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Some Australian Tingidae (Hemiptera), Including New Genera and New Species

By

CARL J. DRAKE

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SOME AUSTRALIAN TINGIDAE (HEMIPTERA), INCLUDING NEW GENERA AND NEW SPECIES

By CARL J. DRAKE

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(Plates III—VI) Manuscript received 10.3.60

Through the kindness of Dr. J. W. Evans, Director of the Australian Museum, Sydney, I have received an interesting collection of Australian Tingidae for determination. This collection contains a number of rare species, including two new genera and five undescribed species. The holotypes and allotypes are in the Australian Museum; paratypes are also there and in the Drake Collection (U.S. National Museum). The illustrations in this Record are by Patricia J. Hogue, of Arlington, Virginia, and were made possible by U.S. National Science Foundation Grant No. 4095.

Dictyla amitina (Horvath)—(Plate III)

Monanthia amitina Horvath, 1923:13

Mt. Pipps, Queensland, Australia, three specimens, 9.i.1931, common species. In a paper in press elsewhere, the Genus *Monanthia* Le Peletier et Serville has been suppressed as a synonym of the Genus *Copium* Thunberg, and the Genus *Dictyla* Stål resurrected from synonymy to receive most of the species previously included in *Monanthia*.

Dictyla aima, new species-(Plate III)

Head very short, deep black, armed with five rather slender, appressed, testaceous spines, the hind pair longer than the others; eyes large, transverse, black; bucculae blackish fuscous with the inferior margin testaceous, areolate, contiguous in front. Antennae indistinctly pubescent, pale testaceous, with last segment largely blackish and pubescent, measurement: I, 7; II, 5; III, 52; IV, 16. Labium brown with apex blackish, reaching to middle of mesosternum; laminae rather low, uniseriate, black, more widely separated and cordate on metasternum, closed behind. Orifice of metathoracic scent glands indistinct. Hypocostal laminae uniseriate. Body beneath black. Length 2.25 mm.; width 0.92 mm.

Pronotum black-fuscous with veinlets of collar, paranota, carinae and hind triangular process largely testaceous, some veinlets infuscate; collar truncate in front, transversely biseriate; median carina distinctly elevated, composed of one row of moderately large, rectangular areolae; lateral carinae short, visible behind paranota, divergent posteriorly, with their apices elevated so as to form larger areolae; posterior process areolate. Paranota large, reflexed, with outer margins resting on pronotal surface but not extending inwards to median carina, with discal part of each slightly elevated above pronotal surface. Elytra a little wider and longer than abdomen, with areolae clear; costal area rather wide, composed of one row of fairly large, quadrate or rectangular areolae; subcostal area scarcely wider in widest part than costal area, biseriate; discoidal area nearly extending to middle of elytra, with outer boundary vein subangulately elevated just before apex, widely angulate at apex, widest at apex of outer boundary angle, there three or four areolae deep; discoidal area composed of rather large areolae. Wings nearly as long as elytra, brownish.

Holotype (male) and allotype (female), Queensland, on "cuolahah box", 20. ix. 1933, A. Musgrave. Paratypes: four specimens, same labels as type.

This new species resembles *D. amitina* (Horvath, 1925), also from Queensland, but may be readily distinguished by the distinctly higher median and lateral carinae, by the discal part of the reflexed paranota being slightly elevated above the pronotal surface, and also by the wider costal areas of elytra. Both species are very similar in size, form and color. In *amitina* the paranota are completely reflexed, and rest flatly on the pronotal surface with outer margins touching (or nearly so) the median carina.

Physatocheila civatis Drake

Physatocheila civatis Drake 1942:10

North Rocks, one specimen, 10. i. 1941, W. Driscoll; two specimens, Fuller's Bridge, New South Wales, Australia. Also known from Queensland.

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Physatocheila objicis Drake

Physatocheila objicis Drake 1942 : 10.

Bogan River, New South Wales, four specimens, x. 1932. Known only from New South Wales and Queensland.

Froggattia olivinia Froggatt

Froggattia olivinia Froggatt 1901 : 1592-1601, pl. 12, fig. 14.

Froggattia olivina Horvath 1902 : 604-605.

Froggattia olivina Hacker 1927 : 25.

Drummoyne, New South Wales, 29. xii. 1911, two specimens. Specimens from Queensland and Tasmania, Australia, have also been studied. This lace-bug is a pest of the olive tree and feeds on the undersides of the leaves. Froggatt (1901 : 1601) gives a good account of its habits and feeding activity.

This genus and species have been wrongly accredited to Horvath (1902) as *Froggattia* olivina in collections and literature since they were originally described. However, Froggatt's descriptive notes, colored figure of adult and economic account of the olive tingid as *Froggattia* olivinia (wrongly attributed by Froggatt himself to Horvath) have priority by almost one year over that of Horvath. Under these circumstances, *Froggattia olivinia* has precedence and thus is the valid technical name for the olive tingid.

Oncophysa vesiculata (Stål)

Monanthia (Physatocheila) vesiculata Stål 1859 : 259.

Oncophysa vesiculata Stål 1873 : 129.

Oncophysa vesiculata Horvath 1925 : 2.

Oncophysa vesiculata Hacker 1928 : 177, fig.

Buna Mts., Queensland, 2,000 ft., 22. i. 1928, one specimen, N. Geary. Specimens from New South Wales are also at hand.

Var. *nigra* Hacker, 1928 : 178, fig., National Park, New South Wales, four specimens, 21. v. 1924, A. Musgrave; Davis Gap, Mt. Kosciusko, New South Wales, 10, i. 1929, A. Musgrave; Mt. Tomah, New South Wales, two specimens, 9. ii. 1929, all collected by A. Musgrave and from New South Wales. Also recorded from Victoria and Tasmania, Australia.

Var. gracilis Hacker 1928 : 178. Sawpit Creek, Mt. Kosciusko, New South Wales, 3. i. 1929, A. Musgrave. Also known from South Australia.

Diplocysta trilobata Drake and Poor

Diplocysta trilobata Drake and Poor 1939 : 205.

Cooper Park, Bellevue Hill, Dr. K. K. Spense, four specimens. This species differs from *D. bilobata* Horvath, from Western Australia, in the shape and form of the large pronotal cysts. The upper two cysts in *trilobata* are distinctly separated from each other. The types of the latter came from Victoria, and I also have specimens from Tasmania and South Australia.

Codotingis evansi, new sp. (Plate IV)

Rather small, oblong, chestnut-brown, with some veinlets of elytra infuscate, head blackish fuscous, paranota and carinae of pronotum largely testaceous, appendages brown with apical half of last tarsal segment and also of terminal segment of antennae blackish. Body beneath dark brown. Length 2.90 mm.; width 1.00 mm.

Head very short, wide, armed with five brown or testaceous spines; median spine tuberculate, placed at centre of vertex; anterior spines situated slightly behind front margins of eyes (one on each side of median line); hind pair of spines appressed, widely separated, situated considerably behind inner margins of eyes, extending anterior nearly to middle of eyes. Antennae rather short, finely granulate, clothed with fine, inconspicuous, yellowish pubescence, measurements: I, 10; II, 8; III, 68; IV, 24. Labium rather stout, dark brown, extending almost to middle of metasternum; laminae low, testaceous, parallel, open behind. Metapleural scent gland orifice indistinct. Hypocostal laminae uniseriate. Legs rather short, indistinctly pubescent, the femora only slightly swollen.

Pronotum moderately transversely convex across humeri, punctate, tricarinate, all carinae distinct, rather thick, without areolae; median carina connected in front with hood; lateral carinae slowly diverging anteriorly, terminating anteriorly opposite apex of median carina but not in contact with hood; paranota long, rather narrow, uniformly dilated, uniseriate, reflexed upward, with dorsal side in contact with pronotum at humeral angles. Hood small, inflated,

projecting anteriorly over basal part of head and posteriorly over most of calli, with measurements of length, width and height practically the same; posterior process areolate. Elytra strongly narrowed beyond discoidal area, divided into the usual areas; costal area fairly wide, composed of one complete and a partial second row of areolae on the basal half, the areolae moderately large; subcostal area slightly wider, biseriate, nearly vertical; discoidal area five-ninths as long as elytra, five areolae deep beyond middle just behind apex of posterior pronotal process, the areolae scarcely larger than those of subcostal area; areolae beyond basal third of sutural area considerably clouded with dark fuscous.

Holotype (male), Moruen District, Queensland, April, 1941, N. Geary. Paratype: One specimen, taken at same time as type.

Differs from *C. recurva* Drake, only other member of the genus, in having slightly longer antennae, much thicker and more elevated carinae, wider paranota, and wider costal areas of elytra. In both species the hood is similar in form and about the same size. This species is named in honor of Dr. J. W. Evans, Director of the Australian Museum, who has published many papers on Australian insects, especially Homoptera. The type is figured.

Alloeocysta, new gen.

Head very short, scarcely extended in front of eyes, armed with five spines; bucculae short, areolate, with apices meeting in front. Labium moderately long, extending beyond prosternum; laminae areolate, more widely separated on metasternum. Antenniferous tubercles short, blunt, rounded in front. Antennae rather short, rather slender, with segments I and II short, III longest, rather slender, IV moderately swollen and much shorter than III. opening of metapleural scent gland not visible. Hypocostal laminae uniseriate. Pronotum moderately narrowed in front of humeri, tricarinate; median carina long, reaching to hood; lateral carinae present on posterior process, modified so as to form long, subcylindrical, inflated, areolate cysts on pronotum proper; paranota long, moderately wide, reflexed upright; hood moderately large, extending over basal part of head, transverse, wider than long. Elytra a little wider and longer than abdomen, without tumid areas, divided into the usual areas, with discoidal area extending beyond middle of elytra. Wings present, longer than abdomen. Legs moderately long, moderately stout.

Type of genus: A. approba, new sp. (Plate V).

Separated from other Australian genera by having the hood distinctly wider than long and the lateral carinae inflated, cystlike on disc of pronotum.

Alloeocysta approba, new sp. (Plate V)

Small, oblong, brownish or brownish testaceous, with veinlets brownish or somewhat fuscous, pronotum black, areolae of hood and cysts of lateral carinae clouded with fuscous, body beneath brownish fuscous with pronotal sterna darker. Antennae testaceous with apical part of last segment infuscate. Legs testaceous with last tarsal segment infuscate. Wings smoky brown. Labium brown with apex infuscate. Areolae of costal area and paranota largely clear. Length 3.00 mm.

Head armed with five, moderately long, suberect, whitish spines; eyes black. Antennae indistinctly pubescent, measurements: I, 9; II, 7; III, 70; IV, 18. Labium scarcely extending to metasternum; laminae divergent on mesosternum, more widely separated and cordate on metasternum. Pronotum broadly transversely convex across humeral angles; median carina elevated, pale, very distinct; lateral carinae greatly modified so as to form elongate, subcylindrical, divergent (anteriorly) vesicles (Plate V) on pronotum proper, then short, parallel and cariniform on posterior process; paranota long, almost uniformly dilated, erect, mostly three areolae deep, slightly less reflexed opposite humeral angles; posterior process triangular areolate, subcyclindrical in outline, with apices overlapping in repose; costal area fairly wide, uniseriate (sometimes with one extra cell in widest part), the areolae fairly large, clear and subquadrate, with transverse veinlets dark fuscous; subcostal area moderately wide, largely biseriate, subvertical; discoidal area large, narrowed and acutely angulate at both ends, five-ninths as long as elytra, with boundary veins raised, widest behind middle, there four areolae deep; sutural area with areolae slightly enlarged apically. Wings nearly as long as elytra, fumose. Legs indistinctly pilose, moderately stout. Female unknown.

Holotype (male), Bogan River, New South Wales.

The type is illustrated (Plate V). The shape of hood and paranota separate this singular tingid from other members of the family inhabiting Australia.

Tingis exalla, new sp.

Elongate, nearly parallel-sided, brown, with head and eyes black; antennae brown with apical half of last segment blackish. Body beneath dark brown with mesosternum and metasternum blackish. Legs and antennae provided with very short, inconspicuous, golden pubescence. Length 4.00 mm.; width 1.25 mm.

Head very short, armed with five short, brownish spines, the hind pair appressed and others semiporrect; antenniferous tubercles bluntly rounded, brown. Antennae rather long, rather slender, segment IV moderately swollen apically, measurements: I, 14; II, 11; III, 90; IV, 30. Labium fuscous, nearly reaching to metasternum; laminae testaceous, uniseriate, parallel on mesosternum, more widely separated and cordate on metasternum, open at middle behind. Bucculae short, with ends meeting in front, areolate. Openings of metathoracic scent glands distinct, with sides of channel raised, nearly upright. Legs long, fairly stout but not incrassate.

Pronotum moderately narrowed anteriorly, broadly convex across humeri, closely punctate; tricarinate, all carinae raised but not areolate; median carina terminating anteriorly on collar; lateral carinae ending in front at calli, feebly divergent from base of pronotal disc anteriorly; paranota very narrow, linear, reflexed against sides of pronotum, with one row of tiny areolae; collar rather long, truncate in front, punctate; posterior process long, triangular, areolate. Elytra scarcely wider than pronotum, not much longer than abdomen; costal area very narrow, composed of one row of tiny areolae; subcostal much wider, subvertical, composed of two rows of small areolae; discoidal area large, seven-twelfths as long as elytra, with outer boundary vein slightly arcuate; then areolae deep at widest part opposite apex of posterior pronotal process, with areolae rather small and about same size as in basal part of suteral area. Wing dark fumose, a little longer than abdomen.

Holotype (male) and *allotype* (female), both mounted on same card, Kosciusko, New South Wales, elevation 5,000 ft., R. Helms. Paratypes: two specimens, same data as type, also both mounted on a rectangular card.

The elongate form, nearly parallel-sided body, very narrow paranota and very narrow costal area of the elytra distinguish this species from its Australian congeners. It belongs to the subgenus *Tingis*.

Tingis hurdae Drake

Tingis hurdae Drake 1947 : 113, fig.

Hornsby, Queensland, one specimen. So far, only known from Queensland.

Tingis drakei Hacker

Tingis drakei Hacker 1929 : 328, fig.

Bunya Mts., Queensland, two specimens. Originally described from Queensland and known only from there.

Paracopium australicum (Stål)

Catoplatus australicus Stål 1873 : 128.

Paracopium australicus Hacker 1927 : 20, fig.

Bunya Mts., Queensland, 22. xii. 1937, 3,000 ft., four specimens, N. Geary. This gall-making tingis is known only from Australia.

Paracopium albofasciata Hacker

Paracopium albofasciata Hacker 1927 : 21, fig.

Clermont, Queensland, vii. 1929, Dr. K. K. Spense. Recorded only from Queensland. The host plants of this species and other gall-forming tingids in Australia are unknown.

Parada popla Drake

Parada popla Drake 1942 : 3.

National Park, Macpherson Ridge, Queensland, xii. 1926, A. Musgrave, one specimen. Original described from Queensland; known only from that region.

Parada torta Drake

Parada torta Drake 1942 : 4, 1952 : 147.

Mt. Tomah, Queensland, four specimens. Known previously from Queensland and New South Wales.

Eualana tasmaniae Drake

Eualana tasmaniae Drake 1945 : 97.

Gordon, New South Wales, 14. xi. 1948, two specimens, on cones of *Banksia robur* var. *minor*, A. Musgrave. The types were taken in Tasmania (Hobart). Two other specimens are before me which bear the label "Fischer Australia, Post 1, 1870".

Genus Chorotingis, new gen.

Head long, porrect, strongly produced in front of eyes, with apex extending beyond first antennal segment, inserted into head up to hind margins of eyes; eyes moderately large, transverse; bucculae very long, parallel, areolate, with ends slightly surpassing apex of head but not curved inward so as to meet in front of clypeus. Labium very long, extending beyond sulcus; laminae areolate, not very widely separated, parallel, open behind. Antenniferous tubercles short, blunt, rounded in front. Antennae rather short, moderately stout; segments I and II short, the latter a little smaller; III moderately long, not much slenderer than II; IV moderately long, slightly incrassate. Orifice of metasternal scent glands indistinct. Legs rather short, with femora a little swollen but not incrassate. Hypocostal laminae long, uniseriate.

Pronotum moderately broadly convex, punctate, with lateral sides slowly and evenly converging in front of humeri, tricarinate; collar feebly produced in front, areolate, elevated at middle so as to form a very small hood; paranota long, areolate, not produced anteriorly beyond collar nor posteriorly behind humeri, with outer margins jointly rounded and thus without angles, feebly reflexed; posterior process long triangular, acutely angulate at apex, areolate; elytra scarcely wider than greatest width across pronotum and paranota, wider and longer than abdomen, with moderately large areolae, divided into costal, subcostal, discoidal and suteral areas, the discoidal area extending beyond middle of elytra. Wings longer than abdomen.

Type species, Chorotingis indigena, new sp. (Plate VI).

This genus belongs to the subfamily Tinginae and may be distinguished at once from other genera of this subfamily occurring in Australia by having a long head (strongly produced in front of the eyes) and by the long bucculae. The large triangular posterior process of pronotum and lack of visible clavus separate it at once from Cantacaderinae, though the long head and long bucculae remind one somewhat of this subfamily.

Chorotingis indigena, new sp. (Plate VI)

Large, obovate, without vestiture, areolae rather small and clear, brown paranota and costal area brownish testaceous, the head fuscous-brown; body beneath darker brown with mesosternum and metasternum blackish; Length 4.00 mm.; width 1.80 mm. (across widest part of elytra).

Head broad, nearly flat above, width across eyes and median length subequal (47 : 48), width of vertex and length of clypeus in front of anterior pair of spines also subequal (26 : 26); median and anterior pair of spines rather short, erect, blunt, the posterior pair bent anteriorly; bucculae long, wide areolate, with anterior ends slightly surpassing but not meeting in front of clypeus; antenniferous tubercles short, blunt, concave within, with apices rounded. Labium reaching almost to apex of second abdominal tergite; laminae pale, rather low, uniseriate. Antennae rather short, with short, inconspicuous, golden pubescent hairs on first three segments, longer pubescence on last segment, measurements: I, 10; II, 8; III, 54; IV, 15. Legs short, with femora only slightly swollen, the tarsi thin.

Pronotum wide, moderately broadly transversely convex across humeral angles, closely punctate; calli small, impressed, impunctate; collar distinctly raised, areolate, modified behind front margins so as to form there a very small subquadrate hood just in front of calli, the hood with a transverse veinlet across its crest; paranota moderately wide, biseriate, the areolae about the same size as in costal area; median carina extending from apex of triangular process to hood, low and without areolae on pronotal disc, then more elevated and with moderately large areolae in front of and behind disc; lateral carinae distinctly divergent anteriorly from the base of the posterior process, less elevated with smaller areolae on discal part of pronotum.

Elytra with sutural areas overlapping and jointly rounded behind in repose; costal area largely or entirely biseriate, sometimes with a few additional areolae in widest part beyond discoidal area, the areolae moderately large; subcostal area much wider than costal area, sloping obliquely downward, largely four areolae deep, with areolae smaller but about equal in size to those in discoidal area; discoidal area very large, seven-tenths as long as elytra, with outer boundary vein a little arcuate, acutely angulate at both base and apex, widest near middle, there eight areolae deep, with boundary veins raised and prominent; sutural area large, with areolae a little larger apically. Wings longer than abdomen. Holotype (male), Saint George's Sound, Queensland. Paratype: One specimen, same data as on type label.

The long head, rather longly extended in front of eyes, and the long bucculae (apices slightly surpassing tylus) distinguish this insect from genus *Tingis* and other genera of the subfamily Tinginae occurring in the Australian Region.

Ulonemia pacifica (Kirkaldy)

Teleonemia pacifica Kirkaldy 1908: 780.

Ulonemia pacifica Drake and Poor 1943: 193; 1945: 288.

Moven District, Queensland, iv. 1945, 27 specimens, N. Geary. This widely distributed species is also found on several islands of the South Pacific. As it is atypical of both *Teleonemia* and *Ulonemia*, its generic position will be discussed in a subsequent paper.

Ulonemia mjobergi (Horvath)

Tingis (Tingis) mjobergi Horvath 1925 : 5. Ulonemia mjobergi Drake and Poor 1937 : 3.

Fuller's Bridge, Lane Cove River, New South Wales, two specimens, x. 1934, Dr. K. K. Spense; Sydney, New South Wales, one specimen. This species was originally described from Broome, Western Australia.

Ischnotingis horvathi Drake

Ischnotingis horvathi Drake 1954 : 69.

Sydney, New South Wales, one specimen. Originally described from New South Wales.

Epimixia tenuatis Drake

Epimixia tenuatis Drake 1944 : 71.

Clermont, Queensland, two specimens, 30, ix. 1929, Dr. K. K. Spense.

Epimixia veteris Drake

Epimixia veternis Drake 1944 : 71.

Cairns, Queensland, common on Casuarina, J. G. Brooks.

Tanybyrsa ampliata (Hacker)

Compseuta ampliata Hacker 1927 : 26.

Morven District, Queensland, six specimens, iv. 1941, N. Geary.

Caloloma uhleri Drake and Bruner

Caloloma uhleri Drake and Bruner 1924 : 153.

One specimen, probably from New South Wales. This species was originally described from the West Indies (Island Antigua, Lesser Antilles). Several specimens have been identified from Australia during the past decade, and only the type specimens are known from Insular America. There seems to be little, if any, doubt that *uhleri* is a native Australian species.

Stephanitis pyrioides (Scott)

Tingis pyrioides Scott 1874 : 440.

Stephanitis azaleae Horvath 1905 : 568; 1912 : 333.

Stephanitis pyrioides Drake and Maa 1953 : 101,

Lane Cove, New South Wales, five specimens, 26. iv. 1924, N.W. Rood. This is an imported species, probably from the Orient, Europe or the United States. It was originally described from Japan. It feeds and breeds on *Azalea* and *Rhododendron* species. *Pieris ovalifolia* also serves as a host in Formosa and Japan.

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EXPLANATION OF PLATES

- Plate III : Dictyla amitina (Horvath) (left) and Dictyla aima Drake, n. sp.
- Plate IV : Codotingis evansi, n. sp.
- Plate V: Alloeocysta approba, n. gen. and n. sp.
- Plate VI : Chorotingis indigena, n. gen. and n. sp.

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PLATE V



