

ART. II.—*Heteropterous Hemiptera collected by Professor W. Baldwin Spencer during the Horn Expedition into Central Australia.*

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(Communicated by Professor W. Baldwin Spencer, F.R.S.)

Before the expedition to Central Australia, organized and equipped by Mr. Horn twenty years ago, no Hemiptera (and scarcely any insects at all) were known from those regions. The collections brought home by the expedition are therefore of unusual interest. The Hemiptera are not represented by a great number of species, nor could they be expected to be so, considering the aridity of the territory. More recently Central Australia has been visited by Mr. H. J. Hillier, whose collections are now in the British Museum. They were made east of Lake Eyre, whereas the Horn expedition explored the tracts west and north-west of this lake. Of the Hemiptera collected by Mr. Hillier some new species, mostly Pentatomidae (three of which were also found by the Horn expedition), have been described by Mr. Distant, but so far as I know he has not yet published any list of all the collected species.

Fam. THYREOCORIDAE.

1. ADRISA, sp.

Crown Point.

Allied to *A. mayri*, Sign., but probably distinct.

Fam. SCUTELLERIDAE.

2. CHOEROCORIS PAGANUS, Fabr.

Illamurta, James Range.

Fam. PENTATOMIDAE.

3. OECHALIA CONSOCIALIS, Boisd.

Stevenson River.

4. ONCOCORIS DESERTUS, n. sp.

Oval, pale ochraceous, beneath still paler, whitish, a small spot at outer basal angle of connexival segments and at base of acetabula, two small widely separated basal spots to fourth and fifth



ventral segments, spiracles, scattered dots to femora, and the stridulatory spicula of the hind femora brown, membrane pale greyish with whitish veins, last rostral joint, except base, pitchy black; above finely and sparsely punctured with brown but with impunctate areolets here and there, connexivum almost concolorously punctulate; beneath more palely and, on the venter, more finely and remotely punctulate, the latter with its middle part and lateral borders (as far as the spiracles) impunctate; at exterior end of pronotal cicatrical areas, behind interior part of these, at basal angles of scutellum, and in each pleura with a small cluster of dark fuscous punctures. Head slightly shorter than its breadth and than the pronotum in the middle, a little incised at apex between juga and clypeus, first antennal joint scarcely reaching apex of head, second a little longer than third which is pale ferruginous above toward the tip (last two joints wanting), rostrum slightly passing hind coxae. Pronotum  $2\frac{1}{4}$  times broader than long in the middle, lateral margins straight, only behind the apical angles a little sinuate, lateral angles obtuse, scarcely prominent. Scutellum with a small elevated impunctate callus at basal angles. Hemelytra somewhat passing apex of abdomen. Male genital segment with the apical margin sinuate in the middle and with the apical angles slightly callose. Length (excl. membrane), ♂ 8 mm.

Illamurta, James Range.

A very pale, finely punctured species, easily recognisable from the others.

N.B.—The genus *Kalkadoona*, Dist., from Central Australia, which Distant placed among the true Pentatominae, belongs to the division Platycoriaria of the subfamily Halyinae. It has the typical ventral stridulatory vittae of that group and is closely related to *Oncocoris*, Mayr. I saw the type of *Kalkadoona centrimaculata*, Dist., in the British Museum.

5. *ALCAEUS HERMANNsburgi*, Dist., Ann. Mag. Nat. Hist. (8) VI., 373 (1910) [*Muritha*]; Bergr., Ent. News. XXIII., 23 (1912).<sup>1</sup>

Crown Point; near Storm Creek; Charlotte Waters; Stevenson R.

#### 6. *EUMECOPUS SUPERBUS*, Dist.

Paisley Bluff, Macdonnell Range.

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<sup>1</sup> Bibliographical references are here appended only to the species not included in the "Catalogue des Hémiptères" of Lethierry and Severin or in Kirkaldy's Catalogue of the Pentatomidae.



7. *EUMECOPUS Y-NIGRUM*, n. sp.

Elliptical, ochraceous, above (excluding head) and on the pleurae and epipleurae rather densely but irregularly punctured with brown, the punctures placed in a network of dark ferruginous tortuous lines, three small basal spots to scutellum, the apical half of its postfrenal part, and a spot behind middle of corium impunctate or almost so, head above with four longitudinal brown or dark ferruginous bands, the inner ones of which are in their apical half (rarely throughout) longitudinally divided by ochraceous, and beneath on each side with three similar bands, the outermost being in its basal half (between eyes and base of antennae) broader and partly visible from above, scutellum with a large black **Y**-shaped marking reaching the middle of the postfrenal part where it occupies the whole breadth of the scutellum, the anterior branches of this figure exteriorly not quite reaching the lateral margins, anteriorly reaching the basal fourth of the scutellum, connexival segments with a transverse brown spot at base and apex, their apical angles ochraceous tipped with brown or entirely brown, membrane brownish, basal and outer borders black, the veins whitish grey, evaporative area of metapleurae greyish brown, abdomen beneath on each side with a broad purplish brown or dark fuscous band outwardly reaching a little beyond the spiracles and emitting a transverse fascia to the lateral margin along the basal and apical margins of the segments, the disk between the longitudinal bands sparingly punctured with brown and on the sixth segment usually with a brown median vitta, basal half of male genital segment dark brown or black, lobes of female genital segment more or less spotted with fuscous; antennae fuscous or blackish, the two first joints reddish brown, all or at least the last three joints at base and second joint at apex yellowish testaceous, rostrum and legs ochraceous, last joint of the former piceous, some streaks and spots to femora, more than apical half of tibiae and their whole upper lateral keels purplish brown, apex of last tarsal joint reddish. Head almost as long as the pronotum in the middle and as broad as long, the ochraceous parts impunctate, the dark vittae finely punctured, antennae five-jointed, first joint two-thirds the length of head and passing apex of head by more than its half, second subequal in length to first, somewhat nodosely dilated at base, third not quite twice the length of second and well separated from it by a distinct articulation, fourth slightly shorter than third, fifth a little longer than second, rostrum somewhat passing middle of



third ventral segment or (usually) reaching base of fourth. Pronotum with the somewhat sinuate lateral margins finely serrulated from apical angle to beyond middle, the short humeral spines directed outward. Hemelytra passing apex of abdomen. Abdomen beneath broadly but not deeply grooved from its base to apex of fifth segment; apical margin of male genital segment on each side with two subconical processes separated by a deep incision, the middle of the margin with a short triangular process preceded by two tubercles and not reaching the apex of the two acute convergent appendages which protrude from the interior of the segment; last female ventral segment at middle of apical margin and female genital lobes palely setose. Length (excl. membrane), ♂ ♀ 20—22 mm.

Var. : membrane whitish hyaline, its basal border brown.

Bagot's Creek ; Alice Springs ; River Finke near Horse-shoe Bend ; Stevenson R. ; Dalhouse Springs.

A very distinct species to be placed in Stål's group *d*. The males of this species are not smaller than the females.

#### 8. *EUMECOPUS HORNII*, n. sp.

Elliptical, ochraceous, six percurrent longitudinal punctulate stripes to upper side of head brownish ferruginous, lateral borders of pronotum (excluding extreme margins from apex to beyond middle), a percurrent median pronotal vitta, lateral areas of scutellum (except middle part of margins), a subangular vitta behind middle of mesocorium, and connexivum black, the latter with a few small subconfluent spots at base and apex of the segments, the lateral margins and apical angles ochraceous; membrane fuscous, basal and exterior borders black, the veins greyish white; pronotum, scutellum, and corium punctured with dark fuscous, more thickly and confluent so on pronotum and scutellum, pronotal cicatrical areas almost impunctate and emitting an impunctate streak to the apical margin, scutellum with an oblong callose spot near basal angles and a smaller basal median spot impunctate, the apical half of its postfrenal part very sparingly almost concolorously punctulate; head beneath on each side with three fuscous longitudinal bands, the outermost in its basal half broader and partly visible from above, the two inner ones narrow and composed of close-set punctures; pleurae and venter punctured with fuscous, the latter with the broad lateral borders (not quite reaching the spiracles) and three discal longitudinal bands impunctate, a per-



current sublateral ventral vitta, an oblong median spot to the sixth segment, and spots to the female genital lobes dark fuscous; antennae fuscous, irrorations to upper side of first joint and a rather narrow basal annulation to third joint ochraceous (fourth joint wanting); rostrum and legs ochraceous, last joint of the former black, numerous small round spots to femora mostly arranged in rows, and tibiae, except a median annulation, fuscous (hind legs wanting). Head one-fourth longer than broad and subequal in length to the pronotum in the middle, clypeus conspicuously surpassing apex of juga, first joint of antennae as long as antecocular part of head and passing its apex by about half its length, second joint more than twice the length of first, cylindrical, not at all incrassated in its basal part, third joint above one-third shorter than second, rostrum reaching middle of fifth ventral segment, second joint longer than third and fourth taken together. Pronotum with the lateral margins slightly sinuate in the middle, serrulate in their anterior half, the short humeral spines directed outwards. Scutellum with a foveolate impression in the basal angles. Hemelytra passing apex of abdomen by about one-third the length of the membrane. Abdomen beneath deeply grooved from its base to the apex of the fifth segment. Length (excl. membrane), ♀ 19 mm.

Alice Springs.

The antennae are incomplete in the type, but from the great length of the second joint there can be little doubt that they are four-jointed. The species is related to *E. armatus*, Fabr., but is at once distinguished by the structure of the antennae. It is not impossible that *E. calidus*, Stål (nec Walk.) belongs to *horni*.

9. *EUMECOPUS EYREI*, Dist. Mag. Nat. Hist. (8) VI., 378 (1910).

Crown Point; Illamurta, James Range; Finke River near Horse-shoe Bend; Stevenson R., Sullivan Creek.

Crown Point; Illamurta, James Range; Finke River near Bend; Stevenson River.

This species, which is known to me also from West Australia, is easily recognised from the good description, but it is not allied to *E. vittiventris*, Stål, as Distant says, belonging in fact to another group of the genus and coming very near *E. fuscescens*, Stål. The second antennal joint is somewhat variable in length, being sometimes, as in Distant's type, little more than one-third the length of the first joint, but usually at least one-half its length; the



fifth joint, which was lacking in the type, is a little shorter than the fourth and of the same colour. The male genital segment is similar to that of *E. fuscescens*.

10. *POECILOMETIS SPENCERI*, n. sp.

Suboval, ochraceous, four longitudinal stripes to upper side of head (the exterior ones narrowing in the anteocular part), an oblong spot behind middle of corium at apex of rimula, membrane (except the greyish white veins), a lateral vitta to head under the margin, a vitta in the anterior half of the propleurae, spiracles, a median streak to sixth ventral segment, and last joint of rostrum and of tarsi black, the first two antennal joints ochraceous sprinkled with small fuscous points, blackish on their outer side (except apex of second joint), third joint blackish excepting base and apex (last two joints wanting); above rather thickly and strongly but not uniformly punctured with black, the puncturation becoming denser in seven percurrent stripes on the pronotum (the three median ones parallel, the outermost placed immediately within the lateral margin), in the narrow basal part of the exocorium, and in an oblong area before middle of mesocorium close to the cubital vein, whereas an anteriorly three-branched scutellar vitta (posteriorly reaching a little beyond the frena), a narrow area interiorly bordering the rimula, a spot behind middle of mesocorium near cubital vein, and a somewhat waved vitta behind the rimula are but sparingly punctured, a percurrent median stripe to head, two stripes to vertex between the ocelli, a median line on anterior half of pronotum, the pronotal lateral and basal margins, a callus at basal angles of scutellum, anterior half of costal margin, apical margin and veins of corium, and exterior margin of connexivum impunctate; beneath less strongly and somewhat less thickly punctured with black, the puncturation getting thinner in the middle of the venter; femora and tibiae rather densely dotted with black. Head as long as broad and one-fourth shorter than the pronotum in the middle, first antennal joint as long as head and passing apex of head by about four-fifths its length, second joint somewhat shorter than first, third as long as first, rostrum reaching a little beyond base of abdomen. Pronotum with the slightly sinuate lateral margins bluntly crenulated in their apical third, the lateral angles subacutely a little prominent with a small sinuosity behind the angles. Hemelytra reaching a little beyond abdominal apex. Abdomen with apical angles of sixth segment shortly and acutely triangularly



produced backward, ventral furrow very distinct, reaching apex of fifth segment, but much shallower in fourth and fifth segments. Length, ♀ 18.5 mm.

Alice Springs.

In this very distinct species the apical angles of the sixth abdominal segment are shortly spinously produced as in the genus *Eumecopus*, but on account of the short head and the only subacutely prominent, not spinous, humeral angles it must be referred to *Poecilometis*, with which it also agrees in its general aspect.

#### 11. CEPHALOPLATUS NUBIFER, n. sp.

Oval, somewhat convex, about one-half longer than its greatest width, testaceous, paler beneath, a narrow impression at basal angles of scutellum and a spot at basal angles of connexival and ventral segments black, middle of sterna, a curved vitta to pleurae, spiracles, ventral sutures in the middle, and last rostral joint piceous, in specimens with well pronounced colouring a waved fuscous transverse line between pronotal humeral angles; membrane dull greyish with fuscous veins and spots; moderately thickly but somewhat irregularly punctured with fuscous, the laminately expanded lateral borders of the prothorax more remotely and coarsely punctate, connexivum very remotely punctured, a spot behind middle of corium, a rather narrow median vitta to venter, and ventral lateral borders impunctate, pronotum, scutellum, and corium with clusters of thick-set punctures, four of these clusters placed in a transverse row before middle of pronotum, four at basal margin of scutellum, one at scutellar lateral margins before their middle, and three in the corium placed successively, the hindmost at the apical margin; almost the whole front femora, apical part of middle and hind femora, and upper side of all tibiae sprinkled with round fuscous spots. Head as broad as long, a little incised at apex, lateral margins in front of eyes with an angular prominence directed outwards, then rounded, juga contiguous in front of clypeus, rather narrowly rounded at apex, second antennal joint a little passing apex of head, with an obscure dark annulation before the tip (last three joints wanting). Pronotum in the middle as long as head, apical angles subacutely produced forwards, reaching (in the normal position of the head) a little beyond anterior margin of eyes, lateral margins scarcely or very minutely crenulated, slightly sinuate behind middle and with a small indentation immediately behind apical angle, lateral angles obtuse, a little prominent. Scutellum somewhat granulated (more distinctly so



when seen in profile), laterally distinctly sinuate behind middle, postfrenal part but slightly narrowing from its base and as broad as long, comparatively broadly rounded at apex. Hemelytra almost or quite reaching apex of abdomen, costal margin of corium obscurely crenulate in its basal part, membrane rather small, half the length of corium. Abdomen with the apical angles of the segments bluntly prominent, male genital segment with the apical margin obtusangularly sinuate, its apical angles slightly prominent. Length, ♂ 9.5—10 mm.

Macdonnell Range; Alice Springs.

Not closely allied to any previously described species. I have also seen an undetermined specimen of it in the British Museum.

N.B.—In the males of *Cephaloplatus*, which were unknown to Stål, the sixth ventral segment is rounded at the base, not angular as in the allied genus *Dictyotus*, Dall.

#### HYPOLCUS, n. gen.

Body oval, somewhat depressed. Head about as broad as long and almost as long as pronotum in the middle, a little convex, lateral margins subacutely narrowly carinated, rotundately angular, scarcely or very slightly sinuate behind middle, clypeus parallel in its basal half, then narrowing toward the tip, juga a little longer than clypeus, but neither meeting nor convergent in front of it, subacute at apex, ocelli about three times more distant from each other than from the eyes which are rather small but prominent, touching apical margin of pronotum (in the normal position of the head), narrowly oval when seen obliquely from before, their vertical diameter being much longer than the horizontal, interocular space over four times broader than an eye, antenniferous tubercles small, not visible from above, antennae five-jointed, first joint very short, little more than twice longer than broad, the three following joints on the whole subequal in length though somewhat variable in this respect, second not quite reaching apex of head, fifth a little longer than fourth, the four last joints successively increasing in thickness, bucculae low, percurrent, neither amplified nor angular at anterior end, rostrum reaching beyond hind coxae, first joint slightly passing bucculae, second shorter than the last two together, third shorter than second but longer than fourth. Pronotum with the apical margin neither elevated nor levigate, rather deeply arcuately sinuate behind interocular space of head, truncate behind eyes, lateral margins not or very obscurely crenulated, not reflexed but laminately dilated, gradually more widely so toward the apical



angles which are produced forward in a subtriangular, apically subtruncate lobe almost reaching or slightly passing the level of the anterior margin of the eyes, lateral angles subrotundate or obscurely notched, not prominent, postero-lateral and basal margins straight. Scutellum a little longer than broad and about as long as pronotum and head together, with a small levigate callus near basal angles, lateral margins a little sinuate almost in the middle, frena scarcely passing middle of scutellum, the postfrenal part of which is a little longer than broad, gradually somewhat narrowing from its base to the rounded apex. Hemelytra slightly passing apex of abdomen, rimula reaching far beyond middle of corium, the apical margin of which is straight or very slightly sinuate before apical angle, membrane with simple veins. Sterna longitudinally grooved in the middle; metasternal orificia not produced in a fold or furrow. Abdomen beneath furrowed in the middle, unarmed at base, apical angles of the segments scarcely prominent. Tibiae above flattened and margined.

Allied to *Lubentius*, Stål, from which it differs in the structure of the head and pronotum.

## 12. *HYPOLCUS APRICUS*, n. sp.

Above black or dark fuscous, thickly punctured, the dilated lateral borders of the pronotum, the calli at the basal angles of the scutellum, a small basal median spot to it, a semicircular concolorously punctate spot occupying its apex, base of exocorium, a spot behind middle of corium at apex of rimula, several mottlings to pronotum, scutellum, and corium, basal and lateral borders to abdominal tergum, connexivum from its base to beyond middle of second segment, and an interiorly rounded median lateral spot to the remaining connexival segments ochraceous; beneath testaceous, a spot at basal and apical angles of ventral segments, spiracles, and an interior apical spot to female genital basal lobes fuscous or pitchy black, pectus moderately densely and rather strongly punctured with fuscous, head and venter more finely and, especially in the male, thickly punctulate with fuscous, rather roughly or granularly so on venter owing to the anterior margin of the small points being elevated, an interiorly rounded lateral spot (smaller but more sharply defined in the male) to ventral segments without the fuscous puncturation; antennae black, first joint and usually the articulations (very narrowly) of the other joints testaceous; rostrum and legs testaceous, the former darkened at apex, two usually broad and subconfluent annulations to apical half of



femora, a subbasal and broad apical annulation to tibiae, and the tarsi fuscous. Rostrum reaching middle of third ventral segment. Pronotum with the lateral margins almost straight. Ventral furrow deep from its base to apex of fourth segment, narrow and very shallow in the last two segments; male genital segment with a triangular median impression, apical margin sinuate in the middle. Length (excl. membrane), ♂ 8.5—9 mm., ♀ 9.5—10 mm.

Crown Point; Finke River near Horse-shoe Bend; Dalhousie Springs. Idracowra.

13. *TURRUBULANA PLANA*, Dist. Ann. Mag. Nat. Hist. (8) VI., 386 (1910); Bergr., Ent. News XXIII., 25 (1912).

Stevenson River.

In the above quoted paper I have made some remarks on the characters and systematic position of this insect. It has a superficial resemblance to a miniature *Atelocera* (near which Distant placed it), but there is no real relationship between these two genera.

The monotypic genera *Lubentius*, *Hypolcus*, and *Turrubulana* form a well defined little group not represented outside the Australian continent. They may be distinguished as indicated below.

1 (4) Head about as long as broad, not longer than pronotum in the middle, anteocular part moderately narrowing from base to apex, laterally more or less distinctly unisinate. Apical margin of pronotum neither levigate nor elevated

2 (3) Head rounded at apex owing to juga and clypeus being equal in length; bucculae rather high. Lateral margins of pronotum narrowly depressed throughout, at apex with a short blunt tooth directed outwards - - *Lubentius*, Stål.

3 (2) Head shortly bicuspidate at apex owing to juga being longer than clypeus; bucculae low. Lateral margins of pronotum rather broadly laminately depressed, gradually more broadly so toward the apex, which is subtriangularly lobately produced forwards to about the level of anterior margin of eyes - - *Hypolcus*, Bergr.

4 (1) Head one-half longer than broad and longer than pronotum in the middle, anteocular part strongly narrowing from base to apex, laterally bisinuate. Apical margin of pronotum levigate and subelevated behind interocellar space of head. Lateral margins of pronotum as in *Lubentius* - - - *Turrubulana*, Dist.



Distant has described an Australian genus *Pseudaelia* which he says is allied to *Lubentius*, but from its characters—especially the structure of the rostrum and abdomen—it is evident that it is only distantly related to this genus and cannot be placed in the same group.

#### 14. PIEZODORUS RUBROFASCIATUS, Fabr.

Alice Springs.

##### PETALASPIS, n. gen.

Body obovate, convex before middle, the head and the anterior part of pronotum being rather strongly declivous in the same plane. Head a little broader than long, narrowing toward the rounded apex, laterally moderately sinuate, clypeus scarcely longer than juga, subparallel, eyes rather large but not much projecting, ocelli four times more distant from each other than from eyes, antenniferous tubercles partly visible from above, antennae five-jointed, first joint not reaching apex of head, bucculae percurrent, rostrum somewhat passing hind coxae, first joint as long as bucculae, second scarcely longer than third, fourth slightly shorter than third. Pronotum at apex as broad as head, the area between the non-elevated apical margin and the cicatrical areas still more thickly and finely punctulate than the remainder of the disk, lateral margins obtuse, broadly and slightly sinuate, humeral angles a little prominent, right-angled, postero-lateral margins sinuate before base of corium, basal margin rather deeply sinuate. Scutellum with straight lateral margins and frena reaching far

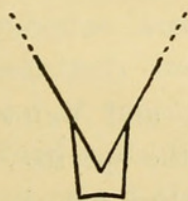


Fig. 1.

beyond its middle, acute at apex but with a laminate appendage horizontally projecting on each side from under the apical part; this appendage beginning immediately behind the frena, slightly narrowed from the base to its subtruncate apex and extending backwards beyond the true apex of the scutellum (cf. fig. 1). Hemelytra but little passing apex of abdomen, corium with slightly rounded

apical margin, membrane with numerous simple veins. Metasternum with a robust median ridge raised above the level of the coxae, sinuate posteriorly for reception of the ventral basal tubercle, and continued forwards to apex of prosternum, being narrower but roundedly more raised under the prosternum and obliquely subtruncate at apex. Abdomen beneath ( $\sigma$ ) roof-shaped, armed at base with an acute tubercle directed forwards, apical angles of the



segments acutely a little prominent, each of the two male genital segments visible from below. Tibiae cylindrical, not sulcate above.

By the remarkable structure of the scutellum and other characters closely allied to *Vitellus*, Stål, but the pronotal humeral angles are not produced in a spinous process, the sternal keel is much shorter, and the scutellar apical appendage is larger and differently shaped. As in *Vitellus* this appendage is not visible when the hemelytra are closed.

#### 15. PETALASFIS TESCORUM, n. sp.

Straw-coloured, finely and rather thickly almost concolorously punctate, cicatrical areas and a longitudinal median line of pronotum, and scutellar apical appendage impunctate, an apical dot to clavus black, membrane (including veins) vitreous, centre of mesosternum (except the ridge) orange, apical margin of last dorsal segment and of last connexival segment above and beneath, and male internal genital appendages dark sanguineous. Second antennal joint not quite twice the length of first, third as long as second and somewhat shorter than fourth (fifth wanting). Sternal keel in the middle of its prosternal part very thin, translucent and almost vitreous. Sixth male ventral segment in the middle slightly longer than the two preceding segments together; first male genital segment short with subtruncate apical margin, second genital segment longitudinally bluntly ridged in the middle, on the sides with a transversely oval impression, apical margin sinuate but in the middle with a short narrow parallel process forming a continuation of the median ridge. Length, ♂ 9.5 mm.

Stevenson River.

#### 16. ROEBOURNEA DIVERSA, Dist.

Tempe Downs, Macdonnell Ranges.

Distant placed this insect in *Basicryptus*, H. Sch., and Van Duzee, who gave a very good description of it under the specific name *tumidifrons*, placed it with a reservation in the genus *Phyllocephala* Lap. It belongs to a very distinct genus described by Schouteden under the above name. Van Duzee mentions only one fuscous vitta on either side of the venter, but normally there are two such vittae on each side. In the larvae, which have four-jointed antennae, the head and pronotum are constructed much as in the *imagines*, and they are also similarly coloured, but the pronotum has a very distinct black transverse median spot which is acutely indented laterally, and the abdomen has above and beneath a prominent black transverse spot at the middle of the lateral



borders of each segment; there is also a rounded black spot in the middle of the last four ventral segments, and the disk of the venter is remotely punctured with fuscous without the papillate sculpture of the *imago*.

To the many specimens collected at the above locality is appended a label to the effect that this species is "living at the base of the stalks and amongst 'Porcupine grass' (*Triodia pungens*)."

Fam. COREIDAE.

17. MICTIS PROFANA, Fabr.

Sullivan Creek.

18. AMORBUS ALTERNATUS, Dall.

Palm Creek.

19. AULACOSTERNUM PUNCTIPES, Stål.

Illara, James Range.

20. LEPTOCORIS MITELLATUS, n. sp.

Red, pronotum rarely tinged with ochraceous, a large quadrate median spot on vertex more or less extended forwards over clypeus and juga, the pronotal calli, scutellum, a large transverse spot in anterior part of pleurae, two ventral patches, one on each side, extended from base of fourth to near middle of sixth segment and connected with each other along apical margin of fourth and fifth segments, antennae, rostrum, and legs black, hemelytra fuscous, clavus and corium more or less tinted with reddish and with a prominent obliquely transverse red spot occupying apex of endocorium and extended a little over interior basal angle of membrane, bucculae, acetabula, anterior margin of prosternum, spiracles, and (narrowly and more or less distinctly) posterior margin of pleurae and of ventral segments and lateral margins of abdomen whitish. Head with the juga slightly shorter than the clypeus and apically not raised above it, the low and blunt oblique anteocular elevations and the postocular calli with short and rather stiff black hairs, rostrum somewhat variable in length, reaching base of second or third ventral segment. Pronotum thickly but extremely finely subrugulose punctulate, darkly pilose at the lateral margins and sparsely but more longly so on the collar which is but slightly convex, broader in the middle than at the sides, and not raised above the level of the calli, the disk with a median keel beginning between the calli and evanescent toward the middle or base, the lateral margins straight or slightly sinuate before middle, sub-



carinate, very narrowly if at all reflexed, scarcely indented at the ends of the transverse impression posteriorly terminating the collar. Scutellum indistinctly punctate. Hemelytra somewhat passing apex of abdomen, corium and clavus very finely alutaceous, scarcely punctate at all, clothed with a very short and fine decumbent pale sericeous pubescence, membrane dull. Pleurae impunctate, sericeously pubescent. Abdomen beneath with the dispersed puncturation almost imperceptible except in the two black patches where it is more distinct, middle of ventral disk rather longly palely pilose; second male genital segment with its median apical part almost vertically ascending, viewed from behind with a round impression on each side of the middle, the apical margin unisinate, the apical angles conically produced straight backwards, the three appendages protruding from the interior of the segment pale testaceous, the middle one shorter than the others, narrowly triangular, acuminate at apex, the lateral ones with a small tubercle beneath at their base, viewed from below parallel from base to middle, where the outer margin is angularly bent, being oblique in its apical half; seen from the side the apical half of the lateral appendages is curved with the convexity upward. Length (excl. membrane), ♂ 10 mm., ♀ 10.5—11.8 mm.

Near Glen Helen, Macdonnell Range; Illamurta, James Range.

Belongs to the same group as *L. fimbriatus*, Dall. (the only Australian species hitherto known), but it is little more than half the size of that species, and the coloration both above and beneath is totally different, excepting the head which is similarly coloured.

## 21. LEPTOCORIS VULGARIS, n. sp.

Brick-red, pronotum (except calli and lateral margins), scutellum, clavus, corium, and in some specimens also middle of vertex slightly infuscated, a subapical fascia to prosternum, all acetabula, posterior part of pleurae, an apical laterally abbreviated mostly narrow fascia to the last three or four (rarely all) ventral segments, antennae, rostrum, and legs (excluding coxae) dark fuscous or blackish, membrane fuscous with an olivaceous tint. apical margin of prosternum and acetabula, and often also extreme posterior margin of pleurae whitish. Head with the oblique anteocular elevations rather narrow and well pronounced, juga slightly shorter than clypeus and apically not raised above it, rostrum variable in length, reaching base of second or apex of third ventral segment. Pronotum thickly and finely punctate, shortly palely pilose at the



lateral margins and on the collar which is distinctly convex and raised above the level of the calli, the disk with a median keel running from between the calli backwards and becoming very fine or evanescent toward the base, the lateral margins almost straight, narrowly depressed and a little reflexed, distinctly angularly indented at the ends of the transverse impression posteriorly terminating the collar. Scutellum scarcely punctate. Hemelytra passing apex of abdomen, corium and clavus thickly and very finely punctured, their sericeous pubescence rather indistinct owing to its extreme shortness, membrane dull. Pleurae very finely rugulose and thinly sericeous. Abdomen beneath almost impunctate, rather shortly and thinly pilose; second male genital segment with its median part obliquely ascending without impressions, apical margin bisinuate, apical angles subconically produced obliquely backwards, distinctly divergent, the three appendages protruding from the interior of the segment pale testaceous, the middle one shaped as in *L. mitellatus*, the lateral ones viewed from beneath parallel, viewed obliquely from below with a small tubercle near the outer margin beyond its middle, the space between the tubercle and the apex curved with the convexity upward. Length (excl. membrane), ♂ 8—9 mm., ♀ 9—10 mm.

Bagot's Creek; near Glen Helen, Macdonnell Range; near Dalhousie Springs. Illamurta, James Range.

Allied to the preceding species, but readily distinguished, apart from the smaller size and quite different colouring, by more distinctly punctured upper side, narrower and more raised anteocular ridges, more distinctly depressed and reflexed pronotal lateral margins with their distinct subapical indentation, more raised and convex pronotal collar, shorter and paler pilosity on the pronotal lateral margins and collar, less distinctly sericeous corium, shorter ventral pilosity, and differently constructed second male genital segment. It was apparently the commonest of the Heteroptera met with during the Horn expedition; very numerous specimens were collected, especially near Glen Helen.

#### Fam. MYODOCHIDAE.

##### 22. *SPILOSTETHUS PACIFICUS*, Boisd.

Ayer's Rock, on *Wahlenbergia gracilis*.

##### 23. *SPILOSTETHUS MACTANS*, Stål.

Dalhousie Springs.



24. *GERMALUS SEXLINEATUS*, n. sp.

Dull, pale dingy ochraceous including antennae, rostrum, and legs, a dot on upper side of antenniferous tubercles, two dots (one on a level with the other) on upper side of first antennal joint, and one dot on under side of this joint black, a streak between the exterior upper dot of first antennal joint and the tip of the joint, a small spot near humeral angles of pronotum, apical angle of clavus and of corium, a spot at apical margin of connexival segments, and on the abdominal tergum three narrow vittae to the penultimate segment, a narrow fascia connecting the posterior ends of these vittae, and a broad median vitta to the last dorsal and the male genital segment fuscous, these abdominal markings tolerably well visible through the translucent membrane, a slightly oblique longitudinal line on each side of vertex and six percurrent narrow vittae on pronotum rusty red, three or four slightly infuscated sublateral spots to each ventral segment, femora sparsely dotted with black, except front side of fore femora. Head a little over two times broader than long and slightly broader than base of pronotum, impunctate, with an oblique impressed line between ocelli and base of ocular peduncle, this peduncle directed outwards and a little backwards, its anterior margin very short, less than one-third the width of an eye, whereas its posterior margin is much longer and almost but not quite touching latero-anterior margin of pronotum, eyes viewed from above slightly more than twice longer than broad, ocelli not quite twice more apart from each other than from the nearest point of the eyes, the distance between the ocelli being as long as between them and the posterior angle of the eyes, antennae a little longer than head and pronotum together, second joint twice the length of first, third one-third shorter than second, fourth subequal in length to third, bucculae slightly passing apex of antenniferous tubercles, rostrum reaching middle of intermediate coxae, first two joints subequal in length, third a little shorter than second and equal to fourth. Pronotum one-half broader than its median length, slightly narrowing from base to apex, sparsely and finely punctured with brown, a transverse postapical fascia not reaching lateral margins and the basal border impunctate, the two median reddish vittae nearer to each other than to the following pair, apical margin straight in the middle, obliquely truncate behind the ocular peduncle of the head, lateral margins almost straight. Scutellum as long as broad and one-third shorter than pronotum in the middle, finely and rather thickly punctured with fuscous, but with the usual



triradiate impunctate elevation. Breast finely and rather thickly punctate with blackish on the propleurae, with pale brownish on the meso- and metapleurae. Hemelytra (♂) reaching a little beyond apex of abdomen, corium with three percurrent rows of very small thick-set brown punctures, first row in its basal third running near the costal margin, then gradually somewhat deviating from it, second row placed in the middle, third near the claval suture and continued from its apex along apical margin of corium to apex of first row, clavus parallel in its basal third, then a little widening toward the commissure which is a little longer than half the length of the scutellum, with two rows of punctures similar to those of the corium, one along basal half of outer margin, the other along the commissure and continued a little way along the inner margin, basal part of clavus moreover with some extremely fine almost colourless punctures partly forming a row, corium and clavus for the rest impunctate. Abdomen impunctate, third, fourth, and fifth connexival segments partially exposed, extending a little beyond the costal margin of the closed hemelytra; male genital segment semi-circular, beneath with a small round pit a little before apex. Length, ♂ 4.7 mm., incl. membrane, 5 mm.

Stevenson River.

Allied to *G. roseobistriatus*, Kirk. (by its describer wrongly referred to the genus *Geocoris*), but with the head broader as compared to the pronotum, different colouring of the head, scutellum, and abdomen, etc.

N.B.—Montandon has separated from *Germalus* a species from New Caledonia as belonging to a distinct genus, *Neogermalus*. The only difference is that in *Neogermalus* the ocular peduncle has the anterior margin shorter and the posterior margin more approaching or even contiguous to the latero-anterior margin of the pronotum, and that the eyes therefore are more oblique. The length and direction of the ocular peduncle are, however, very inconstant in the genus *Germalus*, and some of its described species certainly form distinct and gradual transitions from species with longer ocular peduncle directed a little forwards to such with shorter peduncle directed more or less backwards. In my opinion generic characters cannot, either in *Germalus* or in *Geocoris*, be taken from the shape and direction of the ocular peduncles. The more new species are detected, the more numerous the transitions become. The same is true of the size of the scutellum. It therefore seems to me that *Neogermalus* cannot be ranked as even subgenerically distinct from *Germalus*. Montandon holds *Ophthalmicus*



*membraneus*, Montr., as the type of *Neogermalus*, but I think there can be no doubt that the insect described by him under that name is quite distinct from Montrouzier's species. Montrouzier says in his description: "dessus du corps brun-foncé ou même noir," and the length of his species is 5.5 mm., whereas all species of *Germalus* are very pale in colour, and the length of the species described as *membraneus* by Montandon is 4.3—5 mm. There is nothing in Montrouzier's short description indicating that he had a *Germalus* before him, and his species belongs in all likelihood to the genus *Geocoris*. Being a *nomen false citatum*, Montandon's *membraneus* cannot according to the nomenclatural rules be maintained, and I propose for this species the name *Germalus montandoni*.—Under the specific name *dissidens* Montandon has described, as questionably belonging to *Germalus*, a species with black head, pronotum, and scutellum; but this species differs from *Germalus*, apart from the colour, by the structure of the metasternal orificia, which is always of great systematic importance and never variable to any great extent in the same genus. It clearly belongs to a distinct genus which may be briefly characterised thus:

*Nesogermalus*, n. gen.—Antenniferous tubercles on the outer side armed with a tooth. Metasternal orificia constructed as in *Geocoris*, subrotundate, callosely margined, not produced in a ridge. Other characters as in *Germalus*, Stål.—Type: *Germalus* ? *dissidens*, Mont.

#### 25. STENOPHYELLA SABULICOLA, n. sp.

Whitish testaceous, head with a black lateral spot behind the eyes, tergum of abdomen with two percurrent black vittae well visible through the pellucid hemelytra but in the dorsal genital segment resolved into small subconfluent black points, mesosternum in the middle with two pale brown vittae and between them with a narrow impressed percurrent median blackish vitta continued, though not impressed, through the metasternum; thickly and finely punctured, corium and clavus more coarsely and subseriately punctate, abdomen beneath extremely finely, almost imperceptibly punctulate, the puncturation concolorous with the following exceptions: a cluster of black points on outer side of antenniferous tubercles and in the middle of the two brownish mesosternal vittae, a longitudinal band composed of black points near anterior half of pronotal lateral margins and somewhat within lateral margins of venter from its base to apical margin of fifth segment. Head slightly shorter than pronotum in the middle, and with the eyes but slightly promi-



nent beyond pronotal apical angles, vertex three times broader than an eye, with an impressed longitudinal line on each side extended from near the ocelli to the level of anterior end of eyes, first two antennal joints on their outer side studded with very small black granules, rostrum reaching a little beyond front coxae, first joint not quite reaching anterior margin of eyes, second as long as first, reaching anterior margin of prosternum, third and fourth together slightly longer than second, of equal length, apical half of fourth joint black. Pronotum as broad as long and two-thirds broader at base than at apex, lateral margins straight, basal margin a little rounded between its lateral lobules. Scutellum equilaterally triangular, with a percurrent narrow smooth median ridge. Orificia short, curved, callosely margined, apically lobulately subprominent. Hemelytra reaching somewhat beyond base of female dorsal genital segment, inner half of mesocorium quite hyaline and impunctate, only with a row of punctures along the cubital vein, apical margin of corium straight with a small obtusangular sinuosity near apex of clavus and a very slight and short sinuosity a little before middle, clavus with a single row of punctures between the vein and the suture, which is shorter than apical margin of corium, claval commissure slightly shorter than scutellum, veins of membrane straight and simple. Abdomen in the female with the last dorsal segment rather deeply arcuately sinuate at apex, in the middle only half the length of the preceding segment, female dorsal genital segment more than twice the length of last dorsal segment, produced beyond the ventral genital segments, tapering toward the apex which is rather deeply but narrowly cleft, fifth ventral segment (♀) in the middle sinuate to the very base for reception of the sixth segment. (Last antennal joint and fore and hind legs wanting in the type). Length, ♀ 7.5 mm.

Stevenson River.

Differs from *S. macreta*, Horv. (the only other known species of the genus) by its larger size and by having the eyes narrower and less prominent, the rostrum (especially its second joint) shorter, the scutellum medially keeled, the mesocorium hyaline only in its inner half, the black punctures of the head and pronotum differently distributed, etc. If the specimen described by Horváth really be a male, the apex of the abdomen is bifid in both sexes of this genus.

26. *DIEUCHES*, n. sp.

Bagot's Creek.

A single mutilated specimen, unfit for description.



## Fam. REDUVIIDAE.

## 27. POECILOBDALLUS FORMOSUS, Stål.

Bagot's Creek ; Tempe Downs.

The colour of the upper side of the head is in some specimens as described by Stål, but usually it is black, excluding the part situated before the antennae, which is red with the clypeus blackish ; the postocular part has above a yellow median line. The abdomen, which was lacking in the single type-specimen described nearly 60 years ago, is black with the broad, rather strongly rounded connexivum from its base to the middle of the sixth segment above and beneath, and a median ventral spot of very variable size red ; this ventral spot sometimes small, placed at base of third segment, sometimes large, reaching from apex of second to near apex of fifth segment.

## 28. HAVINTHUS LONGICEPS, Stål.

Finke River near Bend ; Dalhousie Springs. Idracowra. Illamurta.

This species is extremely variable in colouring and in the development of the granulation, and it is hardly possible to describe its varieties as they are connected by numerous transitional links.

## 29. ONCOCEPHALUS CONFUSUS, Reut.

Bagot's Creek.

## Fam. VELIADAE.

## 30. MICROVELIA AUSTRALICA, n. sp.

Oblong, black with a cinereous bloom, a transverse apical spot to pronotum and the margin of its produced posterior part, connexivum (except extreme lateral margin and segmental sutures), lateral borders of venter, and an apical spot to last ventral segment luteous, a longitudinal line to pronotum velvet-black, acetabula and legs testaceous, the latter here and there infuscated. Head as long as broad, rostrum scarcely passing prosternum, dark testaceous, last joint piceous, antennae blackish, first two joints, except apices, dark testaceous, second joint as long as first, third a little longer than second, fourth the longest, slender. Pronotum rugulosely punctate behind the middle, lateral angles obtusely a little prominent. Hemelytra whitish, all veins and a vitta to the median discal area fuscous. Wings lacteous. Hind legs distinctly longer than middle legs ; intermediate tibiae shorter than femora,



posterior tibiae as long as femora and trochanters together. Length, 2 mm.

Palm Creek.

This is the first *Microvelia* recorded from Australia.

Fam. NEPIDAE.

31. LACCOTREPES TRISTIS, Stål. Oefv. Vet. Ak. Foerh. XI., 241 (1854); Freg. Eugenes resa, Ins. III., 266 (1859); Ferrari, Ann. Hofmus. Wien III., 186 (1888).

Bagot's Creek; Alice Springs.





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