

from the Watson tradition with its superfluous splitting, and brings many of the names into line with those used on the Continent, although some anomalies remain, for example, *Aspicilia* is better regarded as a Section of *Lecanora*, *Psora* belongs to *Lecidea*, *Squamaria crassa* is now *Squamarina crassa*, *Squamaria gelida* is *Placopsis gelida* and *Squamaria muralis* is *Lecanora muralis*. *Lepraria* and *Crocynia* are quite unrelated and *Lepraria* belongs to the imperfect lichens (*Fungi Imperfecti*) and not to the *Ectolechiales*. Page 63 states that there is only one British species of *Candelariella*, but really there are six, three being common and widely distributed; moreover it would be more correct to describe *C. vitellina* as being less common on limy substrata rather than as "not usually" growing in such places. *Icmadophila ericetorum* is described as being C+red but in fact the thallus gives no reaction with calcium hypochlorite. *Pannaria rubiginosa* var. *conoplea* is described as a "frequent form", but in reality belongs to a distinct species called *Pannaria pityrea*.

The book gives little information about the ecology of lichens, which is surprising since both authors are noted for their ecological studies. Atmospheric pollution by smoke is mentioned on several occasions, but there is no direct reference to many species and even whole genera being nitrophilous, and therefore almost confined to habitats affected by the proximity of animal excreta. Sometimes the information on distribution is not strictly correct, e.g. *Parmelia caperata* "abundant... only in regions where there is no atmospheric pollution," and *P. sulcata* and *P. borveri* occurring "especially in the west". However, on the whole the book is fairly accurate and, apart from arrangement, up to date. It is attractive in typography, lay out and price. The publication should help to ensure that lichenology is no longer a neglected subject.

[J. R. LAUNDON.]

China, 1963 (1962)

Ann. Mag. Nat. Hist.

(13) 5: 705-723

on computer

Catalogued

HEMIPTERA-HETEROPTERA COLLECTED BY THE ROYAL SOCIETY EXPEDITION TO SOUTH CHILE 1958-1959.

By W. E. CHINA,

British Museum (Natural History), London.

THE Hemiptera of the Royal Society Expedition 1958-1959 were mainly collected by Dr. G. Kuschel and Dr. Martin Holdgate. The Lygaeidae were sent for identification to Dr. Scudder of the University of British Columbia, the Cicadelloidea to Dr. J. W. Evans, Director of the Australian Museum, Sydney, and the Fulgoroidea to Mr. R. G. Fennah, Assistant Director of the Commonwealth Institute of Entomology, London. The Peloridiidae have been worked out already by the writer (China 1962) leaving the remainder which I propose to deal with in the present paper.

Family Pentatomidae.

Subfamily ACANTHOSOMATINAE Stål, 1864.

*Planois bimaculatus* Signoret.

Signoret, 1863, Révision des Hémiptérés du Chili, *Ann. Soc. ent. France* (4) 3: 551; Pl. 11, fig. 2.

Chiloé Is., Chepu, six specimens 11-30. x. 1958, Roy. Soc. Exped. (*G. Kuschel* Coll.);

Wellington Is., Puerto Eden, one specimen 30. xi. 1958, Roy. Soc. Exped. (*G. Kuschel* Coll.);

Puerto Eden, one nymph 5. xii. 1958 (forest) Roy. Soc. Exped. (*G. Kuschel* Coll.).

Described by Signoret from Chile.

*Sinopla perpunctatus* Signoret.

Signoret, 1863, *loc. cit.*: 552 pl. 12, fig. 16.

Navarino Is., Puerto Williams, one male 20. i. 1959, Roy. Soc. Exped. (*G. Kuschel* Coll.);

Isla Bertrand, *Nothofagus* Forest, 55° S, 200 ft., one male 3. ii. 1959, Roy. Soc. Exped. (*M. Holdgate* Coll., Sta. H.W. 23).

Recorded only S. Chile.

*Ditomotarsus gayi* Spinola.

Spinola 1852, in *Gay Hist. Chile, Zool.* 7: 127, pl. 1 fig. 8.

Wellington Is., Puerto Eden, three males and four females 5. xi. 1958, on *Senecio smithii*, Roy. Soc. Exped. (*G. Kuschel* Coll.);

*A.M.N.H.* ser. 13, vol. v.

- Navarino Is., Puerto Williams, six males and seven females 10. i. 1959, on *Senecio smithii*, Roy. Soc. Exped. (*G. Kuschel* Coll.);  
 Chiloe Is., Chepu, five males 23. x. 1958 Roy. Soc. Exped. (*G. Kuschel* Coll.);  
 Chiloe Is., Chepu, 42° S, 30 ft., one male 11. x. 1958, Secondary scrub, Roy. Soc. Exped. (*M. Holdgate* Coll., Stat. H.C. 12);  
 Chiloe Is., Chepu, 42° S, 30 ft., one male 13. x. 58, Secondary scrub, Roy. Soc. Exped. (*M. Holdgate* Coll., Stat. H.C. 13).  
 There are two specimens in the British Museum (Nat. Hist.) collected on Chiloe Is. by Charles Darwin, Voyage of Beagle.  
 Recorded only from S. Chile.

*Lanopsis rugosus* Signoret.

Signoret, 1863, *loc. cit.*: 554; Pl. 12, fig. 18, 18 a, b & c.

- Chiloe Is., Chepu, one female 11. x. 1958, Roy. Soc. Exped. (*G. Kuschel* coll.);  
 Wellington Is., Puerto Eden, 49° S., 350 ft., one male 3. xii. 1958, *Nothofagus betuloides* forest, Roy. Soc. Exped. (*M. Holdgate* Coll., Stat. H.E. 8.).  
 Recorded from S. Chile including Chiloe Is.

Subfamily *ASOPINAE* Amyot & Serville, 1843.✓ *Comperocoris rochneri* (Philippi).

- Jalla rochneri* Philippi, 1862, *Ann. Univ. Chili* 21 : 414.  
*Asopus cruciatus* Signoret, 1863, *Ann. Soc. ent. France* (4) 3 : 543.

- Chiloe Island, Chepu, three males and one female 8. x. 1958, on *Berberis lucifolia*, Roy. Soc. Exped. (*G. Kuschel*);  
 same locality, one male 27. x. 1958, Roy. Soc. Exped. (*G. Kuschel*).  
 Recorded from S. Chile.

Family *Coreidae*.Subfamily *RHOPALINAE* Amyot & Serville, 1843.*Harmostes procerus* Berg.

- Berg, 1878, *An. Soc. cient. Argentina* 6 : 185 (*Hemipt. Argentina* 1879 : 91);  
 Harris, 1944, *Iowa State College J. Sci.* 18 : 191.

- Chiloe Island, San Pedro, 42° S, 2,000 ft., one male 11. xi. 1958, *Baccharis* Scrub (*M. Holdgate* Coll., Stat. H.P. 6).  
 Recorded from Argentina & Uruguay.

Family *Aradidae*.Subfamily *ISODERMINAE* Stål 1872.*Isodermus gayi* (Spinola).

- Anchomichon gayi* Spinola, 1852 in *Gay. Hist. Chile, Zool.*, 7 : 214;  
*Epiestocoris castaneus* Blanchard, 1852 in *Gay Hist. Chile, Zool.*, 7 : 223;  
*Mezira patagonica* Stål, 1859 *Freg. Eugen. resa. Ins.* : 260;  
*Isodermus gayi* (Spinola), Usinger & Matsuda, 1959, *Classification of the Aradidae, Brit. Mus. (Nat. Hist.)*: 58.  
 Navarino Is., Puerto Williams, one male 9. ii. 1959, Forest, Roy. Soc. Exped. (*G. Kuschel* Coll.).  
 Navarino Is., Puerto Williams, two females 29. i. 1959 Roy. Soc. Exped. (*G. Kuschel* Coll.)  
 Recorded from Patagonia & S. Chile.  
 There is a series of ten specimens in the British Museum (Nat. Hist.) collected by Charles Darwin on the Hardy Peninsula, Cape Horn, during the voyage of the Beagle.

This genus is represented in Australia and Tasmania by *Isodermus planus* Erichson and in New Zealand by *Isodermus tenuicornis* Usinger and Matsuda and *Isodermus crassicornis* Usinger & Matsuda. It does not occur anywhere else in the world. This is an example of the so called Antarctic fauna common to Chile, New Zealand, Australia and Tasmania.

Subfamily *MEZIRINAE* Oshanin, 1908.*Mezira americana* (Spinola).

- Brachyrhynchus americanus* Spinola, 1852, in *Gay Hist. Chile, Zool.* 7 : 202.  
*Brachyrhynchus chilensis* Stål, 1854, *Öfv. Vet. Ak. Förh.*, 11 : 237;  
*Mezira americana* (Spinola) Reed, 1901, *Rev. Chil. Hist. nat.*, 5 : 24;  
 Kormilev, 1953, *Acta. Zool. Lilloana* 13 : 227.

- Chiloe Island, Chepu, one female 21. x. 1958, Roy. Soc. Exped. (*G. Kuschel* Coll.)  
 Recorded from S. Chile & Argentine Patagonia.

Family *Lygaeidae*.

See Scudder G.G.E., 1962, Results of the Royal Society Expedition to S. Chile 1958-59: Lygaeidae (Hemiptera) with the description of a new subfamily. *Canadian Ent.* 94 : 1064-1075.

Family *Enicocephalidae*.*Gamostolus subantarcticus* Berg.

- Gamostolus subantarcticus* Berg, 1884, *Ann. Soc. cient. Argentina* 8 : 115.  
*Gamostolus subantarcticus* (Berg), Usinger, 1945, *Ann. ent. Soc. Amer.* 38 : 326.

- Picton Island, west coast: Upper levels above forest, on steep slope with

*Azorella*, *Bolax* and other mats and *Empetrum*, *Pernettya* and grasses; 300 ft. Hand searching under stones;

Five specimens and two nymphs 1. ii. 1959, Roy. Soc. Exped. (*M. Holdgate* Coll., Stat. H.W. 22);

Wellington Island, Monte Jervis, 49° S opposite Puerto Eden on the east. Summit ridge with patches of vegetation, snow patches and much bare rock; 3,000-3,500 ft., one specimen, Alpine fieldmark, 20. xii. 1958, Roy. Soc. Exped. (*M. Holdgate* Coll. Stat. H.E. 24);

Wellington Island, Puerto Eden, 49° S; Knoll at west end of ridge running westwards from Eden House before it joins a higher snow-capped mountain; 2,800 ft., hand collection under stones;

Two specimens 5. xii. 1958, Roy. Soc. Exped. (*M. Holdgate* Coll. Stat. H.E. 12);

Wellington Island, Puerto Eden, three specimens 600-800 metres, 7. xi. 1958 and one specimen, 600 metres 16. xii. 1958 Roy. Soc. Exped. (*G. Kuschel* Coll.);

Chiloe Island, Cordillera de San Pedro, two specimens, 700 metres, 9. xi. 1958, Roy. Soc. Exped. (*G. Kuschel* Coll.);

Chile, Isla Hoste, Bahia Orange, Lat. 55° 31' S, Long. 68° 03' W., 300 metres one adult and one nymph 12. i. 1959, Roy. Soc. Exped. (*G. Kuschel* Coll.).

Recorded previously only from Argentine Tierra del Fuego and Chiloe Is. This genus is common to Tierra del Fuego and New Zealand where it is represented by *Gamostolus tonnoiri* Bergroth.

#### Family Nabidae.

##### *Nabis faminei* Stål.

*Nabis faminei* Stål, 1859, *Freg. Eug. resa*, *Ins. Hemipt.* : 260, 112 ;

Reuter, 1872, *Öfv. Vet.-Akad. Förh.* 29 (6) : 92, 30.

Pictou Is., 55° S., West coast, 300 ft., Upper levels above forest, on steep slope with *Azorella*, *Bolax* and other mats and *Empetrum*, *Pernettya* and grasses; hand searching under stones one male and one female 1. ii. 1959, Roy. Soc. Exped. (*M. Holdgate* Coll., Stat. H.W. 22);

Navarino Is., north coast, Puerto Williams : two females 3. ii. 1959; two females 16. i. 1959 and one female 10. i. 1959, Royal Society. Exped. (*G. Kuschel* Coll.).

Specimens in the collection of the British Museum (Nat. Hist.) from Tierra del Fuego, Estancia Viamonte, xii. 1929 (*P. W. Reynolds*) and from Lago Blanco, Chubut, Argentine Patagonia (*Koslowsky*).

Recorded by Stål and Reuter from Patagonia (*Kinberg* Coll.)

#### Family Miridae.

##### Subfamily ORTHOTYLINAE Van Duzce, 1916.

##### *Idiomiris* gen. n.

Smooth and shining, almost glabrous, the pubescence short, fine, depressed and very sparse except on apical segments of antennae and on underside of head.

Head distinctly declivous, clypeus feebly prominent, eyes prominent, substylate raised well above level of concave vertex (fig. 2 a) and posterior margins widely separated from anterior margin of pronotum; rostrum extending to apices of middle coxae; antennae linear, arising from close to anterior margin of eye; first segment extending beyond apex of head by half its length, second segment longest, third and fourth short, taken together only a little more than half the length of the second (fig. 1).

Pronotum deltoid, that is very narrow at apex and broad at base, twice as wide across humeral angles as at anterior margin (fig. 1); disc distinctly, coarsely punctate; anterior collar distinct, of same width throughout, rather flattened not strongly rounded; lateral margins distinctly carinate on apical half (fig. 2 a); calli relatively small. Ostiolar peritreme of metapleuron about two and a half times longer than wide (fig. 2 a). Scutellum triangular rather shorter than wide at base, apex angular but not acuminate; posterior margin of mesonotum exposed. Legs moderately long and slender especially the femora; tarsal claws long smooth and slender, without a basal tooth and without arolia or pseudarolia; first and second tarsal segments subequal together longer than the third (fig. 2 c).

Hemelytra parallel sided, elongate, smooth not punctate; embolium and cuneus distinct, the former narrowed towards apex the latter about twice as long as broad at base. Small membranal cell present. Male genitalia (figs. 3 a to e) with a distinct theca but not elongated and projecting beyond the mouth of the pygophor as in Phylinae; vesica with two slender tapering spiculae, the apex of vesica membranous with several minute setae (fig. 3 e). Female bursa copulatrix with associated sclerotized rings simple and oval; posterior wall of bursa transverse anteriorly biconcave and posteriorly convex in middle (fig. 2 b).

Type-species *Idiomiris magellanesensis* sp. n.

I have been unable to identify this genus with any already described. By the absence of both arolia and pseudarolia it runs down in Carvalho's world key (Carvalho 1955) to the subfamily Cyzapinae Kirkaldy. At once there is difficulty as to which tribe it goes into. The head is not exceptionally long and correct with the frons horizontal as in the Fulviini Uhler nor are the calli large and occupying the anterior two thirds of the pronotum. On the other hand the frons although distinctly declivous is not vertical. But if placed in the second couplet of Carvalho's key (page 17) it runs to Cyzapini. In this tribe by the substylate eyes strongly raised above the concave vertex and by the punctate pronotum, *Idiomiris* would run to *Cyzapus*. But the short non-filiform antennae, deltoid pronotum

(i.e. anterior margin very much narrower than posterior margin) and relatively short legs readily distinguish it from this genus. If the new genus were to be placed in the Fulviini it runs to *Orasus* Distant 1883, from Mexico, but the Tierra del Fuegian species is quite different from this genus in the substylate eyes elevated well above the vertex, by the transverse pronotum three times as wide across humeral angles as wide across pronotal collar instead of less than twice as wide, in the shorter claval commissure and in the much broader embolium.

In spite of the absence of arolia and pseudarolia I consider that this genus does not belong to the Cylapinae and it might be necessary to establish a new subfamily for it.

In order to obtain further evidence on this point it is necessary to consider the structure of the male aedeagus. According to Carvalho and Leston (1952) there are four main types of aedeagus in the Miridae, Deraeocorine (including Cylapine), Bryocorine, Phylinae (including Orthotyline) and Mirine. E. Wagner (1955), however, reduces these types to three by associating the Deraeocorinae with the Mirinae and the Bryocorinae with the Phylinae at the same time removing Orthotyline from the Phylinae type and regarding it as a distinct type. But as Carvalho (1952 : 34) in his *Major Classification of the Miridae* points out the genitalia alone have been found to be misleading in many respects and their acceptance as a primary character would cause considerable changes in the classification. In fact the study of the aedeagus in Mirid genera has barely begun. A glance at Carvalho's figures of the aedeagus of those Mirids he has described from tropical America show how variable these structures can be even within the same subfamily. In fact the type of genital structure is at present only of limited value in determining the subfamily to which a genus belongs. The aedeagus of *Idiomiris* probably comes nearest to the Orthotyline in the presence of a distinct theca (Kullenberg, 1941, Carvalho and Southwood 1955 : 14) but the vesical appendages are not dentate or serrate as they are in many Orthotyline.

In *Idiomiris* the sclerotized rings associated with the bursa-copulatrix in the female are simple and ovoid as in many Phylinae especially the Dicyphini. The posterior wall of the bursa is also simple, forming a transverse sclerite anteriorly bisinuate, presumably comprising the A-pieces of Slater (1950) and similar to that found in *Deraeocoris*.

The fact remains that while the structure of the claws indubitably places *Idiomiris* in the Cylapinae, the structure of the aedeagus places this genus rather doubtfully in the Orthotyline while the structure of the sclerotized rings of the female bursa-copulatrix places it in the Phylinae and the structure of the posterior wall of the latter places it in the Deraeocorinae.

The structure of the pronotal collar, raised without being rounded (seen in lateral view) and of equal width throughout, is similar to that found in Deraeocorini and Mirini but in *Idiomiris* the claws are not dentate as they are in Deraeocorinae and possess neither pseudarolia nor arolia as do all Mirinae.

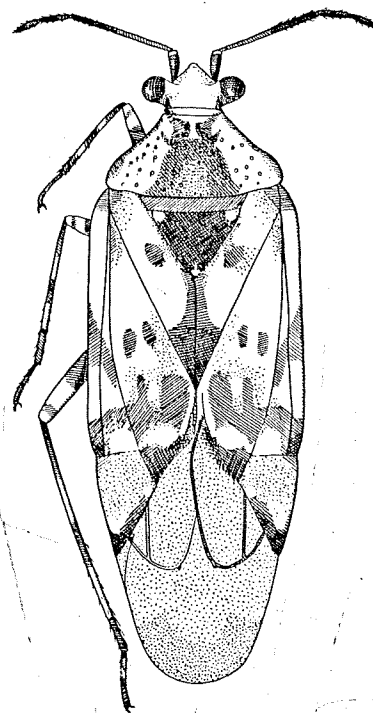
One is tempted to establish a new subfamily for this Chilean mirid especially as many primitive genera are known from this region. The general appearance, however, is so unremarkable that it is proposed to place *Idiomiris* in the Orthotyline as an aberrant genus with the protest that here again is an example of the arolia and claw structure breaking down in the classification of this family (see China and Myers 1929 : 115).

*Idiomiris magellanesensis* sp. n. (Figs. 1-3).

Colour, male and female :

Pale greyish, with very variable fuscous markings ; almost glabrous above, the golden pubescence very short and depressed and very sparse.

Fig. 1.

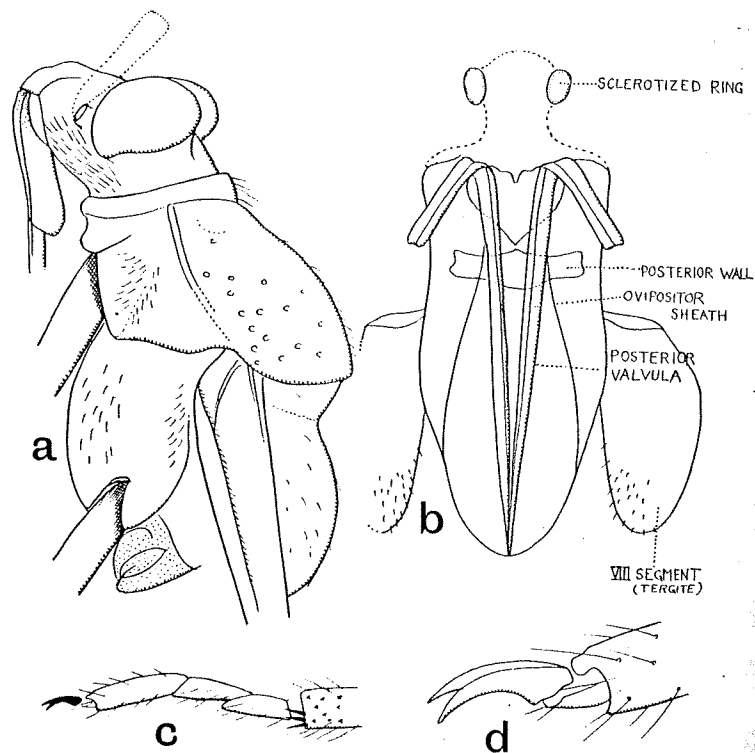


*Idiomiris magellanesensis* gen. et sp. n. ♂ holotype.

Antennae black, covered with short dark hairs, extreme apex of the first segment and the basal three quarters of second segment more or less pallid but sometimes (female) entirely black ; rostrum black with apical half of basal segment pale. Head pallid above but with gula

and sides including antenniferous tubercles, the apex of the clypeus and the region behind the eyes, all shining dark brown to black. Exposed mesonotum black. Pronotum above pallid with the collar laterally and the sides behind the lateral carinae fuscous; a certain amount of infuscation of the centre of the disc, sometimes disc entirely black including calli (fig. 1); underside brown with margins of anterior acetabula yellow, the meso- and meta-sterna and the pleura dark brown to black.

Fig. 2.

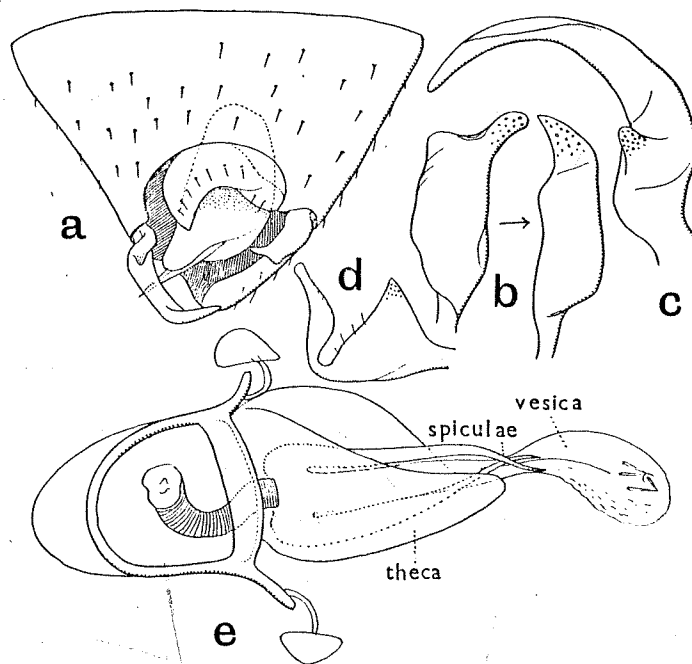
*Idiomiris magellanicensis* gen. et sp. n.

- Lateral view of head and thorax. Note lateral pronotal carina and metapleural scent gland opening.
- Female genitalia dissected to show sclerotized rings of the bursa copulatrix and the posterior wall; anterior valvula removed.
- Hind tarsus of male.
- Claws of hind tarsus to show absence of arolia and pseudarolia.

Scutellum shining black with a yellow spot at each basal angle and sometimes with the apex narrowly yellow extending anteriorly in a narrow median yellow percurrent line. Legs pubescent, pale yellow, banded

with brown: coxae brown with apical half pale, some long pale hairs ventrally, femora yellow with a narrow sub-apical ring, the base and a broader sub-median ring, brown; tibiae with base and apex and a median ring dark brown; tarsi brown, claws pale.

Fig. 3.

*Idiomiris magellanicensis* gen. et sp. n.

- Dorsal view of pygophor showing anal tube, aedeagus and parameres.
- Right paramere, dorsal view on left and lateral view on right.
- Left paramere, dorsal view.
- Left paramere, lateral view.
- Aedeagus.

Hemelytra greyish white very variably marked with fuscous brown; sub-hyaline in places; clavus with apex and a spot on each side of apex of scutellum dark brown to black; inner margin of clavus along scutellum fuscous; corium with a much broken transverse infuscate band across apical half, darkest at apex of embolium and inner apex of corium; apex of cuneus black (see fig. 1); apex of membrane broadly margined with brown. Abdomen dark brown to black with pale hairs.



## Structure, female :

Head (figs. 1 and 2 a), seen from above, about twice as wide across eyes as long in middle (43 : 21), but actually seen in full view (anteriorly) 43 : 33 ; relative lengths of antennal segments 26 : 55 : 18 : 17 ; relative lengths of rostral segments 22 : 20 : 18 : 18 ; underside of head with numerous long pale hairs.

Pronotum twice as wide across humeral angles as long in middle including collar, (70 : 35), (the latter about as wide in middle as thickness of basal antennal segment) and nearly three times as wide as at the anterior margin (70 : 25) ; rather sparsely and shallowly punctate, a pair of deeper punctures between the small calli ; lateral margin slightly concave behind the calli and posterior margin slightly concavely sinuate inside rounded humeral angles.

Scutellum smooth shining distinctly convexly tumid more or less equilateral and rather shorter than width of base (28 : 36). Hemelytra (fig. 1) shining, sub-translucent, practically glabrous and impunctate, embolium widest at base, narrowed from base to apex, costal margin distinctly reflexed except at base ; claval commissure longer than scutellum (38 : 28) ; cuneus nearly twice as long as wide at base (45 : 25) and longer than membrane from apex of cuneus to tip of membrane ; vein of larger membranal cell distinct, much thicker than the vein separating off the smaller cell and with its apex distinctly thickened in the form of a minute spur more visible in some specimens than others ; membrane extending well beyond apex of abdomen.

Legs slender with the hind tibia about one and a half times longer than the femur (97 : 70), the tarsi long about one quarter the length of tibia (24 : 97), relative length of segments 8 : 8 : 17.

Male similar to female but with rather longer elytra and more intense brown markings. Genitalia figured (fig. 3). Left clasper sickle-shaped, the blade reflexed in the middle and at the base with a conical punctate prominence (fig. 3 c) ; right clasper boot-shaped in dorsal view but in side view the "toe" appears obliquely conical ; paired spiculae of aedeagus long slender and apically acuminate (fig. 3 e).

Female genitalia figured (fig. 2 b).

Total length : 5.25 mm. female 5.16 mm.

Width across humeral angles : male and female. 1.58 mm.

Greatest width (across hemelytra near base) : male and female 1.9 mm. S. Chile, Magellanes, Navarino Is., Puerto Williams, 1 male holotype, 1 female allotype, 17.1.1959 (in Collection of University Museum (Santiago)) and 1 female paratype 18.1.1959. (in Collection British Museum (Nat. Hist.)), Roy. Soc. Exped. (G. Kuschel Coll.)

Subfamily *MIRINAE* Amyot & Serville, 1843.*Stenodema dohrni* Stål.

*Miris dohrni* Stål, 1859, *Freg. Eug. Resa, Ins.* : 254, Berg. 1879, Hemipt. Argentina : 118

*Stenodema dohrni* (Stål) Reuter, *Öfv. Vet. Soc. Förh.* 51 (13) : 8 ; Bergroth, 1922, *Ark. Zool* 14 (22) : 2.

Puerto Williams, one male, one female and 2 nymphs 18. i. 1959 ; 41 specimens, swept in Marsippospermum Swamp, 3. ii. 1959, Roy. Soc. Exped. (G. Kuschel Coll.).

Recorded only from Patagonia.

Family *Anthocoridae*.Subfamily *DUFURELLELLINAE* Van Duzee, 1916.*Cardiastethus elegans* (Blanchard) comb. n.

*Anthocoris elegans* Blanchard 1854, in *Gay Historia fisica y politica de Chile Zool.* 7 : 140, Atlas pl. 2, fig. 5 ; Signoret, 1863, *Ann. Soc. ent. France* (4) 3 : 566.

Chiloe Is., San Pedro 550 m., three specimens 10. xi. 1958.

Described from Chile, Cordilleras de Elqui and not recorded from elsewhere.

Reuter in his *Monographia Anthocoridarum (Act. Soc. Sci. Fennicae* 44 : 717) queried Blanchard's species as a species of *Triphleps* Fieber. An inspection of the specimens collected by the Royal Society Expedition on Chiloe Is. shows that they belong to the genus *Cardiastethus* Fieber.

The transfer of the Chilean *Anthocoris elegans* Blanchard into *Cardiastethus* makes *Cardiastethus elegans* Uhler (Grenada, West Indies) a junior secondary homonym and it will therefore require a replacement name. I herewith propose *Cardiastethus uhleri* nom. nov. for *Cardiastethus elegans* Uhler 1894, *Proc. Zool. Soc. London* : 201 nec *Cardiastethus elegans* (Blanchard) 1854, in *Gay Hist. fisica y politica de Chile, Zool.* 7 : 140, Atlas pl. 2: fig. 5.

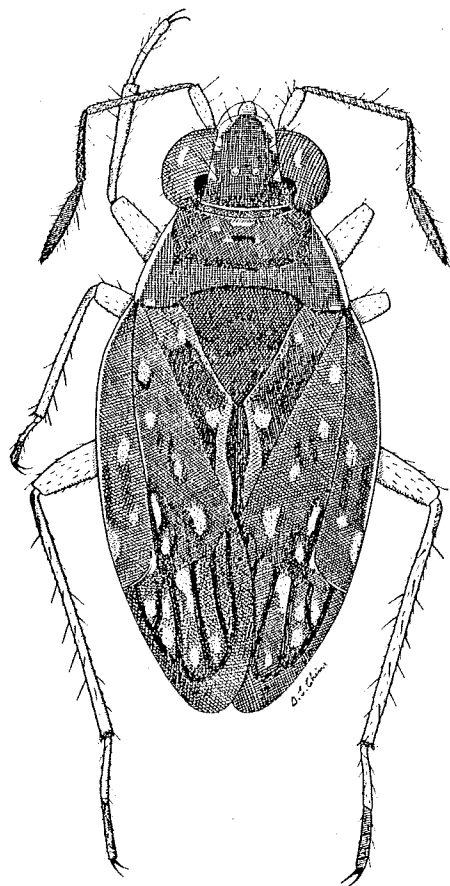
Family *Saldidae*.Subfamily *SALDIDAE* Van Duzee, 1917.*Pseudosaldula cobbeni* sp. n. (Figs. 4 and 5).

Relatively small subbrachypterous species with the hind wings strongly reduced and non-functional. Black with the anterior region of the head and lateral margins of pronotum pale yellowish, legs pale yellow with coxae and apices of tarsi fuscous ; hemelytra black with variable grey and yellowish white spots.

Head: Black, shining with regular, very short, depressed glistening brown pubescence and the usual three pairs of trichobothrial bristles ; in front of eyes yellowish white with a reddish brown spot at base of clypeus ; a pair of yellowish spots placed along inner margin of eye on each side of vertex one level with median trichobothrium near apex of eye, the other level with the yellow ocelli ; eyes pale brown with some short erect bristles on the surface, the non-faceted basal semicircular region, black ; underside black with depressed pale hairs, the bucculae,

labrum and rostrum yellow to fulvous; antennae with basal segment yellow and apical three segments infuscate, the whole with dark brown hairs and bristles; relative lengths of rostral segments 8 : 4 : 40 : 20; of antennal segments 12 : 24 : 17 : 20; the fourth antennal segment distinctly fusiform. Head broader across eyes than long (43 : 27), the eyes less than half as long as wide (21 : 12).

Fig. 4.

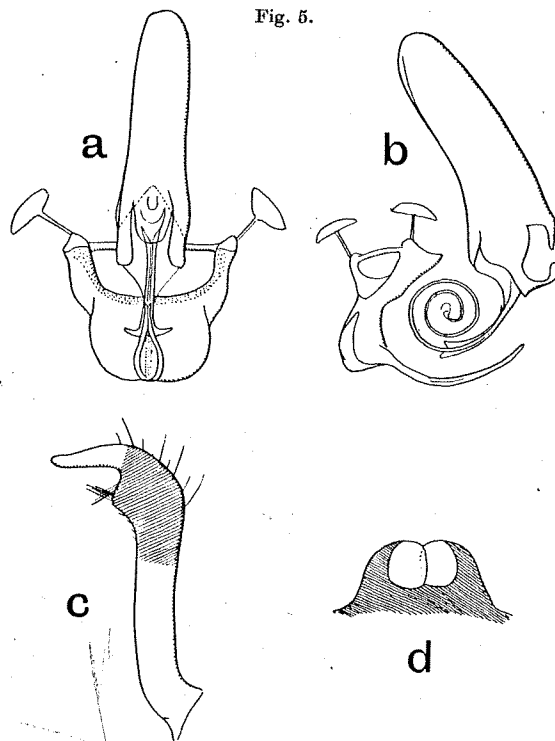
*Pseudosaldula cobbeni* sp. n.

Pronotum : Shining black with short depressed glistening brown pubescence, except on swollen cicatricial anterior region; lateral dorsal margins and acetabulum pale yellow, a trace of fulvous spot on dorsal posterior lateral margin; three times as wide at base as long in middle (60 : 20).

Scutellum : Shining black with rather scattered, short depressed glistening, brownish pubescence; extreme apex very obscurely fulvous; about as long as broad at base (31 : 30).

Legs : yellow with coxæ infuscate, black towards bases.

Fig. 5.

*Pseudosaldula cobbeni* sp. n.

Ventral view of aedeagus. b. Lateral view of same. c. Paramere. a. Parandria (extremity of pygophor).

Hemelytra : Ash-grey with apical two thirds of clavus, some small spots on corium and the area surrounding pale spots at apex of R & M. Shining black; some dull black markings on membrane; variable pale grey spots on corium and base of clavus and yellowish white spots on middle of clavus, variable on apex of corium and on membrane, as shown in fig. 4; costal margins very narrowly yellow; pubescence dense, dark brown, depressed, glistening only at base, the whole pubescence difficult to see except on base of clavus where it is longer and paler. Hindwings reduced, pale grey with base infuscate, extending only to apex of fourth abdominal tergite.

Abdomen shining black with dense pale pubescence.

Male genitalia figured (fig. 5), the parameres angled towards pointed apex, this region strongly swollen and infuscate whereas the base and apex are pale yellow; there is a tuft of hairs on the inner face above the angulation and numerous hairs on the outer side of the swelling; parandria at posterior margin of pygophore figured (fig. 5 d).

Total length, 3.3 mm., width across eyes 0.9 mm., width across humeral angles 1.18 mm., width across hemelytra 1.6 mm.

S. Chile, Magellanes, Navarino Is., Puerto Williams,

one male holotype, four male paratypes and one female paratype (shore) 29. 1. 1959.

one male and three female paratypes 21. 1. 1959, one female paratype 22. 1. 1959; Roy. Soc. Exped. (G. Kuschel Coll.)

Closely allied to the *Pseudosaldula* sp. figured by Cobben 1961 (Ent. Berichten 21 : 98 fig. 2 (figs. 4, 6, 8, 9 and 10) ) and recorded by him on page 99 as "an unidentified species", presumable because he thought it might have been described under *Pentacora*. The colour pattern of the hemelytra is not quite the same and the genitalia do not quite match although the parameres are almost identical. Cobben does not state the locality from which this species came although it seems doubtful whether it would have come from as far south as Puerto Williams. It has been compared, without a resulting identification, with the described species of *Pentacora* and *Saldula*. I therefore dedicate it to Dr. Cobben in recognition of his splendid work on Saldidae.

*Pseudosaldula cobbeni* differs from *Saldula chilensis* (Blanchard) in the pale instead of black legs with a pale ring at apex of tibiae.

#### Family Mesoveliidae.

##### Subfamily MACROVELIINAE McKinsty, 1942.

##### *Chepuvelia* gen. n.

*Head* elongate, widening slightly in front of eyes to prominent antenniferous tubercles, narrowed and deflexed anteriorly the clypeus distinct and convex; eyes small, hemispherical placed on sides of head posteriorly but well away from posterior margin; first antennal segment extending well beyond apex of head, first and second segments moderately thickened, third and fourth slender with long bristles; rostrum swollen at base (2nd segment) gradually narrowing to apex; ocelli absent represented only by a crescent shaped depression close to middle of inner margin of eye; three pairs of trichobothria, the posterior pair one on each side of posterior margin of head behind eye, the middle pair one on each side of anteoocular part of head in front of inner margin of eye, the anterior pair placed closer together and level with the bases of the antenniferous tubercles; vertex with a double line of minute punctures, the two lines more or less contiguous posteriorly, level with basal margin of eyes, but gradually diverging anteriorly to level of base of clypeus; this line of punctures

which is present in *Macrovelia* represents the percurrent, median impression down the vertex of all Veliidae; suture between the frons and the clypeus and juga deeply impressed, a rather shallow impression in middle of frons behind base of clypeus. The head of *Chepuvelia* is very similar to that in *Macrovelia* Uhler differing chiefly in the absence of ocelli and the much more prominent and pointed antenniferous tubercles.

*Pronotum* rather tumid, posteriorly rounded and not produced over base of abdomen as it is in *Macrovelia*, the punctures especially on posterior half almost obsolete in dried specimens and much less dense than in *Macrovelia*. Metasternum with a pair of small contiguous scent-gland openings.

*Legs* unarmed, similar to but shorter than in *Macrovelia* with a much longer pubescence; the hind tarsi distinctly less elongated; claws terminal as in *Macrovelia*.

*Hemelytra* and *wings* completely absent.

*Abdomen* with broad connexivum, slightly reflexed, widest in middle and narrowed at base and apex; larval scent-gland scar on middle of fourth segment of dorsum strongly elevated with a large oval hole in middle; a distinct and rather broad carina extending from base of abdomen over the second third and fourth tergites on each side of the scent-gland scar as in *Macrovelia*; eighth and ninth segments in male cylindrical.

Genitalia similar to those of *Macrovelia* and *Mesovelia* but apices of parameres rounded. No brush-like bunches of short setae on the eighth abdominal segment such as are found in *Mesovelia mulsanti* B. White. Owing to the minute size of these insects the structure of the erected aedeagus in *Macrovelia* and *Mesovelia* has not yet been described but it appears very simple (fig. 7) and similar to that described in the African *Heterocleptes* Villiers (China, Usinger and Villiers 1950).

Type species : *Chepuvelia usingeri* sp. nov.

*Chepuvelia* gen. n. belongs to the Mesoveliidae, subfamily Macroveliinae and is related to *Macrovelia* hitherto the only genus in the subfamily and represented by a single species, *M. horni* Uhler. That remarkable species is restricted to the S. Western United States being recorded from California, Nevada, Colorado, New Mexico, Arizona and the Dakotas. It is found according to McKinsty (1942) "in foothill areas where there is an abundance of moss down deciduous timber and a small stream of water such as a spring which is constant in flow throughout the year. It is found at the water's edge in moss and debris never more than five feet from the water, but never on the water". In fact, it is a terrestrial species of the amphibious family Mesoveliidae. A similar terrestrial African genus *Heterocleptes* Villiers, is found in the Congo and in Angola. This genus was placed by China & Usinger (1949) in the family Hydrometridae although they stressed its relationship with *Macrovelia*. Judging by the



great similarity of the male genitalia, *Heterocleptes* could be placed in the Macroveliinae.

It is, therefore, extremely interesting to find another terrestrial Mesoveliid, belonging to the same subfamily Macroveliinae, thousands of miles away in Southern Chile.

*Chepuvelia* differs from *Macrovelia* in the obsolete ocelli ; in the short posteriorly truncate, punctate, pronotum which nevertheless covers the meso- and metanotum ; in the complete absence of hemelytra and wings ; and in the swollen, elevated region of the larval scent gland-scar with a distinct opening. In *Macrovelia* there is no distinct opening in the scar although such an opening, but much smaller, is present in *Mesovelia mulsanti*. In apterous forms of *Mesovelia* the pronotum is not longer than either the meso- or metanotum which are both exposed whereas in the apterous *Chepuvelia* these sclerites are invisible. The two dorsal abdominal carinae in *Chepuvelia* and *Macrovelia* are present in *Mesovelia* on the basal abdominal tergite only.

There is no doubt that *Chepuvelia* is closely related to *Macrovelia* but the isolation of *Chepuvelia* from *Macrovelia* and the above distinctive characters warrants the establishment of a distinct genus for the South Chilean form.

*Chepuvelia usingeri* sp. n. (Figs. 6 and 7).

Colour : Head above yellowish fulvous, matt, with very sparse scattered pubescence of short depressed golden hairs, but with three pairs of long trichobothrial setae typical of the Amphibicorisa very distinct (fig. 6) ; eyes reddish ; antenniferous tubercles, region of head in front of insertion of antennae and underside dark brown ; antennae with basal segment pale, the second, third and fourth progressively darker brown ; rostrum pallid, tip blackish ; antennae with long pale hairs, very long and erect on the third and fourth segments.

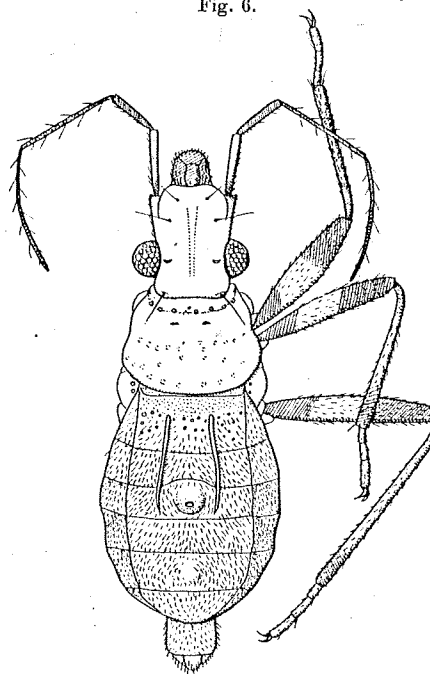
Pronotum dorsally yellowish fulvous, matt, practically glabrous, the pleura and sterna dark brown paler towards apices of acetabula. Legs pale with base and apical half of femora and hind tibiae, brown Abdomen dark brown, shining, dense pubescence golden yellow ; a large rather indistinct pale spot at base of each connexival segment ; genital segments paler towards apex.

Structure : Male.

Head two and a half times longer than wide between eyes (50 : 20) ; diameter across eyes twice width between eyes (40 : 20) ; relative lengths of antennal segments 25 : 18 : 37 : 40.

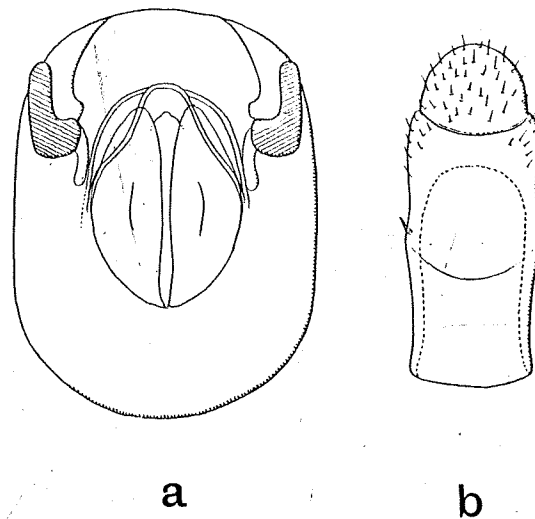
Pronotum rather tumid with distinct collar delimited by a row of punctures in the furrow behind ; two distinct pit-like cicatrices on anterior lobe which is separated from posterior lobe by a depression and a row of rather indistinct punctures ; posterior lobe with some rather indistinct punctures mainly forming a row in front of posterior margin ; pronotum nearly four fifths as wide across widest part, as long in middle (38 : 50) ; metapleura exposed laterally. Underside of thorax and first visible

Fig. 6.



*Chepuvelia usingeri* gen. et sp. n. ♂. S. Chile, Chiloe Is., Chepu 42° S.

Fig. 7.



*Chepuvelia usingeri* gen. et sp. n. ♂.  
a. Pygophor from above ; the anal tube removed to show parameres and aedeagus.  
b. Anal tube from above.

ventral abdominal sclerite, evenly punctate except for an area in middle of metasternum which is pubescent; the omphalium (scent gland opening) lies in the middle of this rather elevated pubescent area and possesses two contiguous circular openings as in *Ocellovechia* China and *Usinger* but without the lateral channels present in that Veliid genus.

Relative lengths of legs: Front leg, femur 63, tibia 67, tarsus 28 (excluding claws); Middle leg, femur 68, tibia 73, tarsus 28; hind leg, femur 78, tibia 95, tarsus 32.

Abdomen one fourth longer than broad excluding 8 and 9 segments (103 : 82) widest across fourth abdominal segment below dorsal scent-gland opening; eighth segment in male extruding beyond seventh segment by about two thirds its length (22 : 35); basal segment (2nd) distinctly punctate both dorsally and ventrally; remaining segments impunctate but with a dense short, fine pubescence.

Genitalia figured (fig. 7 a), strongly resembling those of *Heterocleptes*, the parameres apically rounded, anal tube (10th) elongate, more than twice as long as broad with a slight hump in the middle with a short spine on each side; anal style (11th) hemispherical lid-like with a distinct short pubescence.

South Chile, Chiloe Island, Chepu (42° S):

One male holotype, 17. x. 1958; (cleared and mounted on slide);

One male paratype same locality and date;

One female paratype, 3. x. 1958.

South Chile, Wellington Island, Puerto Eden, 600-800 metres:

One female paratype, 7. xii. 1958;

Royal Society Expedition 1958-59 (G. Kuschel Coll.)

This species is dedicated to Professor R. L. Usinger in recognition of his work on the Mesoveliidae.

#### Family Gelastocoridae.

Subfamily *MONONYCHINAE* Fieber 1851.\*

*Nerthra* sp. n.

Only three species of *Nerthra* have been recorded from Chile: *N. parvula* (Signoret), *N. quinquedentata* (Melin) and *N. ranina* (H.S.). The present species, of which only a single female specimen is available, differs from all these species in the obsolescent hemelytral membrane, and the absence of ocelli.

It runs down in Todd's key to the world species (Todd 1955 : 347-354) to *N. rugosa* (Desjardins) from Mauritius but differs from it in the absence of the broad, round, bristle-covered elevation in middle of hemelytron found in that species. The Chilean species also differs from *N. rugosa* in the shape of the lateral margin of pronotum and of the prominent, apical connexival segments of abdomen. There is no doubt that the Chilean

\* Although the generic name *Nerthra* Say 1832 is older than *Mononyx* Laporte 1833 the family-group name *Mononychinae* Fieber 1851 has priority over *Nerthrinae* Kirkaldy 1906.

specimen from Chepu, Chiloe Is. (station H.C. 8) collected by Holdgate represents a new species but I refrain from describing a single female specimen. *Nerthra rugosa* was described by Desjardins from the sea-shore. Todd seems to have overlooked this fact in his chapter on biology and ecology of the Gelastocoridae. Todd records it also from Panama and Florida, a most remarkably discontinuous distribution and open to doubt.

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#### NOMENCLATURAL NOTE.

This opportunity is taken to rename the homonym *Barberia* Miller 1951 (*Ann. Mag. Nat. Hist.* (12) 4 : 1054) (Lygaeidae) which is preoccupied by *Barberia* Dyar 1905 in Lepidoptera. Mr. N. C. E. Miller has suggested the new name *Barberocoris* and this replacement name should be attributed to him.