

Studies on the *Cydnidae* of the Australian Region XI. A review of species from New Caledonia, with descriptions of *Chilocoris neocaledonicus* n. sp. and *Macroscythus matilei* n. sp. (*Hemiptera: Heteroptera*)

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ABSTRACT. *Chilocoris neocaledonicus* n. sp. and *Macroscythus matilei* n. sp. from New Caledonia are described and compared with allied species. *Geobia fallax* MONTROUZIER, 1858 is synonymised with *Fromundus pygmaeus* (DALLAS, 1851). A list of species hitherto recorded from the island is presented, and a key for their determination is also provided.

Key words: Entomology, review, taxonomy, Australian Region, New Caledonia, *Hemiptera*, *Heteroptera*, *Cydnidae*.

INTRODUCTION

Since the first two papers on *Heteroptera* of New Caledonia by MONTROUZIER (1858, 1861), only two more (DISTANT, 1914, 1920) on this subject have been published to date. Our knowledge of the fauna of *Cydnidae* of that island has been summarised recently (LIS 1996), six species representing four genera have been reported to occur in New Caledonia till now.

Thanks to the kindness of curators of the *Heteroptera* in various European, American and Australian institutions I have had an opportunity to study small but very interesting collections of the *Cydnidae* from New Caledonia. The results of this study are presented below.

Abbreviations: BMNH - the Natural History Museum, London, England (former British Museum Natural History); IRSNB - Institut Royal des Sciences Naturelles, Brussels, Belgium; JAL - the author's collection; JEC - J.E. EGER collection, Tampa, Florida, USA; MNHN - Muséum National d'Histoire Naturelle, Paris, France;

SMTD - Staatliche Museum für Tierkunde, Dresden, Germany; QM - Queensland Museum, Brisbane, Australia.

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A REVIEW OF SPECIES

Cydninae: Cydnini

Chilocoris neocaledonicus, new species

(figs. 1, 3-5)

DIAGNOSIS

The species belongs to the group characterised by the pronotum without postmedial transverse impressed line and with anterior carina not separated from the lateral carinae. In general habitus it is similar to *Ch. impressicollis* HORV. from New Guinea, but differs from the latter in a number of submarginal setigerous punctures on each paraclypeus (6 pegs and 3 hair-like setae in *Ch. neocaledonicus*, 3 pegs and 3 hair-like setae in *Ch. impressicollis*). Additionally, the new species differs from all known species of the genus in having sharply bicoloured pronotum - callal areas are black, while the remaining surface of the disc is reddish brown or castaneous.

DESCRIPTION

Body (fig. 1) polished, punctate with large punctures.

Head black with the anterior fourth reddish brown or castaneous; dorsal surface alutaceous, distinctly striated, with several punctures between the eyes; clypeus free, as long as or slightly shorter than paraclypei, subapically with a pair of pegs; each paraclypeus (fig. 3) with a submarginal row of 9 setigerous punctures (6 pegs and 3 hair-like setae); eyes and ocelli reddish brown, ocular index 1.84-2.13 (male) or 2.11 (female), interocellar distance about 3.0-3.4 times longer than a distance between an ocellus and the eye; antennae pale brown; rostrum yellowish brown, reaching the middle of mesosternum.

Pronotum undivided into lobes, callal areas black, almost impunctate, remaining surface reddish brown or castaneous bearing well visible large punctures, a row of punctures (interrupted medially) present at the lateral margins of the callal areas; each lateral margin of pronotum with 3 submarginal setigerous punctures bearing long hair-like setae.

Corium of the same colour as the posterior half of pronotal disc; clavus with two rows of large punctures (one short, one complete); mesocorium with two rows of punctures parallelling clavo-corial suture, mesocorial disc densely and almost evenly punctate with large well visible punctures; exocorium almost impunctate;



1. *Chilocoris neocaledonicus* n. sp. - general habitus

costa without setigerous punctures, but with numerous short bristles on its lower side; membrane semihyaline, slightly browned, broader than abdomen and decidedly surpassing its tip.

Propleuron brown or pale brown, its anterior convexity alutaceous, depression and the basal part of posterior convexity with a few coarse punctures and rugae.

Evaporatoria typical of the genus (fig. 4); evaporative areas with numerous longitudinal rugae.

Abdominal sternites dark brown or blackish brown, alutaceous, slightly polished; the lateral thirds densely punctate and covered with short light brown hairs.

Legs yellow or yellowish brown, tibial spines dark brown or castaneous.

Paramere as in fig. 5.

Measurements (in mm) (male and female respectively): body length 4.46-4.60, 4.88; body width 2.62-2.79, 2.73; head length 0.60-0.68, 0.67; head width 0.96-1.04, 1.04; pronotum length 1.40-1.46, 1.56; pronotum width 2.24-2.44, 2.56; scutellum length 1.07-1.22, 1.22; scutellum width 1.40-1.54, 1.53; antennal segments: 0.18-0.21 : 0.06-0.08 : 0.35-0.43 : 0.33-0.38 : 0.36-0.47, 0.19 : 0.07 : 0.42 : 0.40 : 0.50.

TYPE MATERIAL

Holotype male: New Caledonia, Forêt de Thy, 21 May 1984, G. MONTEITH & D. COOK; Q.M. Berlesate No. 655, 22.11S x 166.32E, Rainforest, 150m, Litter; Queensland Museum, Loan No. 94.24, Date: Oct. 1994 (QM).

Paratype male: New Caledonia, Riviere Bleue, 25 May 1984, G. MONTEITH & D. COOK; Q.M. Berlesate No. 655, 22.11S x 166.32E, Rainforest, 150m, Litter; Queensland Museum, Loan No. 94.24, Date: Oct. 1994 (JAL).

Paratype female: New Caledonia, Mt Dzumac, 800-1000m, 23 May 1984, G. MONTEITH & D. COOK; Loan No. 94.24, Date: Oct. 1994 (QM).

REMARKS

Chilocoris MAYR is the fifth genus, after *Adrisa* AM. et SERV., *Teabooma* DIST., *Fromundus* DIST. and *Macroscythus* FIEB. that has representatives in the New Caledonian fauna.

Cydninae: Geotomini

Adrisa flavomarginata (VOLLENHOVEN)

Acatalectus flavo-marginatus VOLLENHOVEN, 1868: 177.

Adrisa flavomarginata: LETHIERRY & SEVERIN 1893: 63; LIS 1995: 141, 1996: 198.

MATERIAL EXAMINED

1 male 2 females, Nouvelle-Calédonie, Prov. Sud, Amieu, Pl. 10.II.1993, M. BOULARD réc., Station forestière (MNHN, JAL); 1 male, Nouvelle-Calédonie, Prov. Sud, Amieu, Pl. 30.I.1993, M. BOULARD réc., Station forestière (MNHN); 1 male, Nouvelle-Calédonie, Prov. Sud, Amieu, Pl. 2.III.1993, M. BOULARD réc., Station

forestière (MNHN); Nouvelle-Calédonie, refuge Riv. Bleue, 20.II.1990, M. BOULARD réc., Piège lumineux (MNHN); 1 male 1 female, Nouvelle-Calédonie, Tiwaka (Poindimié) 20 m alt, 23 XI 1983, Mission D. & L. MATILE, nov. déc 1983 (MNHN, JAL); 2 males 3 females, Nelle Calédonie, Nouméa, RISBEC 1929, Muséum Paris (MNHN, JAL); 1 female, N. Calédonie, det. as *Adrisa numeensis*, coll. FALLOU, Muséum Paris (MNHN); 1 female, N. Calédonie, det. as *Adrisa numeensis*, Muséum Paris (MNHN).

DISTRIBUTION

Australia, Guam, New Caledonia.

***Adrisa numeensis* (MONTROUZIER)**

Geobia numeensis MONTROUZIER, 1858: 245.

Adrisa Numeensis: LETHIERRY & SEVERIN 1893: 63.

Adrisa numeensis: STAL 1876: 20; LIS 1995: 141, 1996: 199.

MATERIAL EXAMINED

Holotype female of *Geobia numeensis* MONTROUZIER: N. Calédonie (P. MONTROUZIER), Coll. R.I.Sc.N.B.; *Aethus numeensis* MONTR., Typ., SIGNORET; Holotype (IRSNB). 1 male: New Caledonia, Staatl. Museum für Tierkunde, Dresden; *numeensis* MONTR. (SMTD); 2 males: N.-Calédonie, Houailou, A. FAUVEL 1910 (MNHN, JAL); 1 male, 1 female: N. Calédonie, *Adrisa flavomarginata* VOLL. [det. by SIGNORET] (MNHN); 1 male, 1 female: Nov. Calédonie, Bougie 1881 (MNHN); 1 female: New Caledonia, 2 km E of St. Michel, 18-II-1977, D.H. HABECK, Blacklight, *Adrisa* sp., det. J.E. EGER 1992 (JEC).

DISTRIBUTION

Australia, New Caledonia, Timor, Fiji, Flores.

***Fromundus pygmaeus* (DALLAS)**

Aethus pygmaeus DALLAS, 1851: 120.

Geotomus pygmaeus: SIGNORET 1881: 650.

Fromundus pygmaeus: LIS 1994: 181, 1995: 143.

Geobia fallax MONTROUZIER 1858: 247; Stål 1876: 26; LETHIERRY & SEVERIN 1893: 81; LIS 1995: 146, 1996: 230, **new synonym**.

MATERIAL EXAMINED

2 females: New Caledonia, 2km E of St. Michel, 18-II-1977, D.H. HABECK, Blacklight; *Geotomus* sp., det. J.E. EGER 1992 (JEC); 1 female: New Caledonia, Mandjélia, above Pouébo, 11-13 May 1984, 6-750m, G. MONTEITH & D. COOK (QM); 1 male: New Caledonia, Col d'Amieu Forest Stn., 8-9 May 1984, 400m, G. MONTEITH & D. COOK (QM). 1 male 1 female: New Caledonia, Kanala, 26.2.12

(BMNH, JAL); 1 male: Noumea, 7/1900 Jan. (BMNH); 8 males 11 females: Tiwaka, Poindimié, 20m alt, 22.XI.1983, L. MATILE, Muséum Paris, Nouvelle Calédonie, Mission D.&L. MATILE, nov. déc. 1983 (MNHN, JAL).

DISTRIBUTION

It is one of the commonest species of *Cydnidae* widespread in both Australian and Oriental Regions.

REMARKS

Geobia fallax MONTROUZIER was described from New Caledonia (MONTROUZIER, 1858), and then treated by me in a review of Australian *Cydnidae* (LIS 1996) as a nomen dubium (since neither type nor any other material of this species has been preserved till today). Nevertheless, the body length of *G. fallax* given in the original description permits to place it in the synonymy of *Fromundus pygmaeus* (DALL.), since the latter is the single New Caledonian species of *Geotomini* with such a small body. Because the other characters given in the short original description also fit *F. pygmaeus*, I propose herein to treat *Geobia fallax* MONTR. as a junior synonym of the latter.

Macroscythus australis (Erichson)

Cydnus australis ERICHSON, 1842: 275.

Hahnia australis: DISTANT 1920: 145.

Philapodemus australis: HICKMAN 1978: 45.

Macroscythus australis: LIS 1995: 144, 1996: 220.

MATERIAL EXAMINED

1 male 1 female: Nov. Calédonia, Canala, DELACOUR 1869 (MNHN).

DISTRIBUTION

Australia (Northern Territory, South Australia, Queensland, Victoria, New South Wales, Tasmania), Lifu, New Caledonia, New Zealand, Java.

Macroscythus matilei, new species

(figs. 2, 6-7)

DIAGNOSIS

The new species represents the group characterised by the presence of more than a single submarginal setigerous puncture on each paraclypeus. In the head vestiture it closely resembles *M. piceus* (WESTW.) from Australia, but differs clearly in the number of setigerous punctures on lateral margins of pronotum (5-8 in *M. matilei*, 10-11 in *M. piceus*), and that on the costa (1 in *M. matilei*, 7-8 in *M. piceus*) (see figs 7 & 10).

DESCRIPTION

Body dark brown or blackish brown, polished, generally weakly punctured (fig. 2).

Head dark brown or blackish brown, with margins brown; dorsal surface with hardly visible tiny punctures (at first sight looking impunctate); clypeus without



2. *Macroscythus matilei* n. sp. - general habitus

setigerous punctures, free, as long as paraclypei; each paraclypeus with a row of 3-4 submarginal setigerous punctures bearing long hair-like setae (fig. 6); eyes and ocelli brown or reddish brown; ocular index 2.40-2.54, distance between ocelli 5.7-6.5 times longer than the distance between an ocellus and the eye; antennae pale brown or yellowish brown; rostrum pale brown, reaching middle coxae.

Pronotum dark brown or blackish brown, its posterior margin somewhat paler; each lateral margin with 5-8 submarginal setigerous punctures (fig. 7); pronotal disc undivided into lobes, weakly and sparsely punctate, a few punctures present in lateral parts and behind the middle.

Scutellum of the same colour as pronotal disc, its puncturation well visible, punctures larger and coarser than those on pronotum.

Corium brown or dark brown, lighter in shade than scutellum, distal half of both exocorium and clavus pale brown; the latter with two incomplete and one complete (between the previous two) rows of punctures; mesocorium with two rows of punctures parallel to clavo-corial suture, mesocorial disc moderately punctate with punctures smaller than those on scutellum; exocorium paler and with dark well visible punctures; costa entirely raised, with a single setigerous puncture (fig. 7); membranal suture slightly bisinuate, membrane semihyaline, pale brown with dark brown irregular patches, its apex extending beyond the tip of abdomen.

Propleuron polished, dark brown or blackish brown; depression with a few coarse punctures; evaporatoria typical of the genus.

Abdominal sternites dark brown or blackish brown, polished, almost totally impunctate, only lateral parts slightly dulled by numerous wrinkles and striae around spiracles.

Legs brown, spines blackish brown, tarsi yellowish brown.

Measurements (in mm) (females only): body length 6.63-6.83; body width 3.78-3.89; head length 1.00-1.04; head width 1.74-1.79; pronotum length 1.95-2.17; pronotum width 3.49-3.57; scutellum length 2.49-2.61; scutellum width 2.27-2.39; antennal segments: 0.25-0.28 : 0.39-0.42 : 0.40-0.46 : 0.53-0.54 : 0.59-0.63.

TYPE MATERIAL

Holotype female: Tiwaka (Poindimié), 20m alt., 23.XI.1983, L. MATILE; Muséum Paris, Nouvelle Calédonie, Mission D. & L. MATILE, nov. déc. 1983 (MNHN).

Two paratype females: Nouvelle-Calédonie, Env. Poindimié, Michel BOULARD rec.; Muséum Paris, 27.II.1990; Piège limineux (MNHN, JAL).

ETYMOLOGY

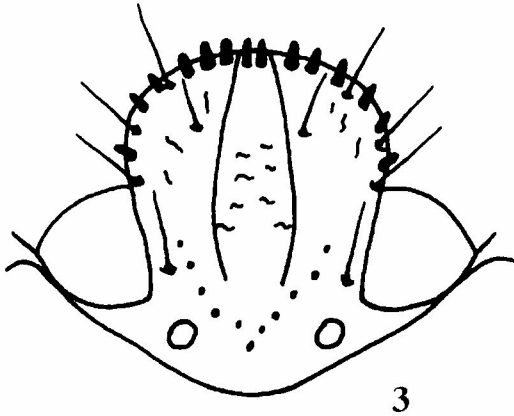
The new species is named after Dr. L. MATILE of MNHN Paris, the collector of the holotype.

Teabooma princeps DISTANT

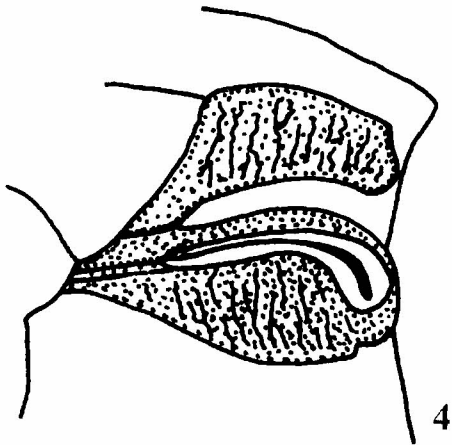
Teabooma princeps DISTANT, 1914: 373; LIS 1995: 146, 1996: 230.

MATERIAL EXAMINED

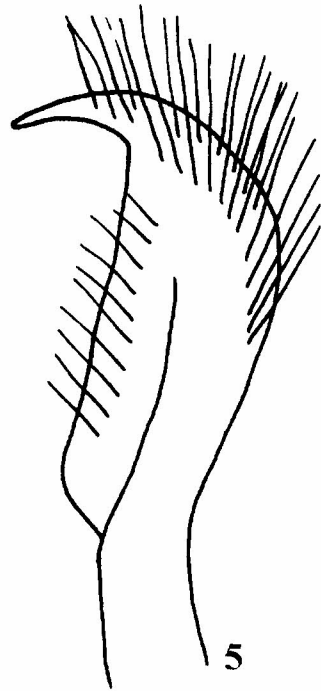
1 male 1 female: New Caledonia, Mt Rembai, 650 m, 9 May 1984, G. MONTEITH & D. COOK (QM, JAL); 1 female: New Caledonia, Table Unio, 700-1000m, 10 May 1984, G. MONTEITH & D. COOK (QM); 1 male, New Caledonia, Mts Koghis, 400m, 26 May 1984, G. MONTEITH & D. COOK (QM); 1 female: Nouvelle-Calédonie, Pic d'Amoa, 21.II.1993, M. BOULARD réc. (JAL); 1 female: Nouvelle-Calédonie, 3 km WNW Col d'Amieu, N La Foa, 450-550m, forêt sempervirente, II-1994, P. GRANDCOLAS réc (MNHN); 1 female: Nouvelle-Calédonie, 12.III.1986, S. BOUDINOT réc. (MNHN).



3



4



5

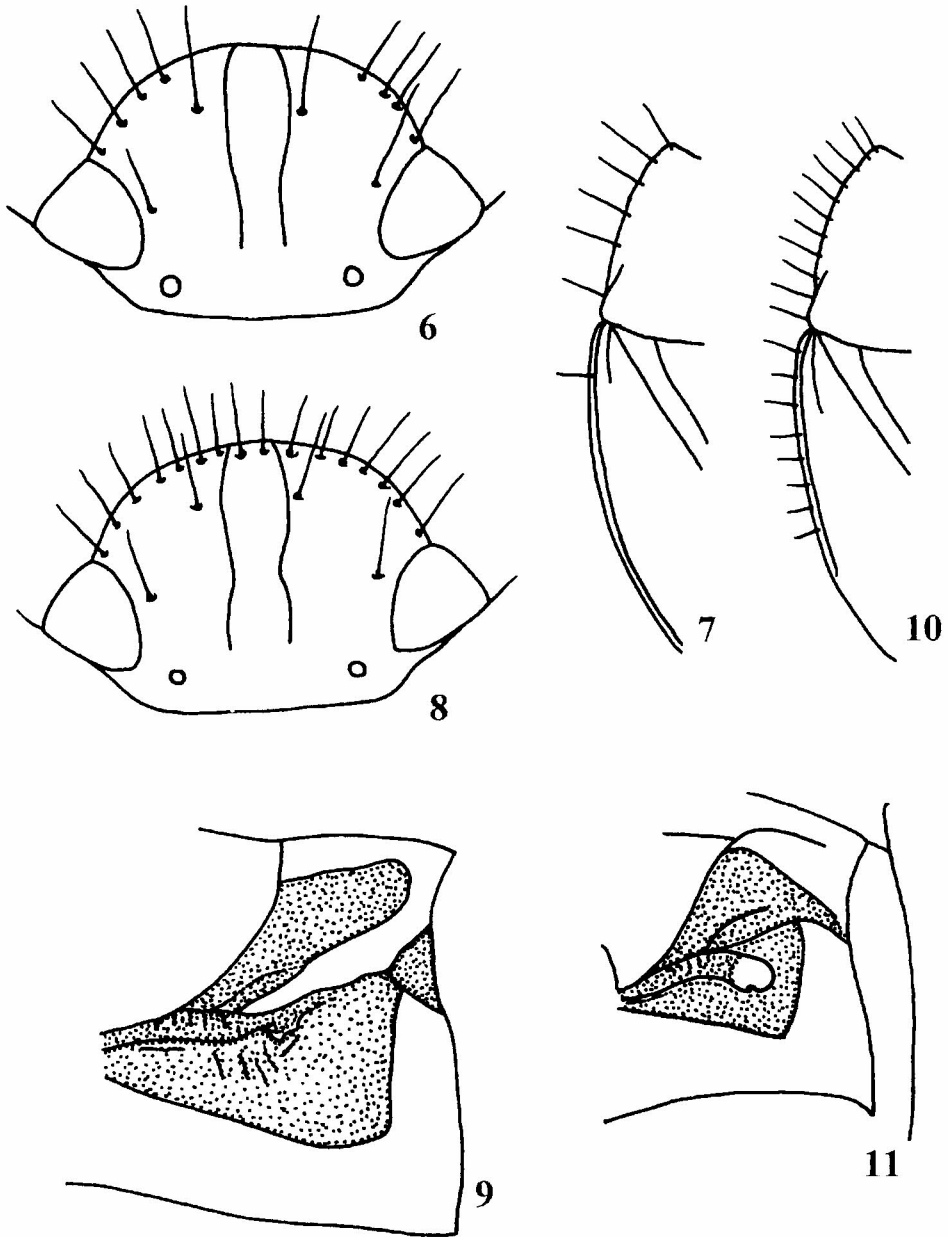
3-5. *Chilocoris neocaledonicus*: 3 - head; 4 - evaporatoria; 5 - paramere

DISTRIBUTION

Known only from New Caledonia.

A KEY TO THE SPECIES OF *CYDNIDAE* KNOWN FROM NEW CALEDONIA

1. Antennae 4-segmented, 2nd segment very long 2.
- Antennae 5-segmented, 2nd segment shorter than or as long as the 3rd 4.
2. Body length exceeding 16 mm; ocelli absent; corium with clavo-corial suture absent and lateral parts (exocorium) directed upwards; scutellum almost flat *Teaboma princeps*
- Body length not exceeding 16 mm (reaching at most about 13 mm); ocelli present; corium with clavo-corial suture present and lateral parts (exocorium) directed downwards; scutellum distinctly convex 3.
3. Costa narrow, bearing a single setigerous puncture basally; tibiae entirely or at least in basal half yellow; lateral margins of pronotum of the same colour as pronotal disc, but posterolateral angles yellow; exocorium yellow or yellowish brown, distinctly lighter than mesocorium; body elongated *Adrisa flavomarginata*
- Costa broad, without setigerous punctures; tibiae brown, of the same colour as femora; lateral margins of pronotum yellow or yellowish brown, distinctly lighter than pronotal disc, posterolateral angles without any yellow markings; exocorium of the same colour as mesocorium; body ovate *Adrisa numeensis*
4. Scutellum short, broader than long, not reaching half length of hemelytra; submargins of head with a row of setigerous punctures bearing pegs and hair-like setae (fig. 3); 2nd antennal segment minute; peritreme extending laterally as very long, elevated and polished lobe (fig. 4) *Chilocoris neocaledonicus*
- Scutellum longer than broad, extending beyond half length of hemelytra; submargins of head with a row of setigerous punctures bearing only hair-like setae (figs. 6 & 8); 2nd antennal segment not minute; peritreme short, its apex not extending laterally as very long, elevated and polished lobe 5.
5. Umbones of pronotum not swollen, its posterolateral margins visible in dorsal view; evaporative area on mesopleuron entirely dulled (fig. 11); body smaller, elongated in outline *Fromundus pygmaeus*
- Umbones of pronotum strongly swollen, its posterolateral margins not visible in dorsal view (figs. 7 & 10); evaporative area on mesopleuron bearing polished wedge-shaped band (fig. 9); body larger, ovate in outline 6.
6. Clypeus with a pair of subapical setigerous punctures (fig. 8); costa with 3-4 setigerous punctures; pronotum densely punctate *Macroscytus australis*
- Clypeus without subapical setigerous punctures (fig. 6); costa with a single setigerous puncture basally; pronotum almost impunctate or weakly punctate *Macroscytus matilei*



6-7. *Macroscytus matilei*; 8-9. *M. australis*; 10 - *M. piceus*; 11. *Fromundus pygmaeus*: 6, 8 - head; 9, 11 - evaporatoria; 7, 10 - lateral body margins

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