangular spot on each basal angle and an X-shaped inconspicuous median fuscous spot. Fore and mid legs mostly yellowish, fore tibia with blackish stripe on apical $\frac{1}{2}$ of inner margin; hind legs pale brownish; genital capsule brownish. Forewings translucent, with light stramineous tinge; veins brown; costal margin black on both margins and yellowish centrally (Fig. 15).

Head strongly bent under body, apex of anteclypeus about level with apex of scutellum. Face longer than wide; from upper margin of crown to apex of anteclypeus $1.1 \times$ as long as wide (2.20:1.95); postclypeus elongate, from ocelli to apex $1.6 \times$ as long as greatest width (1.10:0.70). Anteclypeus almost quadrangular (Fig. 13), $2 \times$ as long as wide at base (0.50:0.25), apical $\frac{1}{2}$ with sides slightly convex. Lora narrow, relatively short, very slightly above level of gena. Upper extremities of postclypeus nearly straight, reaching inner margin of ocellus of corresponding side; ocelli set apart at $3 \times$ distance from ocellus to eye (0.60:0.20). Vertex with anterior and posterior margins parallel, width 0.95, length at middle 0.20. Pronotum: length 0.65, width 1.87, posterior margin broadly and shallowly concave; scutellum length 1.0, width 1.45. Forewings as in Fig. 15; no subapical cells, 3rd apical forked. Hind tibia flattened; spines as follows: row 1, 22–25, fine; row 2, 6, strong; row 3, 19, finer than on row 2; row 4, 30–35, hairlike. Genitalia as in Fig. 12, 17–19. Length 5.3.

♀. Coloration mostly as in ♂. Face from crown to apex of anteclypeus $1.2 \times$ as long as width across eyes (2.30:1.09); ocelli nearly $2 \times$ apart as distance from ocellus to inner margin of eye (0.55:0.25). Anteclypeus length 0.50, width at base 0.25. Lorae and genae as in ♂. Vertex width 1.00, length at middle 0.25. Pronotum width 1.86, length 0.61. Genital segments as in Fig. 16. Length 5.45.

Holotype ♂, PAPUA NEW GUINEA (NE): Finisterre Range, Saidor, Matoko Vill, 6–24.IX.1958 (W.W. Brandt) (BPBM 13,301). *Allotype* ♀, PAPUA NEW GUINEA (NE): Finisterre Range, Kiambavi Vill, 1–28.VIII.1958 (Brandt) (BPBM). *Paratypes*: 2, same data as allotype (1♀ BPBM, 1♂ author's collection).

The trivial name refers to the gogglelike white spots on face.

***Dolichopscerus variegatus* Maldonado, new species**

Fig. 20–27

♂. Mostly straw-colored, with yellowish face, pleurae, and scutellum. Frons above irregularly variegated with brown, postclypeus gradually fading from brownish at base to yellowish between ocelli; anteclypeus blackish. Gena yellowish, below antenna with a black spot, concavity above antennal base black. Lora yellowish above, deepening to blackish at apex. Vertex very light brown, irregularly spotted with brown on anterior $\frac{2}{3}$, last $\frac{1}{3}$ unmarked. Scutellum mostly yellowish, a small triangular area near each basal angle and 4 blackish spots as illustrated. Pleurae yellowish. Fore and mid legs brownish yellow; hind legs with femur and tibiae yellowish, each apically blackish; 1st tarsal segment brownish yellow, last 2 brownish, all spines darker than their respective segments. First abdominal sternum yellow, hind margin brown; others brownish with yellowish margins. Genital capsule brownish. Forewing translucent, with pale brownish tinge, longitudinal veins on corium concolorous, apical and transverse veins of apical cells brownish; costa yellow, black apically, fumate spot on apex of 3rd and 4th apical cells.

Face length 1.03, width across eyes 0.96, width of vertex 0.50, length at middle 0.35, front and hind margins parallel; postclypeus narrow, from ocelli to base 0.50, greatest width 0.32;

ocelli apart at nearly $2\times$ distance to eye. Anteclypeus nearly $2\times$ as long as greatest width (0.25:0.12). Lora relatively small, slightly elevated above level of gena. Head strongly bent under thorax, apex of postclypeus nearly level with apex of scutellum; beak reaching to about mid-length of abdomen. Pronotum width 0.90, length at middle 0.35, hind margin shallowly and broadly concave. Scutellum width 0.71, length 0.50, slightly tumid, slightly above level of forewings. Hind tibia flattened; spines: row 1, 17–19, fine; row 2, 6–7, strong; row 3, 14–16, fine; row 4, 22–25, hairlike. Genitalia as in Fig. 20–21, 26. Length 4.6.

♀. Coloration mostly as in ♂; pattern of spots better defined. From top of crown to apex of anteclypeus $1.1\times$ as long as wide across eyes (2.20:1.95). Ocelli apart at $2\times$ distance from ocellus to eye. Postclypeus $2.5\times$ as long as wide between ocelli (1.30:0.55), greatest width 0.6. Anteclypeus $2\times$ as long as wide at base (0.50:0.25), shaped as in ♂. Lora slightly above surface of gena, narrow, relatively short. Vertex with anterior and posterior margins parallel, width 0.90, length 0.2. Pronotum width 1.70, length 0.5. Scutellum width 1.45, length 1.10, longer than length of vertex and pronotum combined. Apex of abdomen as in Fig. 27. Length 4.7.

Holotype ♂, PAPUA NEW GUINEA: Papua, Brown Riv, 20.VIII.1959 (T.C. Maa) (BPBM 13,302). *Allotype* ♀, same data (BPBM). *Paratypes*, 23♂♀: 21, same data as holotype; 1, BISMARCK ARCH: NEW BRITAIN: Vunabakan, 10 km E of Keravat, 180 m, 16–20.XI.1959 (Maa); 1, IRIAN JAYA: Genjam, 40 km W of Hollandia, 100–200 m, 1–10.III.1960 (Maa). (2 paratypes NMNH, 5 author's collection, others BPBM.)

The coloration separates this species from *D. spectrum*, the other species in the genus.

LITERATURE CITED

- Maldonado Capriles, J.** 1972. Studies on idiocerine leafhoppers: VIII. The Papuan genus *Pedioscopus* and two allied new genera from the Philippine Islands (Homoptera: Cicadellidae). *Pac. Insects* **14**(3): 529–51.
- Webb, M.D.** 1983. Revision of the Australian Idiocerinae (Hemiptera: Homoptera: Cicadellidae). *Aust. J. Zool. Suppl.* **92**: 1–147.