

The Bythoscopidae of Australia (Homoptera, Jassoidea)

By

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PLATES II-IV

In all works dealing with the classification of the Jassoidea, the Bythoscopidae are defined as leaf-hoppers that have their ocelli situated on the ventral surface of their heads and without a distinct margin between vertex and frons. A study of *Eurymela* Le P. and Serv. and related genera, supplied evidence that these genera, although comprised of insects that all have their ocelli ventrally placed, are not closely related to other Bythoscopid genera. Accordingly they have been placed in a separate family (Evans, 1934).

Whilst the Eurymelidae are a homogeneous group, that have as well as common structural characters, similar life-histories and habits, the Bythoscopidae appear to comprise a heterogeneous collection of genera, bound together by a common structural character, the ventral position of the ocelli. It is doubtful whether this character is of any great phylogenetic significance, or whether the majority of the genera are particularly closely related to each other. The presence or absence of a distinct margin between vertex and frons is a character of no value when applied to Australian forms. However, until more material is available, and further research concerned with both the morphology and habits of these insects carried out, it is convenient to retain the family as a unit.

In none of the taxonomic papers in which Australian leaf-hoppers have been described, that have appeared since 1907, has any attempt been made to revise Kirkaldy's classification, though all who have attempted to identify insects with the aid of his bulletins will agree that revision is needed.

This paper is one of a series dealing with the Australian Jassoidea. In each paper an attempt is being made to bring together all known Australian species that belong to the group under consideration. It is perhaps unfortunate that the Palaearctic Jassoid fauna was the first to be thoroughly studied, since the classification of other faunas has had of necessity to be based on this. If the Australian fauna had received similar attention in the past it is believed that a better understanding would now be had of the whole Jassoid complex.

Kirkaldy (1906), referring to the Australian region, pointed out that it demanded the attention of hemipterists, since it appeared to possess the oldest existing fauna in the world. His prediction that the classification of other faunas would have to be modified when the Australian fauna had been worked out, will doubtless prove correct.

KEY TO THE GENERA OF AUSTRALIAN BYTHOSCOPIDAE.

1. Head, including the eyes, wider than the pronotum at the base; bases of tegmina lying close behind the eyes ... 2

Head, including the eyes, narrower than the pronotum at the base; bases of tegmina not lying close behind the eyes ... 8
2. Tegmen with a wide appendix ... 3

Tegmen with a narrow or no appendix ... 4
3. Tegmen with sub-apical cells ... *Idiocerus* Lewis

Type *Idiocerus adustus* Lewis

Tegmen without sub-apical cells ... *Pedioscopus* Kirk.
Type *Pedioscopus philenor* Kirk.
4. Ocelli nearer to the eyes on each side than to each other; or the distance between the ocelli equal to the distance between each ocellus and the adjacent eye ... 5

Ocelli nearer to each other than to the eyes on each side ... *Austroagallia*, gen. nov.
Type *Austroagallia torrida*, sp. nov.
5. Ventral surface of head more or less flat; maxillary plates narrow ... 6

Ventral surface of head more or less in two planes; maxillary plates wide ... *Austroagalloides*, gen. nov.
Type *Austroagalloides karoondae*, sp. nov.
6. Width of head equal to, or but little greater than, the length ... 7

Head, including eyes, nearly twice as wide as long ... *Stenoscopus* Evans
Type *Stenoscopus drummondii* Evans
7. Striations on pronotum transverse ... *Oncopsis* Burm.
Type *Cicada flavicollis* L.

Striations on pronotum oblique ... *Macropsis* Lewis
Type *Cicada virescens* Lewis
8. Crown of head from above visible narrowly between the eyes; pronotum steeply declivous ... 9

Crown of head from above visible widely between the eyes; pronotum not steeply declivous ... *Eurinoscopus* Kirk.
Type *Eurinoscopus lentiginosus* Kirk.
9. Ventral surface of head evenly rounded ... *Chinaella*, gen. nov.
Type *Chinaella argentata*, sp. nov.

Ventral surface of head not evenly rounded, the clypeus lying almost at right-angles to the vertex ... *Trocnada* Walk.
Type *Trocnada dorsigera* Walk.

In the majority of the descriptions of new species that follow, the colour pattern of the type is not given in great detail, since two individuals are seldom found that have identical markings. Instead numerous figures are given, in the hope that they will assist to render the descriptions intelligible.

Tribe MACROPSINI

This tribe is erected to hold the following genera: *Macropsis* Lewis, *Oncopsis* Burm., and *Stenoscopus* Evans. These genera, of which the last is represented by a single species occurring in Western Australia, are very similar to each other in general appearance and detailed structure.

Genus *Macropsis* Lewis

Trans. Ent. Soc. London 1 ; p. 49, 1835.

This genus is of world-wide distribution, and according to China (1925) contained in 1925 nearly seventy described species. Five species have been described previously from Australia: *abscondens* Waik. (*Bythoscopus*), (*Homopt. Ins. Suppl.*, p. 267, 1858); *oeroe* Kirk., *thymele* Kirk., *thya* Kirk., and *thontias* Kirk. (*Bull. Hawaii. Sug. Ass. Ent.* 3; p. 36, 1909). Ten new species are described below. It is possible that a study of the food plants of *Macropsis* spp. would show that many of the species feed upon a single species of plant, since such an isolation would account for the many closely related forms that have developed. The figures render a redescription of this genus unnecessary. The presence of oblique striations on the pronotum is a character that enables its separation from *Oncopsis*, in which the striations are transverse. The male genitalia of all members of the Macropsini consist of long and narrow parameres and subgenital plates, that are frequently of almost equal length to each other, and an aedeagus of variable shape.

Macropsis occidentalis, sp. nov.

(Plate II, fig. 2)

Length, 4 mm. (from the apex of the head to the tip of the folded tegmina).

Head, width 1 mm., punctate, almost flat, with a slight median ridge on the vertex; hind margin produced dorsally; from above angularly produced, the crown (here considered as that part of the vertex as is visible from above) only visible at the sides against the eyes. Frons ochreous, the rest of the head greenish and ochreous, but for two diffuse black areas on the vertex; eyes reddish-brown.

Pronotum, punctate, pale greenish-brown, steeply declivous anteriorly, and higher in the middle than at the sides. *Scutellum*, smooth, yellowish; apex green. *Tegmen*, transparent, tinted slightly with yellowish-green; appendix small, barely perceptible.

Thorax and *abdomen*, ventral surface pale green. *Legs*, pale yellowish-green; tarsi, pale brown.

Type ♀, from Bruce Rock, Western Australia (coll. F. Drummond), in the collection of the Australian Museum, Sydney.

***Macropsis victoriensis*, sp. nov.**

(Plate II, figs. 1a, 1b, 1c)

Length, 4.5 mm. General coloration, greenish-yellow.

Head, width 1.2 mm., egg-yellow, eyes pale chocolate-brown; posterior margin of vertex angularly produced; crown from above visible for its entire width, wider against the eyes than in the middle.

Pronotum, olive-green, anterior lateral angles, yellow. *Scutellum*, yellow. *Tegmen*, clavus and costal margin, apple-green; costal area, colourless, transparent; apex, smoky grey.

Thorax and *abdomen*, ventral surface, yellowish. *Legs*, yellowish but for the hind tibiae, which are green.

Type ♂, from Burwood, Victoria (coll. J.W.E.), in the collection of the Australian Museum, Sydney.

***Macropsis federalis*, sp. nov.**

(Plate II, fig. 3)

Length, 3.8 mm. General coloration, apple-green.

Head, width 1.2 mm., greenish-yellow, with two small brown markings below the ocelli; eyes reddish-brown, hind margin of head rounded; crown visible from above only as a narrow border against the eyes on each side.

Pronotum, pale green, the anterior margin angularly produced, so that in the centre it reaches beyond the posterior border of the head. *Scutellum*, yellowish-green, punctate. *Tegmen*, apple-green, but for the costal area and apex, which are colourless; appendix relatively wide.

Thorax, ventral surface yellow, with dark brown markings. *Legs*, pale yellow. *Abdomen*, ventral surface pale canary yellow.

Type ♀, from Canberra, F.C.T. (coll. J.W.E.), in the collection of the Australian Museum, Sydney.

***Macropsis filicis*, sp. nov.**

(Plate II, fig. 4)

Length, 3.2 mm. General coloration, yellowish-green.

Head, width 1 mm., lemon-yellow, ocelli brown, eyes chocolate-brown; crown from above visible as a band of even width between the eyes.

Pronotum, green, slightly declivous. *Scutellum*, yellow. *Tegmen*, yellowish-green, but for the apex, which is white.

Thorax and *abdomen*, ventral surface and *legs* very pale green.

Type ♀, from Fern Tree Gully, near Melbourne, Victoria (coll. J.W.E.), in the collection of the Australian Museum, Sydney.

***Macropsis tasmaniensis*, sp. nov.**

(Plate II, fig. 5)

Length, 3 mm.

Head, width 1.2 mm., very pale yellowish-brown with dark brown punctures, and two very dark brown arcuate markings on the frons; eyes dark brown; crown from above visible as a wide border between the eyes, of equal width throughout.

Pronotum, almost flat; greyish-brown with dark brown punctures, and two dark brown oval markings against the anterior border, laterally. *Scutellum*, yellowish-brown with brown punctures. *Tegmen*, hyaline, clavus grey; veins brown, barred with white.

Thorax and *abdomen*, ventral surface dark brown. *Legs*, dark brown, but for the bases of the spines on the hind tibiae, which are black, and the first tarsal segment of the hind tibiae, which is very pale brown.

Type ♀, from the summit of Mount Wellington, Hobart, Tasmania (coll. A. M. Lea), in the collection of the Australian Museum, Sydney.

***Macropsis luteus*, sp. nov.**

(Plate II, fig. 6)

Length, 3.2 mm.

Head, width .8 mm., somewhat convex; pale yellowish-brown with dark brown punctures, and two khaki coloured arcuate scars on the lateral borders of the frons; crown from above, visible as a wide band between the eyes, of equal width throughout.

Pronotum, pale yellowish-brown with brown punctures. *Scutellum*, anterior two-thirds, concolorous with the pronotum, the apical third smooth, pale yellowish-white. *Tegmen*, transparent, veins brown with white bars, appendix narrow.

Thorax, ventral surface, pale yellowish-white with black markings. *Legs*, pale yellowish-brown, but for the bases of the spines on the hind tibiae, which are black; spines strong. *Abdomen*, ventral surface, pale yellowish-brown.

Type ♀, from Bruce Rock, Western Australia (coll. F. Drummond), in the collection of the Australian Museum, Sydney. This species has also been taken in the neighbourhood of Adelaide, South Australia.

Macropsis hobartensis, sp. nov.

(Plate II, fig. 7)

Length, 4 mm.*Head*, width 1.2 mm., entirely ochreous; crown from above entirely visible, wider against the eyes than in the centre.*Pronotum*, dull olive-green, the anterior lateral angles paler than the rest of the pronotum. *Scutellum*, yellow, with two brown triangular shaped markings against the anterior margin. *Tegmen*, transparent, veins colourless.*Thorax* and *abdomen*, ventral surface, and *legs*, pale yellowish-brown.*Type* ♀, from Hobart, Tasmania (coll. A. M. Lea), in the collection of the Australian Museum, Sydney.**Macropsis lincolnensis**, sp. nov.

(Plate II, fig. 8)

Length, 4 mm. General coloration, pale yellowish-brown.*Head*, width 1.1 mm., pale biscuit colour with brown punctures and two oval ochreous markings just above the ocelli; eyes light brown; crown from above not visible in the centre.*Pronotum*, light brown with dark brown spots, the anterior border smooth and yellow behind the eyes, the posterior two-thirds darker in colour; steeply declivous, so that the anterior margin is almost at right angles to the hind margin. *Scutellum*, ochreous, sparsely punctured with brown. *Tegmen*, clavus hyaline, grey, the rest of the tegmen colourless, transparent; anal veins buff, the other veins brown.*Thorax* and *abdomen*, ventral surface, and *legs*, pale brown.*Type* ♀, from Port Lincoln, South Australia (coll. A. M. Lea), in the collection of the South Australian Museum.**Macropsis flindersi**, sp. nov.

(Plate II, fig. 9)

Length, 4.5 mm.*Head*, width 1.5 mm., pale yellow and grey, with a few small scattered light brown spots and two brown oval markings just above the ocelli; eyes, pale brick red; crown of head from above visible only as a narrow border between the eyes.*Pronotum*, declivous; grey flecked with brown spots, and two oval yellow areas against the anterior border laterally. *Scutellum*, egg-yellow, with a large black marking against the anterior border. *Tegmen*, transparent, suffused with very pale green, veins colourless.*Thorax* and *abdomen*, ventral surface, and *legs*, pale yellow.*Type* ♀, from Parachilna, Flinders Range, South Australia, in the collection of the South Australian Museum.

Macropsis wilsoni, sp. nov.

(Plate II, fig. 10)

Length, 4 mm.*Head*, width 1.5 mm., pale brownish-yellow; eyes reddish-brown; crown of head from above visible narrowly against the eyes.*Pronotum*, pale brown flecked with chestnut brown. *Scutellum*, yellow. *Tegmen*, yellowish-hyaline, the anal angle suffused with dark brown.*Thorax* and *abdomen*, ventral surface, and *legs*, pale brown with dark brown markings.*Type* ♀, from the Grampian Mountains, Victoria (coll. F. E. Wilson), in the collection of the Australian Museum, Sydney.*Note*.—A variety from Kiata is reddish-brown in colour.Genus **Oncopsis** Burmeister*Gen. Ins.* 1, 1838.

Insects in this genus can be distinguished from those in the previous genus by the character of the transverse striations on the pronotum. *Oncopsis*, like *Macropsis*, is of world-wide distribution. One species has previously been described from Australia: *balli* Kirk. (*Bull. Hawaii. Sug. Ass. Ent.* 3; p. 38, 1907).

Oncopsis scopulus, sp. nov.

(Plate II, fig. 13)

Length, 3 mm.*Head*, width 1 mm., light and dark brown with dark brown punctures, the lateral arcuate markings on the frons, brown; crown from above wider against the eyes than in the centre.*Pronotum*, only slightly declivous; the anterior border, medianly, and lateral angles, pale yellow; anterior half of pronotum dark brown, the posterior half dull grey, with ill-defined brown punctures. *Scutellum*, marked with a pattern of yellow and black. *Tegmen*, transparent, veins and apex of tegmen brown.*Thorax*, ventral surface black. *Legs*, light and dark brown. *Abdomen*, ventral surface black, the hind border of each segment yellow; genital segments brown.*Type* ♂, from Bruce Rock, Western Australia (coll. F. Drummond), in the collection of the Australian Museum, Sydney.**Oncopsis pullus**, sp. nov.

(Plate II, fig. 14)

Length, 5.5 mm.*Head*, width 2 mm., pale brown with dark brown punctures, the arcuate markings, and a small oval area on each side above the

ocelli, ochreous; eyes dark brown; crown from above visible for its entire width, wider against the eyes than in the centre.

Pronotum, concolorous with the head, strongly declivous, so that the anterior margin is more or less at right angles to hind margin. *Scutellum*, pale yellowish-brown with dark brown punctures, the anterior lateral angles ochreous brown. *Tegmen*, transparent, suffused apically with very pale brown; veins pale brown.

Thorax, ventral surface, pale brown with dark brown markings; *Legs*, yellowish-brown, the bases of one row of spines on the hind tibiae dark-brown. *Abdomen*, ventral surface, yellowish-brown.

Type ♀, from Canberra, F.C.T. (coll. J.W.E.), in the collection of the Australian Museum, Sydney. This species has also been taken at Hobart.

***Oncopsis melleus*, sp. nov.**

(Plate II, fig. 15)

Length, 4.8 mm.

Head, width 1.5 mm., whitish-yellow with brown maculations; arcuate markings brown, edged with black, eyes red; crown from above not visible in the centre.

Pronotum, concolorous with the head. *Scutellum*, yellowish with black punctures, anterior lateral angles black. *Tegmen*, transparent, suffused with very pale brown, the apex and the veins dark-brown.

Thorax, ventral surface, dark brown. *Legs*, pale brown with dark brown markings. *Abdomen*, ventral surface, with each segment dark brown anteriorly and pale brown posteriorly; genital segments, dark brown.

Type ♂, from Hobart, Tasmania (coll. A. M. Lea), in the collection of the Australian Museum, Sydney.

***Oncopsis translucens*, sp. nov.**

(Plate II, figs. 11 a-e)

Length, 6 mm.

Head, width 1.8 mm., yellowish-white, with the arcuate markings brown, the rest of the frons dark brown; eyes pale brown; crown from above visible very narrowly in the middle, wide against the eyes.

Pronotum, declivous, with a slight median hump anteriorly; pale yellowish-white, punctate. *Scutellum*, yellow, with brown punctations and irregular brown markings; anterior lateral angles, black. *Tegmen*, transparent, veins pale brown with white bars; appendix distinct.

Thorax, ventral surface, anteriorly pale yellowish, posteriorly black, each sclerite edged with yellow. *Legs*, light and dark brown.

Abdomen, ventral surface, pale yellowish; genital segments brown with yellow markings.

Type ♀, from Parachilna, Flinders Range, South Australia, in the collection of the South Australian Museum.

***Oncopsis subfuscus*, sp. nov.**

(Plate II, figs. 12a, 12b)

Length, 5 mm.

Head, width 1.3 mm., whitish-yellow with dark brown punctures; eyes brown; crown from above not visible in the centre.

Pronotum, steeply declivous, the anterior border yellow; posteriorly grey with dark-brown punctures and maculations. *Scutellum*, yellow with black markings, the anterior lateral angles black. *Tegmen*, transparent, veins brown.

Thorax and *abdomen*, ventral surface, and *legs* marked with a pattern of light and dark-brown.

Type ♂, from Ooldea, South Australia (coll. A. M. Lea), in the collection of the South Australian Museum.

***Oncopsis tepperi*, sp. nov.**

(Plate II, fig. 16)

Length, 5.2 mm.

Head, width 1.5 mm., pale reddish-brown with dark brown punctures; eyes dark brown; hind margin of head almost straight.

Pronotum, with light and dark brown markings, raised medianly into a distinct hump. *Scutellum*, yellowish-brown, the anterior lateral angles reddish-brown. *Tegmen*, brown, but for the costal margin, which is white, and the apex and clavus, which are mottled with very pale brown.

Thorax, ventral surface, dark brown. *Legs*, marked with a pattern of light and dark brown. *Abdomen*, ventral surface, pale brown.

Type ♀, from Kangaroo Island, South Australia (coll. J. G. Tepper), in the collection of the South Australian Museum.

Genus *Stenoscopus* Evans

Trans. Roy. Soc. South Australia 58; p. 166, 1934

This genus contains only one species (*drummondi* Evans), which has recently been described and figured.

Tribe AGALLIINI.

The insect described below has been compared with European and American species of *Agallia* Curtis, *Agalliopsis* Kirk., and *Aceratoagallia* Kirk., and found to differ in the shape of the head, distance between the ocelli, and dorsal thoracic segments. These differences are considered sufficiently striking to merit the erection of a new genus.

Austroagallia, gen. nov.

The head is longer than wide, and the labium reaches to between the hind legs. The ocelli, which are on the same plane as the clypeus, are sunk in depressions, and face outwards towards the eyes; they are closer to each other than to the eyes on each side. The crown is slightly produced anteriorly, and is of an even width throughout. The width of the pronotum is greater than its length, the anterior border is three-sided, and the posterior border straight. The scutellum is approximately half the length of the pronotum. The tegmina, which are steeply tectiform and have very narrow appendices, reach well beyond the end of the abdomen. The hind tibiae have four rows of long slender spines.

Austroagallia torrida, sp. nov. (Genotype)

(Plate III, figs. 1 a-e)

Length, 3.5 mm.

Head, width 1 mm., ivory with faint yellowish-brown markings; ocelli red, eyes black; crown with two large round black spots at the same distance from each other as from the eyes on each side.

Pronotum, ivory with yellowish-brown markings, and two black pear-shaped markings, lying behind those on the head. *Scutellum*, yellowish-brown. *Tegmen*, claval area, an opaque dirty-white, the rest of the tegmen transparent; veins brown, distinct.

Thorax, ventral surface, brown. *Legs*, pale yellow, the bases of larger spines brown. *Abdomen*, ventral surface, pale yellow.

Type ♂, from Adelaide, South Australia (coll. J.W.E.), in the collection of the Australian Museum, Sydney. Described from a long series of both sexes, all taken at light.

Austroagalloides, gen. nov.

In general appearance insects in this genus resemble *Idiocerus* spp. They differ, however, very widely in structure, and appear to be more closely related to *Agallia* spp., to which genus and other related genera they may be ancestral. Nothing is known of their life-history and habits beyond the fact that the majority of specimens taken have been beaten from trees of the genus *Eucalyptus*. The head lies in three distinct planes, so that the vertex bearing the ocelli and the hind margin of the frons, is more or less vertical and at right-angles to the anterior portion of the head. The ledges overhanging the antennae are pronounced, the clypeus usually extends beyond the maxillary plates, and the hind border of the frons is generally obscure. The eyes are large and prominent, so that the head, including the eyes, is wider than the pronotum at the base, and the crown from above, between the eyes, is broad and of even width throughout. The tegmina, which are long and

narrow, have either a very narrow appendix or no appendix at all, and the veins have raised dots, either lying alongside them or on the veins themselves. The hind tibiae usually have an armature of weak spines, seldom set on enlarged bases. The male genitalia have large pygophores, and parameres which are half the length of the sub-genital plates.

***Austroagalloides karoondae*, sp. nov. (Genotype)**

(Plate III, fig. 6)

Length, 7.5 mm.

Head, width 2.5 mm., pale yellowish-brown suffused with pink; eyes reddish-brown; frons convex, ocelli large, situated at the apices of the lateral margins of the frons. *Pronotum*, grey, the anterior border pale yellowish-brown; the entire pronotum covered with raised transverse black markings. *Scutellum*, pale yellowish-brown, the apex pink and the anterior lateral angles brown; anteriorly a few brown maculations. *Tegmen*, transparent, grey, dotted with raised round brown spots that do not follow the course of the veins; veins pale yellow, appendix lacking.

Thorax and *abdomen*, ventral surface, and *legs*, pale yellowish-brown suffused with pink.

Type ♀, from Murat Bay, South Australia, in the collection of the South Australian Museum. A variety from Karoonda, South Australia, has the apices of the tegmina black.

***Austroagalloides rosea*, sp. nov.**

(Plate III, figs. 4a, 4b)

Length, 8 mm.

Head, width 2.5 mm., pale yellow, eyes dark brown.

Pronotum, parchment colour, with transverse raised black markings on the posterior two-thirds. *Scutellum*, yellowish-brown, with two median black spots and two larger black markings lying against the anterior margin. *Tegmen*, hyaline, suffused with pink; veins pink, with small raised dots lying along both sides of every vein.

Thorax and *abdomen*, ventral surface, and *legs*, pale brownish-yellow.

Type ♀, from Leura, New South Wales (coll. J.W.E.), in the collection of the Australian Museum, Sydney. A pale yellow variety of this species has been taken at Launceston, Tasmania.

***Austroagalloides grisea*, sp. nov.**

(Plate III, figs. 5a, 5b)

Length, 7 mm.

Head, width 2.2 mm., clypeus, maxillary plates, and lorae, white; frons pinkish-yellow; the vertical portion of the vertex pink, the dorsal part, or crown, yellowish.

Pronotum, pinkish-grey, anteriorly smooth; posteriorly with raised black transverse markings. *Scutellum*, grey, smooth. *Tegmen*, hyaline, veins and hind margin bright cherry-red; costal margin colourless; veins with raised spots incorporated in them and not lying at the sides; appendix small.

Thorax and *abdomen*, ventral surface, and *legs*, pale yellowish-white.

Type ♀, from Canberra, F.C.T. (coll. J.W.E.), in the collection of the Australian Museum, Sydney.

Austroagalloides brunnea, sp. nov.

(Plate III, figs. 3a, 3b)

Length, 6.1 mm.

Head, width 2 mm., pale yellowish-brown, eyes grey. The vertex is not at right angles to the crown, and the ocelli, which are sunk in slight depressions, are visible from above. *Pronotum*, pale yellowish-brown. *Scutellum*, pale yellowish-brown, with two brown median spots and two large triangular brown markings against the anterior margin. *Tegmen*, yellowish-hyaline, veins yellow, with small raised dots on the actual veins; appendix very narrow.

Thorax and *abdomen*, ventral surface, and *legs*, pale brownish-yellow.

Type ♀, from Canberra, F.C.T. (coll. A. L. Tonnoir), in the collection of the C.S.I.R. Division of Entomology at Canberra.

Austroagalloides agalliae, sp. nov.

(Plate III, figs. 2 a-d)

Length, 5.2 mm.

Head, width 1.5 mm., biscuit colour; eyes brown, the vertex with black markings that may extend on to the frons; antennal ridges oblique; ocelli facing outwards, the eyes sunk in slight depressions.

Pronotum, pale dirty yellow, with transverse raised black markings posteriorly and an irregular pattern of small black markings behind the eyes. The anterior border of the pronotum is sunk below the level of the hind margin of the head. *Scutellum*, smooth, pale yellowish. *Tegmen*, hyaline, veins pink with raised dots.

Thorax, ventral surface, black. *Legs*, whitish with light brown markings. *Abdomen*, ventral surface black, the posterior border of each segment yellow; genital segments brown.

Type ♂, from Canberra, F.C.T. (coll. A. L. Tonnoir), in the collection of the C.S.I.R. Division of Entomology at Canberra. This species has also been taken at Adelaide, South Australia.

Austroagalloides nigra, sp. nov.

(Plate III, fig. 7)

Length, 6.1 mm.*Head*, width 1.5 mm., anteriorly up to the antennal ledges, yellow; vertex and crown black; eyes reddish-brown, ocelli yellow.*Pronotum*, anteriorly yellow, with black maculations, posteriorly yellow suffused with black, and with raised transverse black markings. *Scutellum*, smooth, black. *Tegmen*, yellowish-hyaline, black apically; veins black with raised dots.*Thorax* and *abdomen*, ventral surface, and *legs*, yellow.*Type* ♂, from Leura, New South Wales, in the collection of the Australian Museum, Sydney. A paler variety has been taken at Hobart, Tasmania.**Austroagalloides wrighti**, sp. nov.

(Plate III, figs. 8a, 8b)

This species is larger and broader than the preceding ones, but in essential characters resembles other species in the genus.

Length, 7 mm.*Head*, width 3.5 mm., anteriorly pale yellowish-brown, but for the frons, which is a somewhat darker brown; vertex and crown marked with an irregular pattern of yellow and black; eyes dark brown; frons swollen; ocelli facing towards the eyes; hind margin of frons distinct; eyes very prominent.*Pronotum*, anteriorly brownish-yellow with irregular black markings, posteriorly grey with raised transverse black markings. *Scutellum*, rugose, marked with a pattern of light and dark brown. *Tegmen*, hyaline, with numerous cross veins and round brown spots lying alongside the main veins; appendix narrow.*Thorax* and *abdomen*, ventral surface, brown. *Legs*, marked with a pattern of light and dark brown.*Type* ♀, from Karoonda, South Australia (coll. G. Wright), in the collection of the South Australian Museum.

Tribe BYTHOSCOPIINI

Three genera which have several common characteristics are placed together in this tribe. The head, including the eyes, is narrower than the pronotum at the base. The pronotum is wide laterally, so that the bases of the tegmina are separated from the eyes, and the propleurae which extend laterally from the pronotum are also wide. The tegmina have a somewhat narrow appendix, and the

apical cubital cell serves as a supplementary appendix, the vein bounding its dorsal margin being more heavily chitinised than that bounding the tegmen within the true appendix. The hind tibiae are somewhat flattened, and bear three rows of strong spines and one row of long delicate spines. The apices of the hind femora rest just behind the eyes.

Genus **Bythoscopus** Germar

Rev. Ent. 1; p. 180, 1833.

Numerous Australian leaf-hoppers were placed in this genus by Walker. None of them is congeneric with the genotype, *Bythoscopus lanio* L.

Genus **Eurinoscopus** Kirkaldy

H.S.P.A. Exp. Sta. Bull. 1 (9); p. 346, 1906

Kirkaldy considered this genus to be the Australian representative of *Bythoscopus* Germ., differing from the latter in the venation of the tegmen. An examination of the paratypes of the seven species he described has shown that two of his names are synonyms. The following species were described by Kirkaldy; *lentiginosus* (genotype), *sontiates*, *soboles*, *molestia*, *dryas*, *pelias*, and *pelamys*. *E. pelias* and *E. pelamys* are synonymous with *E. dryas*. Distant (1908) refused to recognize Kirkaldy's genus, and described an insect from Australia which he placed in the genus *Bythoscopus*. This species, *viridipes*, undoubtedly belongs to the genus *Eurinoscopus*.

Eurinoscopus differs from *Bythoscopus* in the absence of numerous costal cells in the tegmen, and the greater length of the tegmen in comparison with its breadth. In addition the pygophores of the male genitalia of *Eurinoscopus* do not extend ventrally so as to cover the parameres and sub-genital plates as they do in *Bythoscopus*.... In spite of these differences and the fact that insects in the genus *Eurinoscopus* are smaller and slenderer than *B. lanio*, the two genera are undoubtedly very closely related. Figures (Plate IV, figs. 1a, 1b) are given of the tegmen and the head in profile of *Bythoscopus lanio*. A redescription of *Eurinoscopus* Kirk. is given below.

Head with the labium reaching to between the middle pair of legs, and the lorae anteriorly not reaching to the front margin of the maxillary plates. The frons is evenly rounded, the antennal ridges lying halfway up the lateral margins. The ocelli are large, lie well away from the frons, and are closer to the eyes on each side than to each other. The hind border of the head, as seen from below, is evenly rounded, while the crown of the head from above is of even

width throughout. The eyes are not prominent, so that the head, including the eyes, is slightly narrower than the pronotum at its base. The anterior margin of the pronotum is evenly rounded and parallel to the fore (dorsal) border of the head, the lateral margins are almost parallel to each other, and the hind margin is straight. Both the head and pronotum are transversely striated. The scutellum is equal in length to the pronotum, and the apex is slightly raised. The propleurae continue laterally from the pronotum, the bases of the tegmina being widely separated from the eyes. The tegmina are long and narrow, and overlap posteriorly, the ventral apical cell forming a supplementary appendix. The veins are bordered on each side by a row of small punctures. The hind tibiae are somewhat flattened, and bear two rows of long strong spines, one row of strong short spines, and one row of delicate spines or hairs. The male genitalia resemble those of *Austrougalloides* in the development of the pygophores, and such genera as *Macropsis* in the possession of long and narrow parameres and sub-genital plates.

Eurinoscopus viridis, sp. nov.

(Plate IV, fig. 5)

Length, 5 mm.

Head, width 1.5 mm., emerald green, but for the frons and ocelli, which are yellowish; eyes dark brown.

Pronotum, emerald green. *Scutellum*, emerald green, lateral angles and apex yellow. *Tegmen*, transparent, suffused with pale yellowish-green.

Thorax and *abdomen*, ventral surface, and *legs*, pale yellowish-green.

Type ♂, from Adelaide, South Australia (coll. J.W.E.), in the collection of the Australian Museum, Sydney. A variety from Canberra is pale brownish-yellow in colour and has red eyes.

Eurinoscopus pallidus, sp. nov.

(Plate IV, figs. 3a, 3b)

Length, 4.5 mm.

Head, width 1.8 mm., pale brownish-yellow.

Pronotum and *scutellum*, pale brownish-yellow.

Thorax and *abdomen*, ventral surface, and *legs*, very pale brownish-yellow.

Type ♀, from Hobart, Tasmania (coll. A. M. Lea), in the collection of the Australian Museum, Sydney.

Eurinoscopus elegans, sp. nov.

(Plate IV, figs. 2 a.-b)

Length, 5.5 mm.*Head*, width, 1.8 mm., pale chestnut brown, dark brown between the ocelli; ocelli colourless, eyes pale chocolate-brown.*Pronotum*, pale brownish-yellow, with orange-brown markings. *Scutellum*, brownish-yellow, the anterior lateral angles orange-brown. *Tegmen*, hyaline, yellowish-green.*Thorax* and *abdomen*, ventral surface, pale brownish-yellow. *Legs*, brown.*Type* ♂, from Hobart, Tasmania (coll. A. M. Lea), in the collection of the Australian Museum, Sydney.**Eurinoscopus citrinus**, sp. nov.

(Plate IV, fig. 4)

Length, 6.2 mm.*Head*, width 1.8 mm., pale lemon-yellow, dorsal margin of frons above antennal ledges distinct.*Pronotum* and *scutellum*, pale lemon-yellow. *Tegmen*, yellowish-hyaline, rugose, with a few brown spots on the veins and no cross veins.*Thorax* and *abdomen*, ventral surface, and *legs*, pale lemon-yellow.*Type* ♀, from Canberra, F.C.T. (coll. J.W.E.), in the collection of the Australian Museum, Sydney.**Chinaella**, gen. nov.

The head is evenly rounded, the antennal ledges are prominent, the hind margin of the frons is distinct, and the ocelli are on the ventral surface of the head. The crown is visible narrowly from above, being widest against the eyes, and the head, including the eyes, is narrower than the pronotum at the base. The lateral margins of the pronotum are narrow in comparison with species in related genera, but sufficiently wide to separate the bases of the tegmina from the eyes, and the propleurae are visible as lateral prolongations of the pronotum. The tegmina overlap very considerably, so that when the tegmina are closed the distal parts of the anal borders lie at an acute angle to the proximal conjoined borders. The appendix is wide, and there is a supplementary appendix. Insects in this genus, whilst resembling *Eurinoscopus* spp. in the shape of the head and the position of the ocelli, are more similar in general appearance to *Trocnada* spp.

Chinaella argentata, sp. nov. (Genotype)

(Plate IV, fig. 6)

Length, 4.5 mm.*Head*, width 2 mm., cream colour mottled with pale reddish-brown.*Pronotum*, steeply declivous, golden-yellow flecked with brown. *Scutellum*, reddish-yellow. *Tegmen*, proximally brownish-yellow, distally yellowish-white; veins brown, venation reticulate.*Thorax*, ventral surface, and *legs*, pale brown. *Abdomen*, ventral surface, white suffused with very pale brown; genital segments brown.*Type* ♀, from the Everard Ranges, South Australia (coll. A. Brumby), in the collection of the South Australian Museum.**Chinaella shephardi**, sp. nov.*Length*, 4 mm.*Head*, width 1.8 mm., frons and vertex reddish-brown mottled with yellow, clypeus, lorae, and maxillary plates black; eyes grey.*Pronotum*, reddish-brown, slightly declivous. *Scutellum*, yellowish-brown with dark brown markings. *Tegmen*, reddish-brown with a white streak along the costal margin and a purplish-brown stripe lying along the claval suture; veins brown apically.*Thorax*, ventral surface, and *legs*, dark brown. *Abdomen*, ventral surface, pale brown.*Type* ♀, from Broken Hill, New South Wales (coll. F. W. Shephard), in the collection of the South Australian Museum.

sp. nov.

Chinaella cudmorei, sp. nov.

(Plate IV, fig. 7)

Length, 4 mm.*Head*, width 1.5 mm., anteriorly and frons, ochreous; vertex, pale brownish-yellow.*Pronotum*, ochreous. *Scutellum*, dark reddish-brown, apically pale brown. *Tegmen*, hyaline, mottled with pale brown; veins pale brown, venation not reticulate.*Thorax* and *abdomen*, ventral surface, and *legs*, pale brown.*Type* ♂, from 130 miles S.E. of Broome, Western Australia (coll. A. S. Cudmore), in the collection of the Australian Museum, Sydney.Genus **Trocnada** Walker*Ins. Saund. Homopt.* 104, 1858

The head lies in two distinct planes of approximately equal length, the anterior portion up to the antennal ledges is parallel to the long axis of the body, and the posterior portion, on which is situated the hind margin of the frons and the ocelli, is vertical and at right-angles to the axis of the body. The antennal ledges are curved,

and project beyond the surface of the head. The pronotum, which is transversely striated, is very steeply declivous, and at the base is wider than the head. It is wide laterally, and the propleurae are visible, and separate the eyes from the bases of the tegmina. The tegmina have, in addition to a wide appendix, a supplementary appendix formed from the apical cubital cell; this cell is not pigmented. The apices of the hind femora rest just behind the eyes, and the hind tibiae, which are somewhat flattened, bear four rows of spines.

One species has previously been placed in this genus, *Trocnada dorsigera* Walker. *Albelterus incarnatus* Stål (*Öfv. Vet-Ak. Forh.* 22; p. 1, 1865) is synonymous with *T. dorsigera*.

***Trocnada gigantea*, sp. nov.**

(Plate IV, figs. 8a, 8b)

Length, 8.2 mm.

Head, width 3 mm., pale biscuit colour suffused with pink; ocelli colourless or red, eyes red.

Pronotum, pale biscuit colour, in some specimens suffused with pink. *Scutellum*, yellowish-pink. *Tegmen*, pink.

Thorax, ventral surface, and *legs*, biscuit colour partly suffused with pink. *Abdomen*, ventral surface, pale biscuit colour.

Type ♀, from Karoonda, South Australia, in the collection of the South Australian Museum.

***Trocnada minuta*, sp. nov.**

(Plate IV, fig. 9)

Length, 4.5 mm.

Head, width 1.8 mm., ochreous, ocelli pink.

Pronotum, reddish-brown. *Scutellum*, dark brown. *Tegmen*, hyaline brown, veins pinkish-brown.

Thorax and *abdomen*, ventral surface, and *legs*, ochreous brown.

Type ♂, from Canberra, F.C.T. (coll. J.W.E.), in the collection of the C.S.I.R. Division of Entomology at Canberra.

Tribe IDIOCERINI

This tribe contains two Australian genera. Of these, *Idiocerus* Lewis is of world-wide distribution, whilst *Pedioscopus* Kirk. is confined to Australia. Insects in these genera resemble *Austroagaloides* spp. in general appearance, but differ in the shape of the head, the venation of the tegmina, the presence of a broad appendix, the armature of the hind tibiae, and the structure of the male genitalia.

Genus **Idiocerus** Lewis*Trans. Ent. Soc. London* 1: p. 47, 1885

Fourteen species have previously been described from Australia: *cupreus* Walk. (*Bythoscopus*), (List Homopt. 111; 871, 1851); *ipso* Kirk. (*Bull. Hawaii. Sug. Ass. Ent.* 1 (9); 466, 1906), and *kisseis* Kirk., *oreias* Kirk., *orodemnias* Kirk., *zantho* Kirk., *hyleorais* Kirk., *cupido* Kirk., *napais* Kirk., *aulonias* Kirk., and *nercias* Kirk., (*H.S.P.A. Bull.* 3; pp. 32-4, 1907); *geoffroyi* Dist. (*Ann. Soc. Ent. Belg.* 52; 99, 1908); *leurenensis* Evans (*Trans. Roy. Soc. South Austr.* 58; p. 167, 1934).

A redescription of this genus has been published recently, so it will be sufficient to give here such characters as will serve to distinguish it from other genera described in this paper.

The head is slightly convex, and the ocelli lie more or less on the same plane as the clypeus. The dorsal margin of the frons is not distinct, and the ocelli appear to lie at the apices of the lateral margins of the frons. The eyes are large, and the crown of the head from above is broad and of equal breadth throughout, and the head, including the eyes, is wider than the pronotum at its base. The tegmina have very broad appendices, and there are never more than two sub-apical cells between the radius and the cubitus. The sub-genital plates of the male are usually long and narrow and the parameres short.

Idiocerus kirkaldyi, sp. nov.

(Plate IV, figs. 9b, 10b)

Length, 6.8 mm.

Head, width 2 mm., yellow suffused with pink, with two round black markings on the vertex close to the eyes; eyes chocolate-brown; clypeus wider anteriorly than at the base, frons almost flat.

Pronotum, yellow suffused with pink, with two black markings behind the eyes and close to the posterior border. *Scutellum*, marked with a pattern of black and pinkish-yellow. *Tegmen*, transparent, grey apically; veins pink, costal margin black.

Thorax and *abdomen*, ventral surface, pale yellow. *Legs*, marked with a pattern of pink, yellow, and brown.

Type ♀, from Leura, New South Wales (coll. J.W.E.), in the collection of the Australian Museum, Sydney.

Idiocerus seckeri, sp. nov.*Length*, 5.5 mm.

Head, width 2 mm., pale pinkish-yellow.

Pronotum, concolorous with the head. *Scutellum*, pinkish-brown. *Tegmen*, brown, hyaline, with two transparent white fasciæ; costal margin between the fasciæ, reddish-brown; veins pink.

Thorax, ventral surface, white with black markings. *Legs*, very pale yellow. *Abdomen*, ventral surface, black, each segment white posteriorly.

Type ♂, from Lucindale, South Australia (coll. F. Secker), in the collection of the South Australian Museum.

***Idiocerus inconsequens*, sp. nov.**

Length, 4.5 mm.

Head, width 1.2 mm., yellowish-green, eyes dark-brown, frons flat.

Pronotum and *scutellum*, yellowish-green. *Tegmen*, hyaline, yellowish-green.

Thorax and *abdomen*, ventral surface, and *legs*, yellowish-green; abdomen not nearly reaching posteriorly to the apex of the folded tegmina.

Type ♀, from Emerald, Victoria (coll. J.W.E.), in the collection of the Australian Museum, Sydney.

***Idiocerus divisus*, sp. nov.**

(Plate IV, fig. 19)

Length, 4 mm.

Head, width 1.2 mm., yellowish-pink, eyes dark brown, frons swollen.

Pronotum and *scutellum*, yellowish-pink. *Tegmen*, hyaline, yellowish-pink.

Thorax and *abdomen*, ventral surface, and *legs*, yellowish-pink; posterior margin of the last ventral abdominal segment in the female divided medianly.

Type ♀, from Bruce Rock, Western Australia (coll. F. Drummond), in the collection of the Australian Museum, Sydney.

***Idiocerus lesmurdiensis*, sp. nov.**

Length, 3 mm.

Head, width 1 mm., bright yellow, with a large oval pink area on the vertex.

Pronotum and *scutellum*, yellow. *Tegmen*, transparent, suffused with pale green; proximal costal margin white.

Thorax and *abdomen*, ventral surface, and *legs*, yellow; posterior margin of the last ventral abdominal segment in the female, straight; apex of abdomen nearly reaching to the tip of the folded tegmina.

Type ♀, from Lesmurdie, Western Australia (coll. F. Drummond), in the collection of the Australian Museum, Sydney.

Genus **Pedioscopus** Kirkaldy

H.S.P.A. Exp. Sta. Bull. 1 (9); p. 349, 1906

This genus, which comprises insects closely allied to *Idiocerus*, is apparently confined to Australia. The figures of *P. polydoros* Kirk. (Plate IV, 12, 12a, 12b) were drawn from the paratype. The venation is unusual, the median vein being distinct, and not fused basally with the radius. Kirkaldy described the following species: *philenor*, *polydoros*, and *agenor*. *P. agenor* is a synonym of *P. polydoros*.

CONCLUSION

It is hoped that when this series of papers is completed it will be possible to present a summary, giving a key to the families, sub-families, tribes, and genera dealt with, and at the same time to indicate the various evolutionary trends within the groups concerned. The present need is more material for study, since leaf-hoppers are usually passed over by collectors, and the material now available in Australian museums can represent only a very small proportion of the available fauna. Kirkaldy (1906), in commenting on the rich fauna of leaf-hoppers that must occur in Australia, pointed out that Koebele and Perkins collected for only a few months in the very places that an entomologist, not collecting for an economic purpose, would avoid on account of their barrenness. Yet their efforts produced nearly five hundred new species. The collection named by Kirkaldy was taken almost entirely in Queensland and the coastal districts of New South Wales. The bulk of the material that has been available to the present author was collected on the mountains and tablelands of New South Wales and in South Australia. The most interesting Jassoid fauna occurs in Western Australia, a region in which systematic collecting has never been undertaken.

ACKNOWLEDGEMENTS.

The systematist who is out of touch with libraries and museums is to a great extent dependent on those more fortunately placed if he is to make any real progress, and not merely to add to the confusion already existing. In this study of the Australian Jassoidea, I have been in constant correspondence with Mr. W. E. China, of the British Museum, who has never failed to assist me, and without whose aid this series of papers could never have been written. I am also indebted to Dr. O. H. Swezey, of Honolulu, for the loan of seventy-four of Kirkaldy's paratypes; to Professor H. B. Hungerford, for the gift of a large collection of named American Jassoidea, which have been invaluable for comparative purposes; and to the authorities in charge of the South Australian Museum, for permitting me to examine the collection in their care.

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EXPLANATION OF PLATES

PLATE II—

- Fig. 1a.—*Macropsis victoriensis*, head, ventral aspect.
- Fig. 1b.—*Macropsis victoriensis*, head and thorax, dorsal aspect.
- Fig. 1c.—*Macropsis victoriensis*, tegmen.
- Fig. 2.—*Macropsis occidentalis*, head and thorax, dorsal aspect.
- Fig. 3.—*Macropsis federalis*, head and thorax, dorsal aspect.
- Fig. 4.—*Macropsis filicis*, head and thorax, dorsal aspect.
- Fig. 5.—*Macropsis tasmaniensis*, head and thorax, dorsal aspect.
- Fig. 6.—*Macropsis luteus*, head and thorax, dorsal aspect.
- Fig. 7.—*Macropsis hobartensis*, head and thorax, dorsal aspect.
- Fig. 8.—*Macropsis lincolniensis*, head and thorax, dorsal aspect.
- Fig. 9.—*Macropsis flindersi*, head and thorax, dorsal aspect.
- Fig. 10.—*Macropsis wilsoni*, head and thorax, dorsal aspect.
- Fig. 11a.—*Oncopsis translucens*.
- Fig. 11b.—*Oncopsis translucens*, head, ventral aspect.
- Fig. 11c.—*Oncopsis translucens*, head and thorax, dorsal aspect.
- Fig. 11d.—*Oncopsis translucens*, tegmen.
- Fig. 11e.—*Oncopsis translucens*, hind tibia.
- Fig. 12a.—*Oncopsis subfuscus*, tegmen.
- Fig. 12b.—*Oncopsis subfuscus*, head and thorax, dorsal aspect.
- Fig. 13.—*Oncopsis scopulus*, head and thorax, dorsal aspect.
- Fig. 14.—*Oncopsis pullus*, head and thorax, dorsal aspect.
- Fig. 15.—*Oncopsis melleus*, head and thorax, dorsal aspect.
- Fig. 16.—*Oncopsis tepperi*, head and thorax in profile.

PLATE III—

- Fig. 1a.—*Austroagallia torrida*, tegmen.
- Fig. 1b.—*Austroagallia torrida*, head, ventral aspect.
- Fig. 1c.—*Austroagallia torrida*, head and thorax, dorsal aspect.
- Fig. 1d.—*Austroagallia torrida*, hind tibia.
- Fig. 1e.—*Austroagallia torrida*, male genitalia.
- Fig. 2a.—*Austroagalloides agalliae*, tegmen.
- Fig. 2b.—*Austroagalloides agalliae*, head, ventral aspect.
- Fig. 2c.—*Austroagalloides agalliae*, head and pronotum, dorsal aspect.
- Fig. 2d.—*Austroagalloides agalliae*, male genitalia.
- Fig. 3a.—*Austroagalloides brunnea*, head, ventral aspect.
- Fig. 3b.—*Austroagalloides brunnea*, head and pronotum, dorsal aspect.
- Fig. 4a.—*Austroagalloides rosea*, tegmen.
- Fig. 4b.—*Austroagalloides rosea*, head and pronotum, dorsal aspect.
- Fig. 5a.—*Austroagalloides grisea*, head and pronotum, dorsal aspect.
- Fig. 5b.—*Austroagalloides grisea*, hind tibia.
- Fig. 6.—*Austroagalloides karoondae*, head and pronotum, dorsal aspect.
- Fig. 7.—*Austroagalloides nigra*, head and pronotum, dorsal aspect.
- Fig. 8a.—*Austroagalloides wrighti*, dorsal aspect.
- Fig. 8b.—*Austroagalloides wrighti*, ventral aspect.

PLATE IV—

- Fig. 1a.—*Bythoscopus lanio*, tegmen.
- Fig. 1b.—*Bythoscopus lanio*, head in profile.
- Fig. 2a.—*Eurinoscopus elegans*.

- Fig. 2b.—*Eurinoscopus elegans*, tegmen.
Fig. 2c.—*Eurinoscopus elegans*, head and thorax in profile.
Fig. 2d.—*Eurinoscopus elegans*, head, ventral aspect.
Fig. 2e.—*Eurinoscopus elegans*, head and thorax, dorsal aspect.
Fig. 2f.—*Eurinoscopus elegans*, male genitalia.
Fig. 3a.—*Eurinoscopus pallidus*, head and thorax, dorsal aspect.
Fig. 3b.—*Eurinoscopus pallidus*, hind leg.
Fig. 4.—*Eurinoscopus citrinus*, head and thorax, dorsal aspect.
Fig. 5.—*Eurinoscopus viridis*, head and thorax, dorsal aspect.
Fig. 6.—*Chinaella argentata*.
Fig. 7.—*Chinaella cudmorei*, male genitalia.
Fig. 8a.—*Trocnada gigantea*, head and thorax in profile.
Fig. 8b.—*Trocnada gigantea*, hind tibia.
Fig. 9.—*Trocnada minuta*, head and pronotum, anterior aspect.
Fig. 9b.—*Idiocerus kirkaldyi*.
Fig. 10b.—*Idiocerus kirkaldyi*, hind tibia.
Fig. 11.—*Idiocerus divisus*, head, ventral aspect.
Fig. 12.—*Pedioscopus polydoros*, head, ventral aspect.
Fig. 12a.—*Pedioscopus polydoros*.
Fig. 12b.—*Pedioscopus polydoros*, tegmen.





