# The species of *Platydema* Laporte & Brullé (Coleoptera: Tenebrionidae) from New Guinea and the Moluccan Islands, with descriptions of 11 new species[1]

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Abstract

The species of the genus *Platydema* Laporte & Brullé, 1831 (Coleoptera: Tenebrionidae: Diaperini) from New Guinea and the Moluccan Islands are revised. The diagnostic characters are figured, a species key for all 27 species is compiled. – New species: *Platydema bacanicum* **n. sp.**, *P. cyclopsicum* **n. sp.**, *P. djuremnaicum* **n. sp.**, *P. halmahericum* **n. sp.**, *P. kaiense* **n. sp.**, *P. papuanum* **n. sp.**, *P. pseudofuligineum* **n. sp.**, *P. seramicum* **n. sp.**, *P. skalei* **n. sp.**, *P. wamenaicum* **n. sp.**, *P. weigeli* **n. sp.** – New synonym: *Platydema gebieni* Kaszab, 1939 **n. syn.** = *Platydema striolatum* Kaszab, 1939. – New combination: *Platydema confusum* (Kaszab, 1939) **n. comb.** from *Alphitophagus*. – Lectotype designations are given for *Alphitophagus confusus* Kaszab, 1939, *Platydema biroi* Kaszab, 1939, *P. denticapitis* Kaszab, 1939, *P. gebieni* Kaszab, 1939, *P. globigerum* Kaszab, 1939, and *P. hastatum* Kaszab, 1939.

K e y w o r d s : Coleoptera, Tenebrionidae, Diaperini, *Platydema*, New Guinea, Moluccan Islands, new species, taxonomy, species key.

Zusammenfassung

Die Arten der Gattung *Platydema* Laporte & Brullé, 1831 (Coleoptera: Tenebrionidae: Diaperini) von Neu Guinea und den Molukken werden revidiert. Die diagnostischen Merkmale werden abgebildet, ein Bestimmungsschlüssel für alle 27 Arten wird aufgestellt. – Neue Arten: *Platydema bacanicum* **n. sp.**, *P. cyclopsicum* **n. sp.**, *P. djuremnaicum* **n. sp.**, *P. halmahericum* **n. sp.**, *P. kaiense* **n. sp.**, *P. papuanum* **n. sp.**, *P. pseudofuligineum* **n. sp.**, *P. seramicum* **n. sp.**, *P. skalei* **n. sp.**, *P. wamenaicum* **n. sp.**, *P. weigeli* **n. sp.** – Neues Synonym: *Platydema gebieni* Kaszab, 1939 **n. syn.** = *Platydema striolatum* Kaszab, 1939. – Neue Kombination: *Platydema confusum* (Kaszab, 1939) **n. comb.** von *Alphitophagus*. – Lectotypen werden festgelegt für *Alphitophagus confusus* Kaszab, 1939, *Platydema biroi* Kaszab, 1939, *P. denticapitis* Kaszab, 1939, *P. gebieni* Kaszab, 1939, *P. globigerum* Kaszab, 1939 und *P. hastatum* Kaszab, 1939.

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## 1 Introduction

In continuation of my previous contributions on the taxonomy and distribution of species of the genus *Platydema* Laporte & Brullé, 1831 (Schawaller 2003, 2004a, 2004b) the present paper deals with the 27 species (including 11 new species) known from New Guinea including small adjacent islands (Japen, Salawati, Biak, Batanta) and from the Moluccan Islands (major islands Halmahera, Seram, Buru, Ambon, Ternate, Aru Islands, Kai Islands) (Fig. 1). Species occuring exclusively on the Pacific Islands are not considered here, and all species (except *P. fuligineum* for comparative purposes) described from Australia are not included as well, although biogeographic relationships may exist. The terms New Guinea and the Moluccan Islands are used in a physical geographical sense (the Moluccan Islands and West Papua belong politically to Indonesia, the eastern Papua New Guinea is an independent state).

The treated species have been described in various papers (Champion 1893; Gebien 1922, 1925; Kaszab 1939; Kulzer 1957) and have never been revised in a comprehensive way. The species characters within the genus have been discussed in my previous contributions (Schawaller, 2003, 2004a, 2004b). All species are adapted to fungal habitats and may be considered as one of the indicator species for mature forests, which are endangered worldwide.

The distributional data in this paper are not just collected from the labels alone but are partly completed by additional data for a better localization and translated in

[1] Contributions to Tenebrionidae, no. 70. – For no. 69 see Stuttgarter Beiträge zur Naturkunde A, N. S. 1: 387–411 (2008).

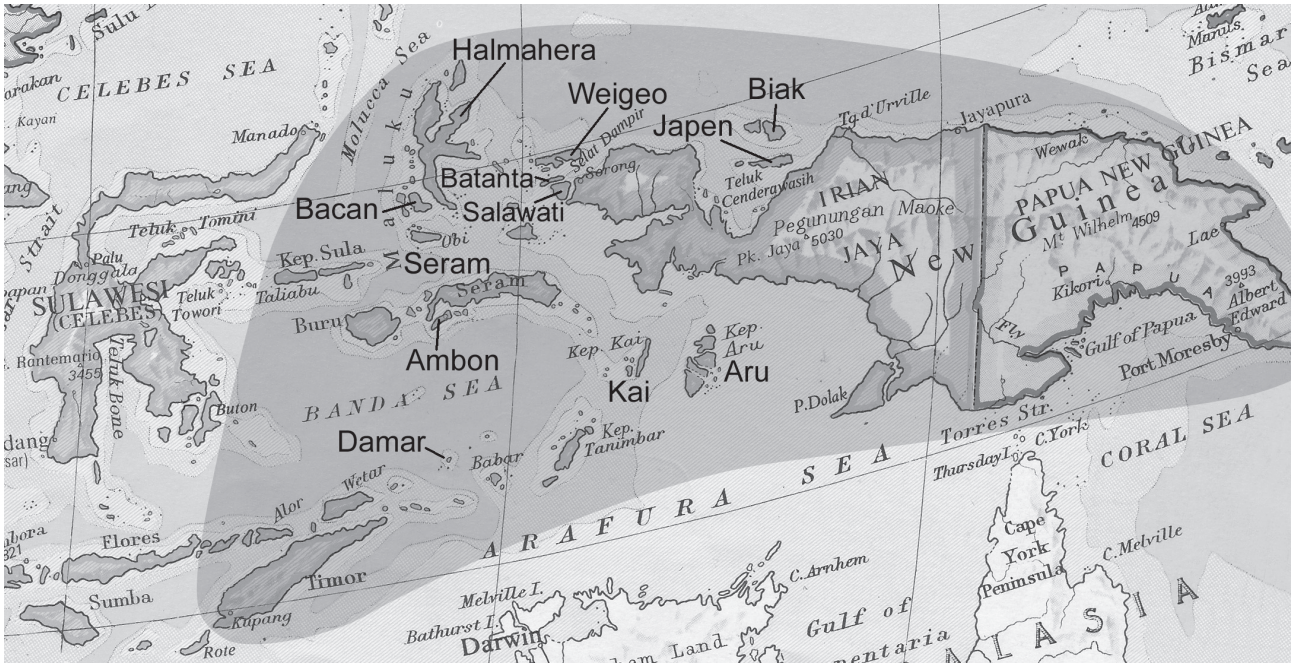


**Fig. 1.** The investigated area of New Guinea including small adjacent islands with records of *Platydema* (Biak, Japen, Waigeo, Salawati, Batanta) and the Moluccan Islands (Halmahera, Bacan, Seram, Ambon, Damar, Aru, Kai).

several cases from other languages into English. The old German colonial names have been listed (in quotation marks), when no recent locality name was available. The Indonesian (western) part of New Guinea is listed herein consequently as West Papua, even if older specimens are labelled with Irian Jaya. Specimens from the Indonesian provinces Maluku and/or Maluku Utara, even if labelled so, are listed herein consequently under Moluccan Islands.

In all cases, in which the original descriptions are based on an unspecified number of syntypes (independent from the labelling), lectotypes are designated herein in order to fix a single name-bearing type and thus to define the species, according to Article 74.7.3 of the International Code of Zoological Nomenclature.

Acronyms of depositories

| | |
|---|---|
| BMNH | The Natural History Museum, London (Max Barclay) |
| CASH | Collection André Skale, Hof/Saale |
| CKAO | Collection Dr. Kiyoshi Ando, Osaka |
| CRGT | Collection Dr. Roland Grimm, Tübingen |
| HNHM | Hungarian Natural History Museum, Budapest (Dr. Ottó Merkl) |
| NME | Naturkundemuseum, Erfurt (Matthias Hartmann) |
| SMNS | Staatliches Museum für Naturkunde, Stuttgart |
| ZSM | Zoologische Staatssammlung, München (Dr. Martin Baehr, Prof. Dr. H. J. Bremer) |

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The photographs were taken by Johannes Reibnitz (Stuttgart) with a Leica DFC320 digital camera on a Leica MZ16 APO microscope and subsequently processed by him with Auto-Montage (Syncroscopy) software. He also scanned my drawings and mounted them on plates.

## 2 The previously known Papuan and Moluccan species of *Platydema*

### *Platydema asymmetricum* Champion, 1893 (Figs. 21, 77–79)

New material: Damma Island, leg. J. J. Walker, 7 ex. BMNH (topotypic specimens but not labelled as types; specimens labelled as types not present in BMNH). – Papua New Guinea, Prov. Morobe, "Sattelberg", Huon Golf, 1899, leg. L. Biró, 1 ex. HNHM. – Papua New Guinea, Prov. Morobe, Kaiapit, XII.1978, leg. W. G. Ullrich, 1 ex. ZSM. – Papua New Guinea, Kiunga, 23.VII.–2.VIII.1969, leg. J. Balogh, 1 ex. HNHM. – West Papua, Prov. Paniai, Epomani, km 145, 550–750 m, 15.–16.I.1996, leg. A. Riedel, 2 ex. ZSM. – West Papua, Japen Island, Kontiunai, 600–700 m, 23.XII.2000, leg. A. Riedel, 2 ex. SMNS. – West Papua, Prov. Raja Ampat, Salawati Island, Kaliam, 22.I.2004, leg. A. Weigel, 2 ex. NME, 2 ex. CRGT. – Solomon Islands, Ysabel Island, Rasa, 20.VIII.1963, leg. P. Greenslade, 5 ex. BMNH, 1 ex. SMNS.

Distribution: Damar (= Damma) Island NE of Timor (type locality), New Guinea (KASZAB 1939), Solomon Islands (new record).

### *Platydema biroi* Kaszab, 1939
(Figs. 17, 65–67)

Studied type material: Papua New Guinea, Prov. Morobe, "Sattelberg", Huon Golf, 1899, leg. L. BIRÓ, ♂ "type" HNHM, designated herewith as lectotype. – Same data as before, 1 ♂ "cotype", now paralectotype.

New material: Papua New Guinea, Prov. Morobe, Kaiapit, XII.1978, leg. W. G. ULLRICH, 1 ex. SMNS. – Papua New Guinea, Prov. Morobe, Wau, Ecological Station, 11.XI.1988, leg. R. HOLYNSKI, 1 ♀ HNHM (identification of female doubtful).

Distribution: New Guinea (type locality "Sattelberg").

### *Platydema confusum* (Kaszab, 1939) **n. comb.**
(Figs. 5, 33–35)

*Alphitophagus confusus* Kaszab, 1939.

Studied type material: Papua New Guinea, Simbang, Huon Golf, 1899, leg. L. BIRÓ, ♂ "type" of *Alphitophagus confusus* HNHM, designated herewith as lectotype. – Papua New Guinea, Idenburg River, Prauvenbivak, 1920, leg. W. C. VON HEURN, 1 "cotype" HNHM, now paralectotype.

New material: Papua New Guinea, Port Moresby, Brown River, 17.–18.VIII.1968, leg. I. LOKSA, 2 ex. HNHM, 1 ex. SMNS. – Papua New Guinea, Port Moresby, 4.–18.IV.1983, leg. M. HOLYNSKA, 1 ex. HNHM. – Papua New Guinea, Kokoda, 1200 ft., VIII.1933, leg. L. E. CHEESMAN, 3 ex. BMNH.

New combination: The species was described by KASZAB (1939) as *Alphitophagus confusus*, but it shares all characters of *Platydema*. The type series in the collection of the HNHM was already labelled as *Platydema* and consequently transferred to this genus by the late Dr. KASZAB.

Distribution: New Guinea (type locality Simbang).

### *Platydema denticapitis* Kaszab, 1939
(Figs. 16, 62–64)

Studied type material: Papua New Guinea, Erima, Astrolabe Bay, 1897, leg. L. BIRÓ, ♂ "type" HNHM, designated herewith as lectotype. – Same data, ♀ "type", 1 ♀ "cotype" HNHM, now paralectotypes. – Papua New Guinea, "Stephansort", Astrolabe Bay, 1898, leg. L. BIRÓ, 1 ♂ "cotype" HNHM, now paralectotype.

New material: Papua New Guinea, Mt. Lamington, 1300–1500 ft., leg. C. T. MCNAMARA, 2 ex. BMNH. – Papua New Guinea, Kiunga, 23.VII.–2.VIII.1969, leg. J. BALOGH, 4 ex. HNHM. – Papua New Guinea, Prov. New Ireland, Hans Meyer Range, 60 km SE Namatanai, Hirudan River, 50 m, 9.III.2000, leg. A. WEIGEL, 1 ex CRGT. – West Papua, Jayapura, Sentani, Cyclops Mts., 300 m, 9.–11.VIII.1991, leg. A. RIEDEL, 7 ex. SMNS. – West Papua, Jayapura, Sentani, Cyclops Mts., 300–450 m, 8.VIII.1992, leg. A. RIEDEL, 17 ex. SMNS, 2 ex. CKAO. – West Papua, Jayapura, Sentani, Cyclops Mts., 400–800 m, 7.VIII.1992, leg. A. RIEDEL, 2 ex. SMNS. – West Papua, Baliem Distr., Kangime, 1400–1700 m, 4.IX.1990, leg. A. RIEDEL, 1 ex. SMNS. – West Papua, Manokwari, Gunung Meja, 200 m, 30.XII.2000, leg. A. RIEDEL, 1 ex. SMNS. – West Papua, 120 km S Nabire, Unipo-Ebore, 500 m, 4.I.1996, leg. A. WEIGEL, 1 ex. CRGT.

Distribution: New Guinea (type locality Erima).

### *Platydema detersum* Walker, 1858

New material: Moluccan Islands, Seram, 12 km SE Wahai, Solea, 17.I.–6.II.1997, leg. S. BILÝ, 1 ex. ZSM. – Papua New Guinea, Madang Distr., Finisterre Mts., Moro, 5550 ft., 30.X.–15.XI.1964, leg. M. E. BACCHUS, 1 ex. BMNH. – Papua New Guinea, E Highland Distr., Okapa, 5000 ft., 4.–15.II.1965, leg. M. E. BACCHUS, 2 ex. BMNH. – Papua New Guinea, Wau, Bishop Museum Field Station, 15.–25.IV.1965, leg. J. BALOGH & J. SZENT-IVÁNY, 7 ex. HNHM. – Papua New Guinea, Prov. Morobe, Aseki, 1000–1300 m, 13.X.1992, leg. A. RIEDEL, 1 ex. SMNS. – West Papua, Fak Fak, 2 km E airstrip, 16.–18.VII.1996, leg. P. SCHÜLE & P. STÜBEN, 1 ex. SMNS. – West Papua, Paniai, Mulia, Wuyuneeri, 1900–2200 m, 6.–7.VII.1994, leg. A. RIEDEL, 2 ex. SMNS. – West Papua, Jayapura, Sentani, Cyclops Mts., 300 m, 19.–21.IX.1990, leg. A. RIEDEL, 6 ex. SMNS. – West Papua, Manokwari, Ransiki, Mayuby, 26.–30.IX.1990, leg. A. RIEDEL, 1 ex. SMNS. – West Papua, Testega, 1200 m, 31.III.–12.IV.1993, leg. A. RIEDEL, 2 ex. SMNS. – West Papua, Wandammen Bay, Wasior, 100–200 m, 7.–9.I.2001, leg. A. RIEDEL, 1 ex. SMNS. – West Papua, Biak Island, Korim, Roidifu, 100 m, 2.II.2001, leg. A. RIEDEL, 1 ex. SMNS. – West Papua, Biak Island, Korim, Nernu, 100–150 m, 1.–4.II.2001, leg. A. RIEDEL, 2 ex. SMNS. – West Papua, Biak Island, 10 km N Bosnik, 13.II.1998, leg. A. WEIGEL, 1 ex. CRGT. – West Papua, Japen Island, 20 km E Serui, 2.–5.I.1999, leg. A. WEIGEL, 1 ex. NME, 1 ex. CRGT. – West Papua, 170 km S Nabire, Epomani, 1150 m, 6.I.1996, leg. A. WEIGEL, 1 ex. CRGT. – West Papua, Prov. Raja Ampat, Salawati Island, Kaliam, 21.–24.I.2004, leg. A. SKALE, 2 ex. NME, 1 ex. CRGT. – West Papua, Prov. Raja Ampat, Batanta Island, Waywesar, 18.I.2004, leg. A. WEIGEL, 1 ex. NME.

Remarks: Figured by SCHAWALLER (2003).

Distribution: Widespread in SE Asia, Philippines, New Guinea (GEBIEN 1922 under synonym *Platydema laticorne* Fairmaire, 1882), Moluccan Islands (new record), Renell Island, Australia.

### *Platydema furcaticorne* Gebien, 1925
(Fig. 7)

New material: Moluccan Islands, Kai (= Key) Island, 1 ♀ HNHM. – West Papua, Prov. Paniai, Epomani, km 145, 550–750 m, 15.–16.I.1996, leg. A. RIEDEL, 1 ♂ SMNS.

Remarks: The identification of the above mentioned female is not quite sure, because the characteristic shape of the male head with two long and narrow horns (GEBIEN 1925: pl. 1, fig. 8) cannot be compared. The colour pattern of the elytra with a single yellow transverse band coincides with the pattern of the holotype (GEBIEN 1925: pl. 1, fig. 9). The aedeagus of this species is still unknown (the above listed male is not figured because it was added during proof). The elytral colour pattern is identical with that of *Platydema halmahericum* n. sp., however this species has an unarmed male head.

Distribution: Moluccan Islands (type locality Aru Islands), New Guinea.

*Platydema globigerum* Kaszab, 1939
(Figs. 15, 59–61)

Studied type material: Papua New Guinea, Prov. Morobe, "Sattelberg", Huon Golf, 1899, leg. L. Biró, ♂ "cotype" HNHM, designated herewith as lectotype. – Same data, 1 ♀ "cotype" HNHM, now paralectotype.

Distribution: New Guinea (type locality "Sattelberg").

*Platydema hastatum* Kaszab, 1939
(Figs. 18, 68–70)

Studied type material: Papua New Guinea, Prov. Morobe, "Sattelberg", Huon Golf, 1899, leg. L. Biró, ♂ "type" HNHM, designated herewith as lectotype (aedeagus fragmentary). – Same data, 1 ♀ "type", 1 ♀ HNHM, now paralectotypes.

New material: Papua New Guinea, Prov. Morobe, 10 km S Garaina, Saureri, 1800–2150 m, 26.III.1998, leg. A. Riedel, 4 ex. ZSM, 1 ex. SMNS. – West Papua, Jayawijaya, Emdoman, 900–1200 m, 29.IX.1993, leg. A. Riedel, 1 ♀ SMNS. – West Papua, Merauke, Senggo, trail to Abau, 100 m, 15.–17.VI.1994, leg. A. Riedel, 1 ♂ SMNS. – West Papua, Prov. Manokwari, Membey, 800–1200 m, 31.VIII.1991, leg. A. Riedel, 2 ♀♀ SMNS. – West Papua, 47 km S Kwatisore, Urie Camp, E Nabrie, 5.III.1998, leg. A. Weigel, 1 ♀ CRGT.

Distribution: New Guinea (type locality "Sattelberg").

*Platydema novaeguineense* Gebien, 1922
(Figs. 8, 39–41)

New material: Papua New Guinea, "Friedrich-Wilhelmshafen" (= Madang), without date, 1 ex. HNHM. – Papua New Guinea, Prov. Morobe, Gurakor, XII.1979, leg. W. G. Ullrich, 1 ex. CKAO. – West Papua, Jayapura, Sentani, Cyclops Mts., 300 m, 19.–21.IX.1990, leg. A. Riedel, 6 ex. SMNS. – West Papua, Jayapura, Sentani, Cyclops Mts., 300–500 m, 31.X.1992, leg. A. Riedel, 1 ex. SMNS. – West Papua, Baliem Distr., Kangime, 1400–1700 m, 4.IX.1990, leg. A. Riedel, 1 ex. SMNS. – West Papua, Manokwari, Gunung Meja, 200 m, 30.XII.2000, leg. A. Riedel, 1 ex. SMNS. – West Papua, Prov. Manokwari, 6 km N Manokwari, Desa Pami, 100 m, 9.III.2007, leg. A. Skale, 2 ex. CASH. – West Papua, Wandammen Bay, Wondiwoi Mts., Wasior, 250–600 m, 4.I.2001, leg. A. Riedel, 2 ex. SMNS. – West Papua, Fak Fak Distr., Yamur lake area, 100 m, IV.1998, leg. M. Balke, 1 ex. NME, 1 ex. CRGT. – West Papua, 120 km S Nabire, Unipo-Ebore, 500 m, 4.I.1996, leg. A. Weigel, 1 ex. CRGT. – West Papua, Prov. Raja Ampat, Batanta Island, Wallebet, 18.–21.I.2004, leg. A. Skale, 1 ex. NME, 1 ex. CRGT. – West Papua, Prov. Raja Ampat, Batanta Island, Yensawai, 16.I.2004, leg. A. Weigel, 1 ex. CRGT. – Solomon Islands, Ysabel Island, 1.III.1962 and 20.VIII.1963, leg. P. Greenslade, 2 ex. BMNH.

Distribution: New Guinea (type locality Doré), Solomon Islands (new record).

*Platydema pallidicolle* Lewis, 1894

New material: Moluccan Islands, Halmahera, Buli, Maba, 50–650 m, 8.XI.1999, leg. A. Riedel, 2 ex. SMNS. – Moluccan Islands, Ambon, 20 m, 16.II.1961, leg. A. M. R. Wegner, 1 ex. HNHM. – Moluccan Islands, Seram, Air Besar 6 km E Wahai, 5.XI.1998, leg. O. Mehl, 2 ex. HNHM. – Moluccan Islands, Seram, 12 km SE Wahai, Solea, 16.X.–4.XI.1998, leg. S. Bilý, 1 ex. ZSM. – Papua New Guinea, Torecella Mts., 1700 ft., IV.1939, leg. G. P. Moore, 1 ex. BMNH. – Papua New Guinea, Kiunga, 23.VII.–2.VIII.1969, leg. J. Balogh, 7 ex. HNHM, 1 ex. SMNS. – West Papua, 120 km S Nabire, Unipo-Ebore, 500 m, 4.I.1996, leg. A. Weigel, 1 ex. NME. – West Papua, Japen Island, Kontiunai, 600–700 m, 23.XII.2000, leg. A. Riedel, 6 ex. SMNS. – West Papua, Manokwari, Gunung Meja, 200 m, 30.XII.2000, leg. A. Riedel, 4 ex. SMNS. – West Papua, Japen Island, 20 km E Serui, 2.–5.I.1999, leg. A. Weigel, 1 ex. NME. – Solomon Islands, Guadalcanal Island, 22.IV.1963, leg. P. Greenslade, 1 ex. BMNH.

Remarks: Figured by Schawaller (2004b). Probably, *Platydema townesi* Kulzer, 1957, described from the Caroline Islands, is a junior synonym of this widespread and variable species.

Distribution: Widespread in SE Asia, Japan, Taiwan, Philippines, New Guinea (new record), Moluccan Islands (new record), Solomon Islands (new record).

*Platydema rectum* Kaszab, 1982

New material: Moluccan Islands, Seram, Sepa, 35 km S Masohi, 15.X.1998, leg. O. Mehl, 1 ex. HNHM. – Moluccan Islands, Seram, Unit O, 35 km E Pasahari, 24.–30.X.1998, leg. O. Mehl, 1 ex. HNHM.

Remarks: Illustrated in Schawaller (2004b). In contrast to the studied paratype, both newly collected specimens from Seram possess only a discal spot and not a humeral spot on the elytra, all other characters coincide. This difference in the colour pattern is considered as infraspecific variation.

Distribution: Tiworo Island (SE Sulawesi), Moluccan Islands (new record).

*Platydema simbangense* Kaszab, 1939
(Figs. 14, 56–58)

Studied type material: Papua New Guinea, Simbang, Huon Golf, 1898, leg. J. Biró, ♂ holotype (by monotypy) HNHM.

New material: Papua New Guinea, "Simpsonhafen" (= Rabaul), V.1909, leg. H. Schoede, 2 ex. HNHM. – Papua New Guinea, Prov. Morobe, "Sattelberg", Huon Golf, 1899, leg. L. Biró, 1 ex. HNHM. – Papua New Guinea, Prov. Morobe, S Garaina, 700–1700 m, 21.–22.III.1998, leg. A. Riedel, 1 ex. SMNS. – West Papua, Manokwari, Gunung Meja, 200 m, 24.VIII.1991, leg. A. Riedel, 1 ex. SMNS. – West Papua, Jayapura, Sentani, Cyclops Mts., 300 m, 19.–21.IX.1990, leg. A. Riedel, 26 ex. SMNS. – West Papua, Jayapura, Sentani, Cyclops Mts., 300 m, 9.–11.VIII.1991, leg. A. Riedel, 1 ex. SMNS. – West Papua, Jayapura, Sentani, Cyclops Mts., 400–800 m, 7.VIII.1992, leg. A. Riedel, 1 ex. SMNS. – West Papua, Iba, 1300 m, 7.–8.IV.1993, leg. A. Riedel, 1 ex. SMNS. – West Papua, Testega, 1200 m, 31.III.–12.IV.1993, leg. A. Riedel, 1 ex. SMNS. – West Papua, Anggi, Tetaho, Kosmena, 1400–1750 m, 26.–28.III.1993, leg. A. Riedel, 2 ex. SMNS. – Solomon Islands, Guadalcanal Island, Kukum, 2.II.1963, leg. P. Greenslade, 1 ex. BMNH. – Solomon Islands, Guadalcanal Island, Mt. Austen, 19.IX.1962, leg. P. Greenslade, 1 ex. BMNH, 1 ex. SMNS.

Remarks: The specimens show an extraordinary range of the body length from 4.3 mm (holotype) up to 6.0 mm.

Distribution: New Guinea (type locality Simbang), Solomon Islands (new record).

*Platydema striolatum* Kaszab, 1939
(Figs. 19, 71–73)

*Platydema gebieni* Kaszab, 1939 **n. syn.**

Studied type material: Papua New Guinea, "Stephansort", Astrolabe Bay, 1900, leg. L. Biró, ♂ holotype (by monotypy) of *striolatum* HNHM. – Same data, ♂ "type" of *gebieni* HNHM, designated herewith as lectotype. – Same data, ♀ "type" of *gebieni* HNHM, now paralectotype.

New material: West Papua, Manokwari, Gunung Meja, 300 m, 22.–23.IX.1990, leg. A. Riedel, 1 ex. HNHM. – West Papua, Manokwari, Gunung Meja, 200 m, 30.XII.2000, leg. A. Riedel, 6 ex. SMNS. – W Papua, Prov. Manokwari, 6 km N Manokwari, Desa Pami, 160 m, 9.III.2007, leg. A. Skale, 2 ex. CRGT.

Synonymy: The armature of the male head (the length of the horns and the extent of setation at the apical part) is somewhat variable (as in other species of *Platydema*, independent from the body length): in the ♂ holotype of *Platydema striolatum* the horns are shorter and the setation at the apical part is indistinct, in the ♂ lectotype of *P. gebieni* the right horn is longer and the setation distinct. All other characters coincide, thus both types from the same locality represent only a single species, for which the valid name *Platydema striolatum* Kaszab, 1939 is herewith selected (according to Art. 24.2 ICZN, the fixation of the precedence is up to the first reviser and page priority is not required).

Distribution: New Guinea (type locality "Stephansort").

*Platydema subfascium* Walker, 1858

New material: Moluccan Islands, Ambon, 16.II.1961, leg. A. M. R. Wegner, 1 ex. HNHM (*subfascium* det. Kaszab). – Moluccan Islands, Ambon, Laithatu, Soya, 500 m, 8.XI.1998, leg. O. Mehl, 1 ex. HNHM. – Moluccan Islands, Seram, 12 km SE Wahai, Solea, 31.X.–4.XI.1998, leg. J. Horák, 2 ex. ZSM. – West Papua, Batanta Island, Waywesar, 12.–15.I.2004, leg. A. Skale, 1 ex. CASH, 1 ex. CRGT.

Remarks: Figured by Schawaller (2003). Eventually, *Platydema aries* Pascoe, 1869 from Australia might be a synonym of this widespread species.

Distribution: Widespread in SE Asia, Japan, Taiwan, Philippines, Moluccan Islands (new record), New Guinea (new record).

*Platydema tricuspis* Motschulsky, 1873

New material: Timor, Dilli, 2500 ft., leg. Doherty, 1 ex. BMNH. – Moluccan Islands, Seram, Unit O, 35 km E Pashari, 24.–30.X.1998, collector not labelled, 1 ex. CRGT. – West Papua, Yapen Island, E Serui, 31.VII.1996, leg. N. Ohbayashi, 3 ex. CKAO. – West Papua, Masuni, Manokwari, 11.VIII.1996, leg. N. Ohbayashi, 40 ex. CKAO. – West Papua, 120 km S Nabire, N Unipo, 400 m, 7.I.1996, leg. A. Weigel, 1 ex. CRGT. – West Papua, Prov. Raja Ampat, Salawati Island, Kaliam, 21.–24.I.2004, leg. A. Skale, 2 ex. CRGT. – West Papua, Prov. Raja Ampat, Salawati Island, Kaliam, 22.I.2004, leg. A. Weigel, 2 ex. NME. – West Papua, Prov. Raja Ampat, Batanta Island, Wallebet, 18.–21.I.2004, leg. A. Skale, 1 ex. CRGT. – West Papua, Prov. Raja Ampat, Batanta Island, 12 km W Wallebet, 20.I.2004, leg. A. Weigel, 1 ♀ CRGT. – Papua New Guinea, Prov. Morobe, Kaiapit, XII.1978, leg. W. G. Ullrich, 1 ex. ZSM.

Remarks: Illustrated in Schawaller (2004b).

Distribution: Widespread in SE Asia, Philippines, Timor, New Guinea (Gebien 1922 under synonym *Platydema reflexum* Chevrolat, 1878), Moluccan Islands (new record), Australia.

*Platydema waterhousei* Gebien, 1925

New material: Moluccan Islands, Seram, 35 km E Pasahari, 24.–30.X.1998, leg. O. Mehl, 1 ex. HNHM. – Moluccan Islands, Seram, 35 km E Pasahari, 24.–30.X.1998, leg. J. Horák, 4 ex. CRGT, 2 ex. SMNS. – Moluccan Islands, Seram, 35 km E Pasahari, 24.–30.X.1998, leg. S. Bilý, 1 ex. CRGT.

Variability: The series from the same locality listed above consists of eight specimens, six of them show an aberrant dark pronotum, two possess the "normal" lighter red pronotum. The light colour pattern of the elytra and also the shape of the aedeagus are identical. This colour variability is as yet unknown among several identified specimens of this widespread species. Such a variability might cause some taxonomical problems, see the remarks under *Platydema halmahericum* n. sp. (which could be only a dark insular form/subspecies on Halmahera and New Guinea).

Remarks: Illustrated in Schawaller (2004b).

Distribution: Widespread in SE Asia, Philippines, Moluccan Islands (new record).

## 3 Descriptions of new Papuan and Moluccan species of *Platydema*

*Platydema bacanicum* **n. sp.**
(Figs. 10, 45–47)

Holotype (♂): Moluccan Islands, Bacan Island, Labuha, hotel "Buana Lipu", 12.I.2006, leg. A. Skale, CRGT.

Paratype: Moluccan Islands, Bacan Island, valley 3 km S Labuha, 40 m, 13.I.2006, leg. A. Skale, 1 ex. SMNS.

Etymology: Named after the island Bacan, where the type series was collected.

Description: Body length 4.3–4.5 mm. Dorsal side glabrous and with colour pattern, without metallic shine; head dark ferrugineous; pronotum reddish with dark ferrugineous parts along basal and distal margins; elytra dark ferrugineous, in the anterior third with a light transverse band interrupted at the suture, before apices each elytron with a round light spot; tibiae and tarsi lighter (Fig. 10). Head with regular fine punctation. Head in males (Fig. 45): frons medially with a feeble tubercle. Proportions of the antennal segments as in Fig. 46, antennomere

3 short. Pronotum convex, with distinctly finer and sparser punctation than on head, with feeble basal foveae. Basal margin completely unbordered, distal and lateral margins finely and completely bordered; anterior margin not excavated and anterior corners not protruding. Propleura with feeble longitudinal wrinkles, and with short setation. Elytra convex and oval, 1.4 times as long as wide, besides scutellar row and lateral margin with 8 rows of punctures without striae (third row with about 33 punctures). Intervals flat and with nearly invisible punctation, without setation. Abdominal ventrites with short setation, lateral punctures sometimes confluent and surface feebly wrinkled. Legs without peculiarities, male tarsi not dilated, tibiae externally with crenulated indistinct keels. Aedeagus as in Fig. 47.

Diagnosis: The insular *Platydema bacanicum* n. sp. shows similarities to the widespread *Platydema waterhousei* Gebien, 1925 (figured by SCHAWALLER 2004b) concerning body shape and size as well as colour pattern. In *P. waterhousei*, however, the male head is without armature, the frons between the eyes is narrower, the pronotum is narrower (extremely broad in *P. bacanicum* n. sp.) and bears a denser punctation, and the aedeagus is different. *P. ribbei* Gebien, 1925 from Sulawesi is also similar, and its aedeagus is nearly identical, however in *P. ribbei* the pronotum is also narrow and bears a denser punctation than in *P. waterhousei*, but the male head has a long medial horn.

### *Platydema cyclopsicum* **n. sp.**
(Figs. 11, 48–49)

Holotype (♂): West Papua, Jayapura, Sentani, Cyclops Mts., 400–800 m, 7.VIII.1992, leg. A. RIEDEL, SMNS.

Etymology: Named after the Cyclops Mountains, where the holotype was collected.

Description: Body length 4.2 mm. Dorsal side glabrous and with unicoloured blue metallic shine; tibiae and tarsi light (Fig. 11). Head with extremely fine, nearly invisible punctation. Head in males (Fig. 48): frons with two symmetrical long horns, apical parts without setation; clypeus medially without tooth. Proportions of the antennal segments unknown, both antennae missing in the holotype. Pronotum slightly convex, with fine punctation slightly larger than on head, with feeble basal foveae. Basal margin completely unbordered, distal and lateral margins finely and completely bordered; anterior margin feebly excavated and anterior corners not protruding. Propleura with feeble longitudinal wrinkles, and with short setation. Elytra only feebly convex and oval, 1.4 times as long as wide, besides scutellar row and lateral margin with 8 rows of punctures without striae (third row with about 40 punctures). Intervals flat and with similar fine punctation as on pronotum, without setation. Abdominal ventrites with short setation, lateral punctures sometimes confluent and surface wrinkled. Legs without peculiarities, male tarsi not dilated, tibiae externally with crenulated indistinct keels. Aedeagus as in Fig. 49.

Diagnosis: To be recognized by its small body size with unicoloured metallic shine, the male head with two long symmetrical horns without setation, the relatively flat elytra, and the shape of the aedeagus. Most of the other small unicoloured metallic species from New Guinea and adjacent islands are more convex and have the male head either with asymmetrical horns with different setation, or without armature. *Platydema kaiense* n. sp. and *P. seramicum* n. sp. possess also two symmetrical horns on the male head (short in *P. kaiense* n. sp., long in *P. seramicum* n. sp.), but their bodies are more convex, the elytra have convex intervals and either distinct (*P. kaiense* n. sp.) or feeble (*P. seramicum* n. sp.) striae, and the aedeagi are different (Figs. 49, 52, 55).

### *Platydema djuremnaicum* **n. sp.**
(Figs. 23, 83–85)

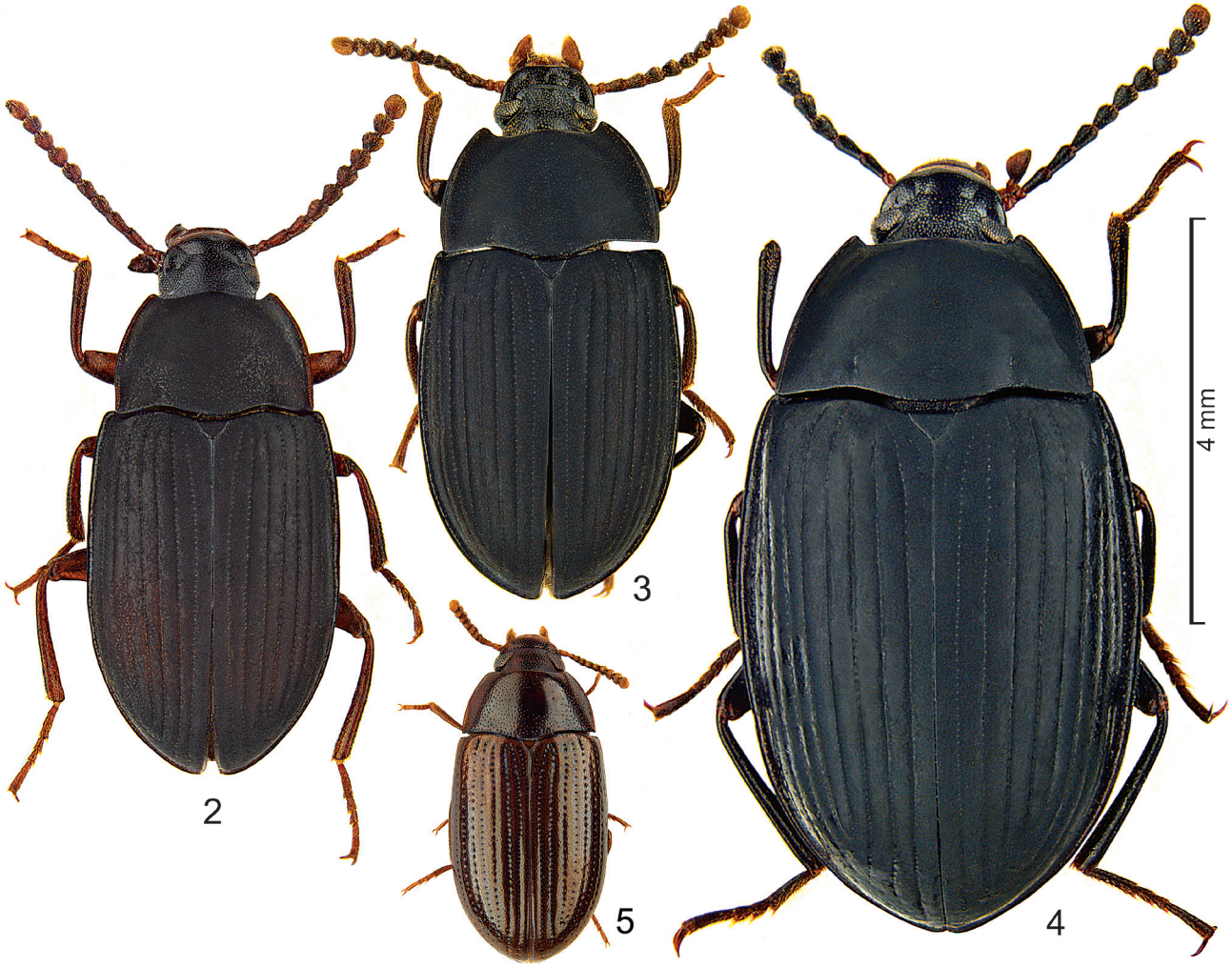
Holotype (♂): West Papua, Prov. Jayawijaya, Djuremna, 1900–2100 m, 9.–11.IX.1992, leg. A. RIEDEL, SMNS.

Paratypes: Same data as the holotype, 4 ex. SMNS, 1 ex. HNHM. – Papua New Guinea, Prov. Eastern Highlands, Kainatu, Onerunka, 21.VIII.1979, leg. W. G. ULLRICH, 1 ex. ZSM.

Etymology: Named after the village Djuremna, in whose vicinity the type series was collected.

Description: Body length 6.5–7.0 mm. Dorsal side glabrous and with colour pattern: head, pronotum and elytra black with distinct green metallic shine; elytra with light transverse humeral spots; tibiae and tarsi somewhat lighter (Fig. 23). Head with extremely fine, nearly invisible punctation. Head in males (Fig. 83): frons with two asymmetrical horns, right horn longer and pointing more upwards, left horn shorter and pointing forwards, apical part of the right horn with distinct setation; clypeus medially with a distinct tooth. Proportions of the antennal segments as in Fig. 84, antennomere 3 short. Pronotum slightly convex, with fine punctation, with feeble basal foveae. Basal margin completely unbordered, distal and lateral margins finely and completely bordered; anterior margin distinctly excavated and anterior corners protruding. Propleura with larger punctation than on pronotum, and with short setation. Elytra convex and oval, 1.4 times as long as wide, besides scutellar row and lateral margin with 8 rows of punctures without striae (third row with about 40 punctures). Intervals flat and with similar fine punctation as on pronotum, without setation. Abdominal ventrites with short setation, lateral punctures sometimes confluent and surface wrinkled. Legs without peculiarities, male tarsi not dilated, tibiae externally with crenulated indistinct keels. Aedeagus as in Fig. 85.

Diagnosis: To be recognized by its large body size, a colour pattern with green-metallic dorsal shine and




**Figs. 2–5.** Dorsal view of *Platydema* male spp. – **2**. *P. fuligineum*, non-type SMNS. **3**. *P. pseudofuligineum* n. sp., holotype SMNS. **4**. *P. papuanum* n. sp., holotype SMNS. **5**. *P. confusum*, non-type SMNS.

light humeral spots on the elytra, the armed male head with asymmetrical shape and setation of the horns, and the shape of the aedeagus. A similar combination of characters does not occur in any other known species of the Oriental and Papuan Regions.

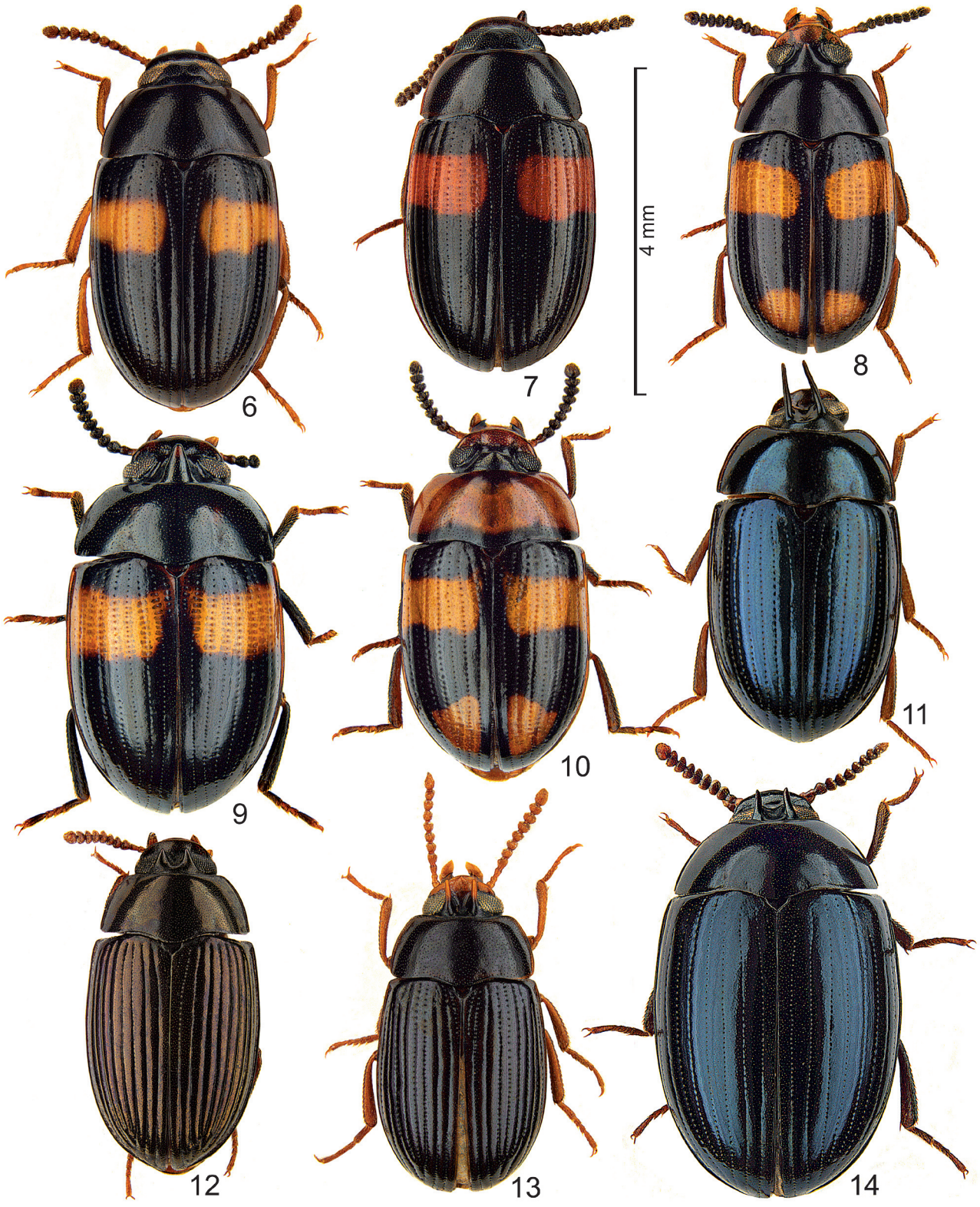
### *Platydema halmahericum* **n. sp.**
(Figs. 6, 36–38)

Holotype (♂): Moluccan Islands, Halmahera, Buli, Maba, 50–650 m, 8.XI.1999, leg. A. Riedel, SMNS.

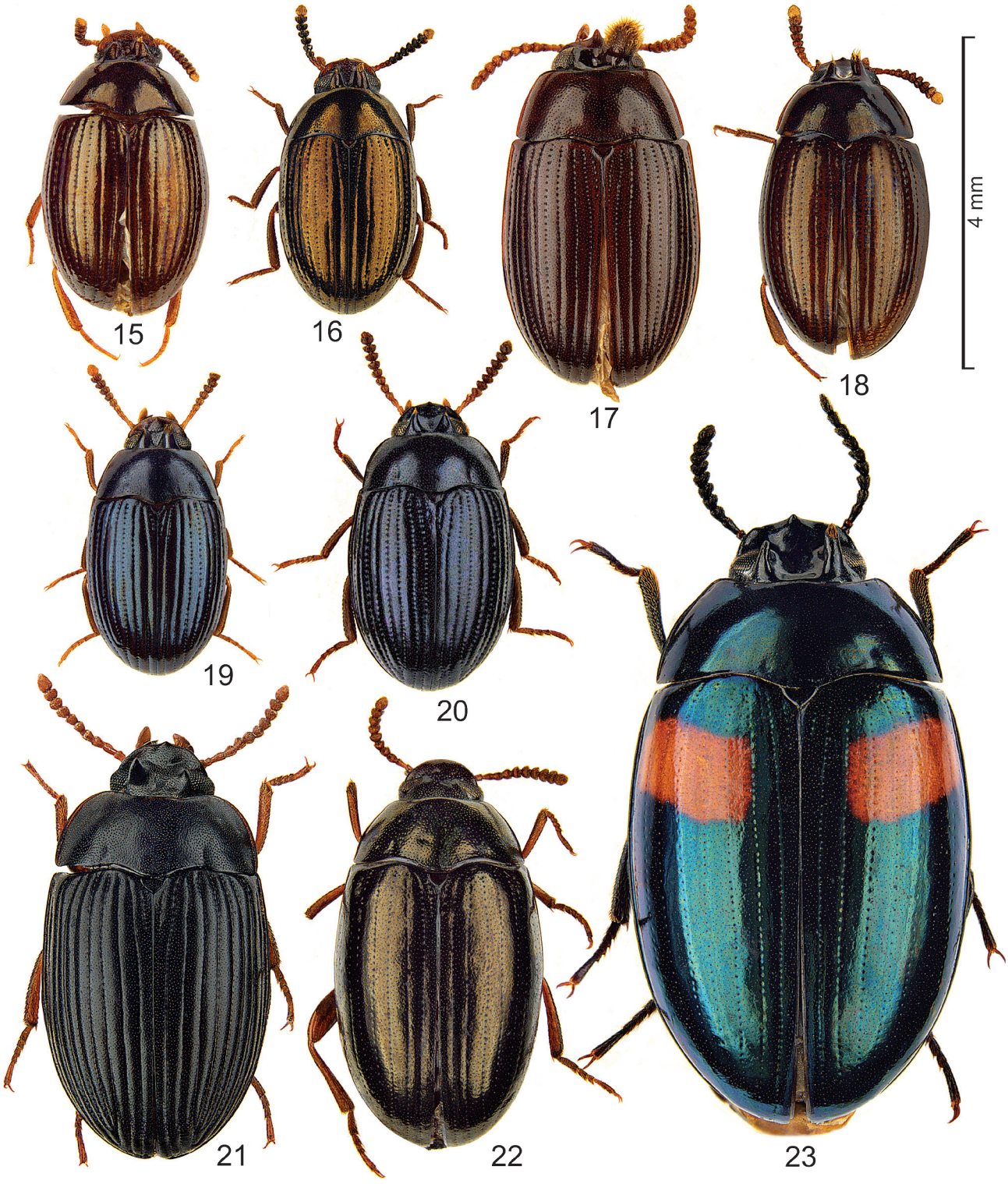
Paratypes: Same data as the holotype, 11 ex. SMNS, 2 ex. CRGT, 2 ex. HNHM. – Papua New Guinea, Kiunga, 23.VII.–2.VIII.1969, leg. J. Balogh, 8 ex. HNHM, 2 ex. SMNS. – West Papua, Prov. Raja Ampat, Waigeo Island, Lopintol, 11.I.2004, leg. A. Skale, 3 ex. CRGT, 1 ex. SMNS.

Etymology: Named after the island Halmahera, where a part of the type series was collected.

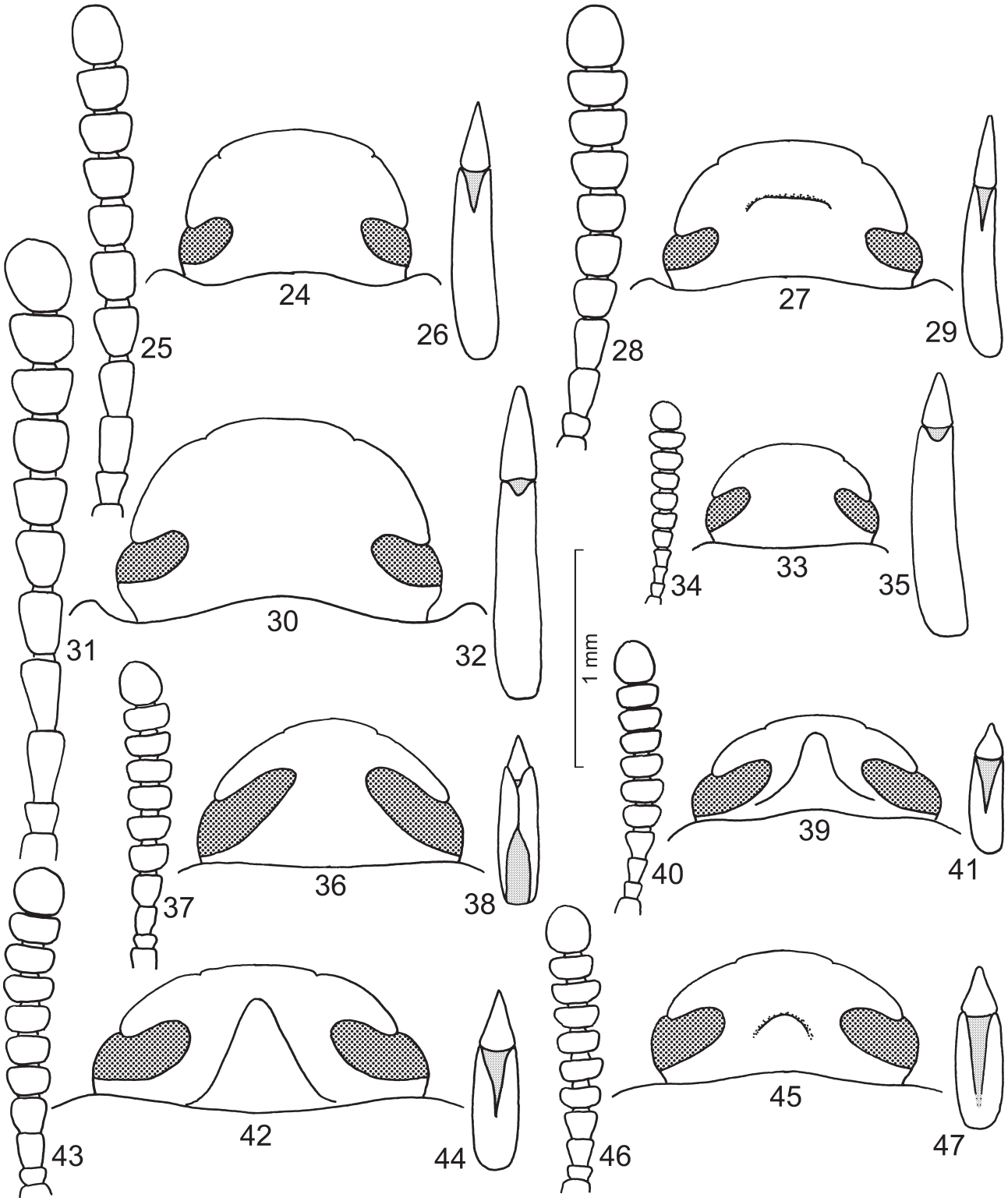
Description: Body length 4.0–4.8 mm. Dorsal side glabrous and with colour pattern: head, pronotum and elytra dark ferrugineous without metallic shine; elytra in the anterior third with a light transverse band interrupted at the suture; tibiae and tarsi light (Fig. 6). Head with regular fine punctation. Head in males (Fig. 36) without sexual characters. Proportions of the antennal segments as in Fig. 37, antennomere 3 short. Pronotum slightly convex, with finer punctation than on head, with feeble basal foveae. Basal margin completely unbordered, distal and lateral margins finely and completely bordered; anterior margin only feebly excavated and anterior corners not protruding. Propleura with larger punctation than on pronotum, and with short setation. Elytra convex and oval, 1.4 times as long as wide, besides scutellar row and lateral margin with 8 rows of punctures without striae (third row with about 40 punctures). Intervals flat or slightly convex



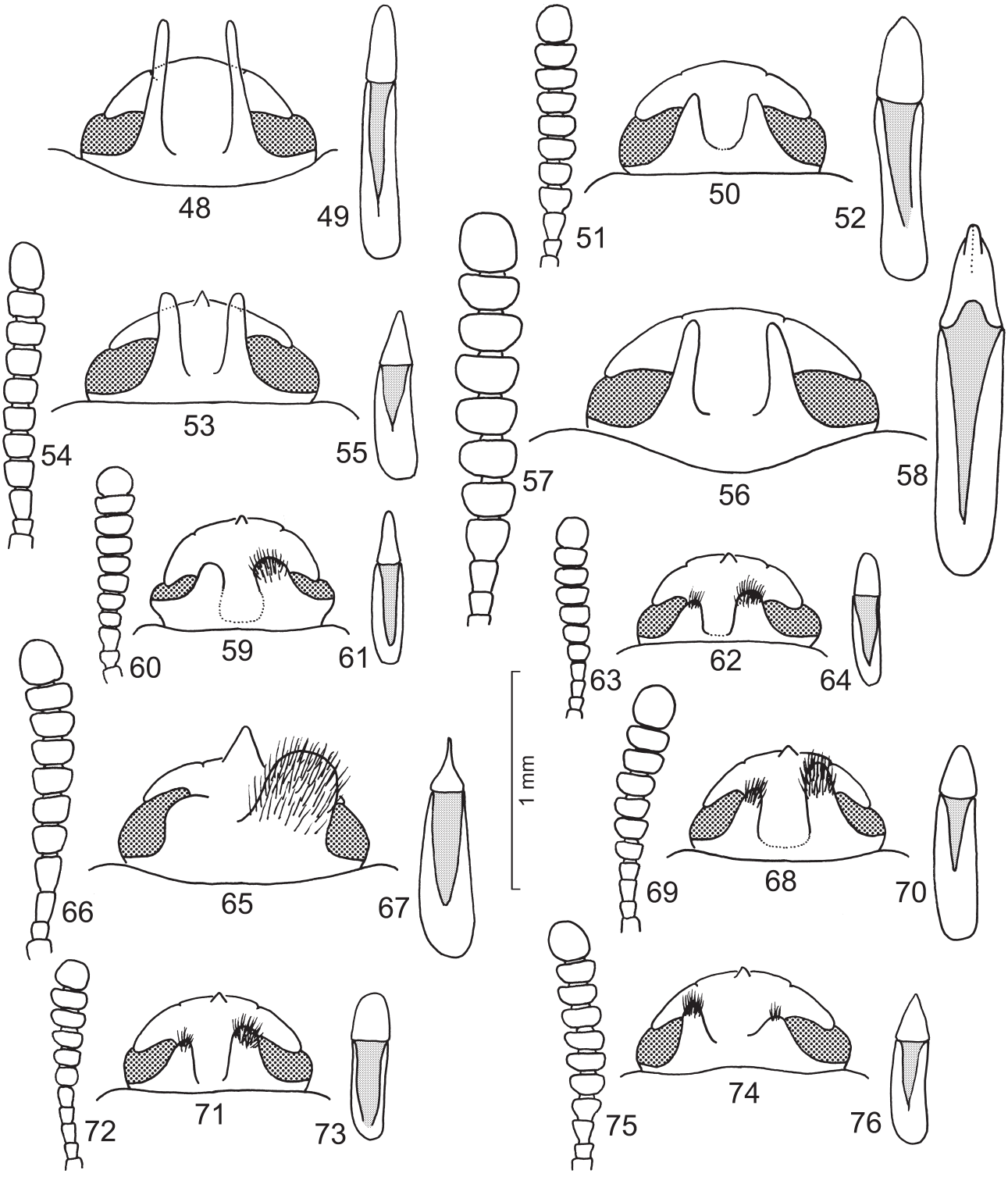

**Figs. 6–14.** Dorsal view of *Platydema* male (6, 8–14) and female (7) spp. – **6**. *P. halmahericum* n. sp., holotype SMNS. **7**. *P. furcaticorne*, non-type HNHM. **8**. *P. novaeguineense*, non-type SMNS. **9**. *P. skalei* n. sp., holotype CRGT. **10**. *P. bacanicum* n. sp., holotype CRGT. **11**. *P. cyclopsicum* n. sp., holotype SMNS. **12**. *P. kaiense* n. sp., holotype HNHM. **13**. *P. seramicum* n. sp., holotype CRGT. **14**. *P. simbangense*, non-type SMNS.



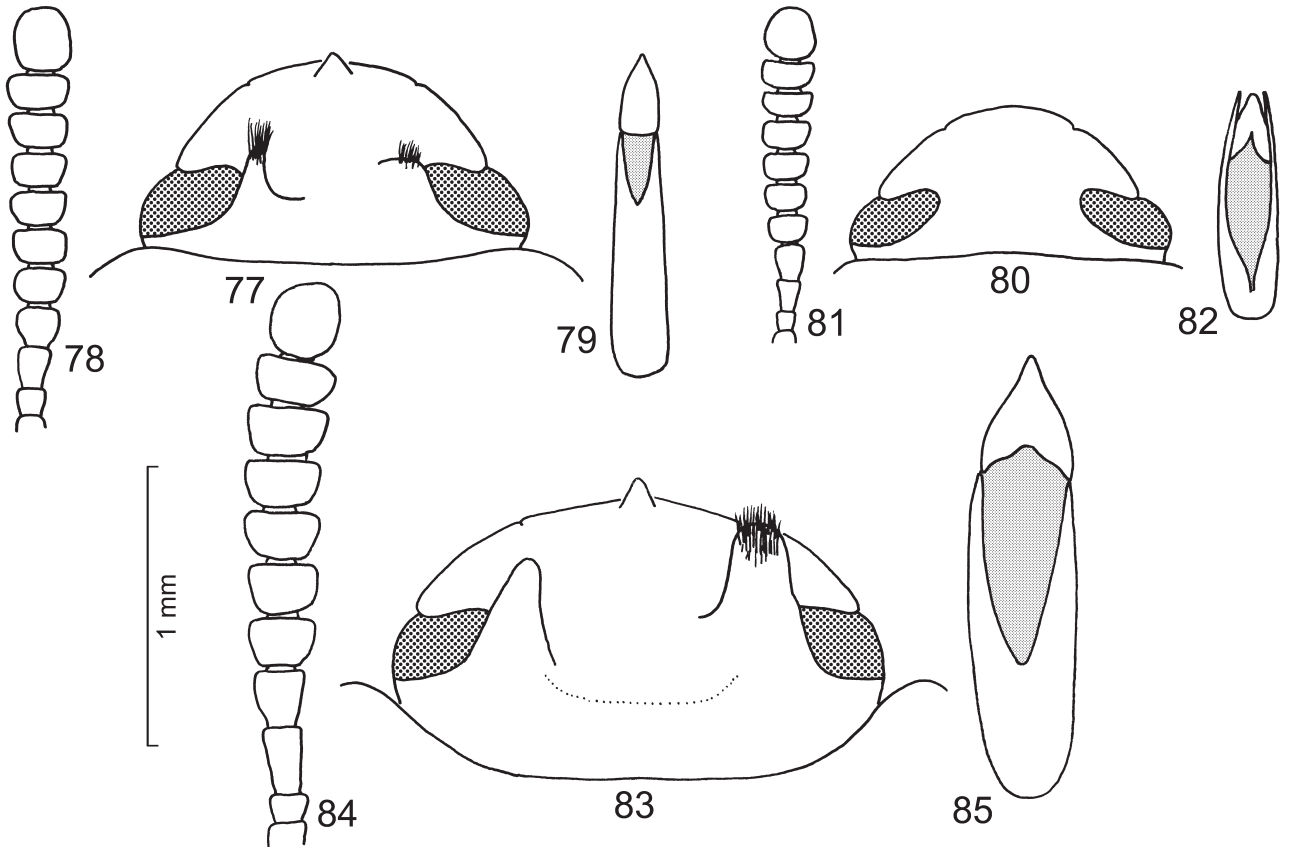

**Figs. 15–23.** Dorsal view of *Platydema* male spp. – **15**. *P. globigerum*, lectotype HNHM. **16**. *P. denticapitis*, non-type SMNS. **17**. *P. biroi*, lectotype HNHM. **18**. *P. hastatum*, lectotype HNHM. **19**. *P. striolatum*, non-type SMNS. **20**. *P. weigeli* n. sp., holotype SMNS. **21**. *P. asymmetricum*, non-type SMNS. **22**. *P. wamenaicum* n. sp., holotype SMNS. **23**. *P. djuremnaicum* n. sp., holotype SMNS.




**Figs. 24–47.** Male head, antenna and aedeagus of *Platydema* spp. – **24–26**. *P. fuligineum*, non-type SMNS. **27–29**. *P. pseudofuligineum* n. sp., holotype SMNS. **30–32**. *P. papuanum* n. sp., holotype SMNS. **33–35**. *P. confusum*, non-type SMNS. **36–38**. *P. halmahericum* n. sp., holotype SMNS. **39–41**. *P. novaeguineense*, non-type SMNS. **42–44**. *P. skalei* n. sp., holotype CRGT. **45–47**. *P. bacanicum* n. sp., holotype CRGT.




**Figs. 48–76.** Male head, antenna and aedeagus of *Platydema* spp. – **48–49**. *P. cyclopsicum* n. sp., holotype SMNS (both antennae missing). **50–52**. *P. kaiense* n. sp., holotype HNHM. **53–55**. *P. seramicum* n. sp., holotype CRGT. **56–58**. *P. simbangense*, non-type SMNS. **59–61**. *P. globigerum*, lectotype HNHM. **62–64**. *P. denticapitis*, non-type SMNS. **65–67**. *P. biroi*, lectotype HNHM. **68–70**. *P. hastatum*, lectotype HNHM. **71–73**. *P. striolatum*, non-type SMNS. **74–76**. *P. weigeli* n. sp., holotype SMNS.




**Figs. 77–85.** Male head, antenna and aedeagus of *Platydema* spp. – **77–79**. *P. asymmetricum*, non-type SMNS. **80–82**. *P. wamenaicum* n. sp., holotype SMNS. **83–85**. *P. djuremnaicum* n. sp., holotype SMNS.

and with finer and sparser punctation than on pronotum, without setation. Abdominal ventrites with short setation, lateral punctures sometimes confluent and surface wrinkled. Legs without peculiarities, male tarsi not dilated, tibiae externally with crenulated indistinct keels. Aedeagus as in Fig. 38.

D i a g n o s i s : *Platydema halmahericum* n. sp. shares with the Oriental widespread *P. planum* Gebien, 1914 the general body size, the unarmed male head and a similar dorsal colour pattern. However, *P. planum* possesses a flatter body shape, the elytra besides the anterior transverse band also with additional light spots before the apices, and a different aedeagus. The Oriental *Platydema monoceros* Gebien, 1925 and *P. aurimaculatum* Gravely, 1915 have a similar oval and convex body and also a similar colour pattern as *P. halmahericum* n. sp., but both have an armed male head with a single distinct horn, and a different aedeagus. *P. furcaticorne* Gebien, 1925 from New Guinea, the Aru and Key Islands and *P. sulawesicum* Schawaller, 2004 from Sulawesi have also a similar colour pattern, but the male heads are armed with two distinct horns, and the aedeagi are different too. Concerning the diagnostic characters see also the following chapter.

V a r i a b i l i t y : Both series from Halmahera and New Guinea differ only by minute characters, considered as infraspecific variations of both insular populations. In the series from Halmahera the elytral light band is slightly narrower and the elytral punctural rows are slightly more impressed, all other characters including the shape of the aedeagus coincide. The four specimens from the island Waigeo are somewhat smaller in average (4.0–4.2 mm) and the elytral intervals are slightly convex (completely flat in the other specimens), the aedeagus is identical.

R e m a r k s : It cannot be fully excluded, that *Platydema halmahericum* n. sp. is only a subspecies or dark form of the widespread *P. waterhousei* Gebien, 1925 (figured by SCHAWALLER 2004b), because the shape of the aedeagus of both species is identical. It is not impossible that the pale-coloured *P. waterhousei* is widespread in southeastern Asia including the Philippines, and shows no distinct variation of the colour pattern in that large area, but is missing exactly on Halmahera and New Guinea. Furthermore it seems possible, that (as yet only) on the Moluccan island Seram, *P. waterhousei* occurs with the "normal" pale elytral colour pattern, but either with "normal" pale but also with aberrant dark ferrugineous prono-

tum. Probably, we face here an early stage of ongoing insular speciation, which cannot be understood by morphological characters alone. All four specimens from the small island Waigeo possess a dark pronotum. At the present state of taxonomic knowledge I avoid establishing a subspecies and consider the dark populations as a valid species, being different from *P. waterhousei*.

### *Platydema kaiense* **n. sp.**
(Figs. 12, 50–52)

Holotype (♂): Moluccan Islands, Kai Islands (labelled as "Ins.-Key" without further details), HNHM.

Etymology: Named after the Kai (= Key) Islands, where the holotype was collected.

Description: Body length 4.0 mm. Dorsal side glabrous and with unicoloured violet metallic shine; tibiae, tarsi and antenna light (Fig. 12). Head with fine punctation. Head in males (Fig. 50): frons with two symmetrical short horns, apical parts without setation; clypeus medially without tooth. Proportions of the antennal segments as in Fig. 51, antennomere 3 short. Pronotum convex, with similar punctation as on head, with feeble basal foveae. Basal margin completely unbordered, distal and lateral margins finely and completely bordered; anterior margin feebly excavated and anterior corners not protruding. Propleura with feeble longitudinal wrinkles, and with short setation. Elytra convex and oval, 1.6 times as long as wide, besides scutellar row and lateral margin with 8 rows of punctures in distinct striae (third row with about 50 punctures). Intervals convex and with similar fine punctation as on pronotum, without setation. Abdominal ventrites with short setation, lateral punctures sometimes confluent and surface wrinkled. Legs without peculiarities, male tarsi not dilated, tibiae externally with crenulated indistinct keels. Aedeagus as in Fig. 52.

Diagnosis: *Platydema kaiense* n. sp. is similar to the widespread *P. marseuli* Lewis, 1894 (figured by Schawaller 2004b) sharing the small unicoloured metallic and convex body, the armature of the male head with two symmetrical horns, and the distinct elytral striae. Both can be separated mainly by a distinctly different shape of the aedeagus (parameres broad pentagonal in *P. kaiense* n. sp., triangular finger-like in *P. marseuli*). See also under *Platydema cyclopsicum* n. sp. and *P. seramicum* n. sp.

### *Platydema papuanum* **n. sp.**
(Figs. 4, 30–32)

Holotype (♂): West Papua, Paniai, Mulia, Wuyuneeri, 1900–2200 m, 6.–7.VII.1994, leg. A. Riedel, SMNS.

Paratypes: West Papua, Prov. Jayawijaya, Borme, 1500–2000 m, 13.–17.VIII.1992, leg. A. Riedel, 7 ex. SMNS, 2 ex. HNHM. – West Papua, Prov. Raja Ampat, Batanta Island, Wallebet, 18.–21.I.2004, leg. A. Skale, 4 ex. CRGT. – West Papua, Prov. Manokwari, 18 km NW Ransiki, Anggi Gida, Kampung Itkau, 1890 m, 4.III.2007, leg. A. Skale, 2 ex. CASH. – West Papua, Prov. Manokwari, Mokwam (Siyoubrig), 1400–1800 m, 24.–28.II.2007, leg. A. Skale, 1 ex. CASH. – West Papua, Prov. Manokwari, Snalmboy (Warmare), 24.II.2007, leg. A. Skale, 1 ex. CKAO. – Papua New Guinea, Prov. Morobe, Aseki, Oiwa, 11.IV.1998, leg. A. Riedel, 3 ex. CRGT. – Papua New Guinea, Prov. Morobe, Kaiapit, XII.1978, leg. W. G. Ullrich, 3 ex. ZSM. – Papua New Guinea, Prov. Morobe, Kaiapit, 30.IX.1979, leg. W. G. Ullrich, 1 ex. ZSM. – Papua New Guinea, Prov. Eastern Highlands, Kainatu, Onerunka, 22.IV.–21.X.1979, leg. W. G. Ullrich, 8 ex. ZSM. – Papua New Guinea, Prov. Eastern Highlands, Kainatu, Onerunka, VII.1981, leg. W. G. Ullrich, 2 ex. ZSM.

Etymology: Named after the Papua tribes, settling on New Guinea.

Description: Body length 6.0–9.0 mm. Dorsal side glabrous and unicoloured black, without metallic shine, surface dull; tibiae, tarsi and antenna somewhat lighter (Fig. 4). Head with regular and fine punctation. Head in males (Fig. 30) without sexual characters. Proportions of the antennal segments as in Fig. 31, antennomere 3 long. Pronotum flat and conical, without punctation, with distinct basal foveae. Basal margin medially unbordered, distal and lateral margins finely and completely bordered; anterior margin distinctly excavated and anterior corners protruding. Propleura smooth as pronotal disc. Elytra flat and of oval shape, 1.6 times as long as wide, besides scutellar row and lateral margin with 8 rows of fine nearly indistinct punctures in distinct striae (third row with about 50 punctures). Intervals feebly convex by the distinct striae, without punctation. Abdominal ventrites with very short setation, laterally with feeble impressions and confluent punctures. Legs without peculiarities, male tarsi not dilated, tibiae rounded and externally without keels. Aedeagus as in Fig. 32.

Diagnosis: *Platydema papuanum* n. sp. shares the large body size with the dull blackish surface, the unmodified male head, and even the similar shape of the aedeagus with the widespread *P. detersum* Walker, 1858 (illustrated by Schawaller 2003). It can be distinguished by the conical shape of the pronotum, flatter elytra with deeply impressed striae, widely separated lateral margins of the elytra, longer antennomeres and unmodified male tibiae. Two other dull blackish species from New Guinea are smaller in average (5.0–6.0 mm), have a broader pronotum with rounder lateral margins, a different aedeagus (*P. pseudofuligineum* n. sp.) or possess even a modified male head (*P. tricuspis*).

### *Platydema pseudofuligineum* **n. sp.**
(Figs. 3, 27–29)

Holotype (♂): West Papua, Wandammen Bay, Wondiwoi Mts., Wasior, 250–600 m, 15.I.2001, leg. A. Riedel, SMNS.

Paratypes: West Papua, Japen Island, Kontiunai, 600–700 m, 23.XII.2000, leg. A. Riedel, 6 ex. SMNS. – West Papua, Testega, 1100–1300 m, 30.III.–2.IV.1993, leg. A. Riedel,

4 ex. SMNS. – West Papua, Testega, Meydoudga, 1100 m, 4.IV.1993, leg. A. Riedel, 1 ex. SMNS. – West Papua, Manokwari, Ransiki, Mayuby, 26.–30.IX.1990, leg. A. Riedel, 2 ex. BMNH. – West Papua, Jayapura, Sentani, Cyclops Mts., 400–800 m, 7.VIII.1992, leg. A. Riedel, 2 ex. SMNS. – West Papua, Fak Fak, 2 km E airstrip, 16.–18.VII.1996, leg. P. Schüle & P. Stüben, 2 ex. SMNS. – Papua New Guinea, Prov. Morobe, "Sattelberg", Huon Golf, leg. L. Biró, 4 ex. HNHM. – Papua New Guinea, Kiunga, 23.VII.–2.VIII.1969, leg. J. Balogh, 2 ex. HNHM, 1 ex. SMNS. – Papua New Guinea, Wau, Kilolo Creek, 26.VIII.1968, leg. I. Loksa, 1 ex. HNHM. – Papua New Guinea, Kokoda, 8.II.1951, leg. J. Sedlacek, 1 ex. HNHM. – West Papua, Prov. Raja Ampat, Salawati Island, 2–4 km N Kalobo, 26.I.2004, leg. A. Skale, 1 ex. CRGT. – West Papua, 120–150 km S Nabire, Unipo-Ebomani, 9.I.1997, leg. A. Weigel, 1 ex. CRGT. – West Papua, Prov. Manokwari, 20 km W Manokwari, Prafi, 160 m, 8.III.2007, leg. A. Weigel, 1 ex. NME.

Etymology: The name refers to the Australian *P. fuligineum* Pascoe, 1869 which looks morphologically similar.

Description: Body length 5.0–6.0 mm. Dorsal side glabrous and unicoloured black, without metallic shine, surface dull; tibiae, tarsi and antenna somewhat lighter (Fig. 3). Head with rough and partly confluent punctation. Head in males (Fig. 27) with a feeble transverse ridge between cheeks. Proportions of the antennal segments as in Fig. 28, antennomere 3 short. Pronotum feebly convex, without punctation, with distinct basal foveae. Basal margin medially unbordered, distal margin finely and lateral margins broadly and completely bordered; anterior margin distinctly excavated and anterior corners protruding. Propleura smooth as pronotal disc. Elytra flat and of oval shape, 1.4 times as long as wide, besides scutellar row and lateral margin with 8 rows of fine nearly indistinct punctures in feeble striae (third row with about 50 punctures). Intervals feebly convex, without punctation. Abdominal ventrites with very short setation, laterally with feeble impressions and confluent punctures. Legs without peculiarities, male tarsi not dilated, tibiae rounded and externally without keels. Aedeagus as in Fig. 29.

Diagnosis: *Platydema pseudofuligineum* n. sp. resembles *P. fuligineum* Pascoe, 1869 from Australia (Figs. 2, 24–26; based on a male from N. S. Wales, 2.X.1908, leg. G. E. Bryant, SMNS [duplicate from BMNH]). Both share the small body size and shape with dull blackish surface. *P. fuligineum* can be distinguished by a distinctly narrower pronotum with a finer lateral margin, a completely unmodified male head, and a different shape of the aedeagus with acute apical part of the parameres. See also under *P. papuanum* n. sp.

### *Platydema seramicum* **n. sp.**
(Figs. 13, 53–55)

Holotype (♂): Moluccan Islands, Seram, Unit O, 35 km E Pasahari, 24.–30.X.1998, leg. J. Horák, CRGT.

Paratype: Moluccan Islands, Seram, 12 km SE Wahai, Solea, 17.I.–6.II.1997, leg. J. Horák, 1 ex. ZSM.

Etymology: Named after the island Seram, where the holotype was collected.

Description: Body length 3.8 mm. Dorsal side glabrous and with feeble unicoloured blue metallic shine; clypeus, legs and antenna light (Fig. 13). Head with fine punctation. Head in males (Fig. 53): frons with two symmetrical long horns, apical parts without setation; clypeus medially with tooth. Proportions of the antennal segments as in Fig. 54, antennomere 3 short. Pronotum slightly convex, with fine punctation similar as on head, with feeble basal foveae. Basal margin completely unbordered, distal and lateral margins finely and completely bordered; anterior margin feebly excavated and anterior corners not protruding. Propleura with feeble longitudinal wrinkles, and with short setation. Elytra only feebly convex and oval, 1.4 times as long as wide, besides scutellar row and lateral margin with 8 rows of punctures with feeble striae (third row with about 35 punctures). Intervals convex and with distinctly finer punctation than on pronotum, without setation. Abdominal ventrites with short setation, lateral punctures sometimes confluent and surface wrinkled. Legs without peculiarities, male tarsi not dilated, tibiae externally with crenulated indistinct keels. Aedeagus as in Fig. 55.

Diagnosis: *Platydema seramicum* n. sp. shares the small body size and shape, the unicoloured shining dorsal surface, and the male head with two symmetrical horns with *P. cyclopsicum* n. sp. and *P. kaiense* n. sp. from the investigated area. *P. seramicum* n. sp. can be recognized by an additional tooth on the clypeus (lacking in *P. cyclopsicum* n. sp. and *P. kaiense* n. sp.), distinct convex elytral intervals (flat in *P. cyclopsicum* n. sp., convex in *P. kaiense* n. sp.), and a distinct shape of the aedeagus (Figs. 49, 52, 55). Furthermore, in *P. kaiense* n. sp. the elytra bear distinct striae and the elytral intervals are densely punctured.

### *Platydema skalei* **n. sp.**
(Figs. 9, 42–44)

Holotype (♂): West Papua, Prov. Raja Ampat, Salawati Island, 2–4 km N Kalobo, 26.I.2004, leg. A. Skale, CRGT.

Paratypes: West Papua, Prov. Manokwari, 6 km N Manokwari, Desa Pami, 100 m, 9.III.2007, leg. A. Skale, 1 ex. CASH, 1 ex. CRGT, 1 ex. SMNS.

Etymology: Named in honour of André Skale (Hof/Saale), collector of the type series and other species of Papuan *Platydema*.

Description: Body length 4.5 mm. Dorsal side glabrous and with colour pattern: head, pronotum and elytra dark ferrugineous without metallic shine; elytra in the anterior third with a light transverse band interrupted at the suture; tarsi somewhat lighter (Fig. 9). Head with distinct but not confluent punctation. Head in males (Fig. 42): frons with a medial conical horn with rounded

apical part pointing forwards, apical part without setation; clypeus medially without tooth. Proportions of the antennal segments as in Fig. 43, antennomere 3 short. Pronotum broad and flat, with finer punctation than on head, with feeble basal foveae. Basal margin completely unbordered, distal and lateral margins finely and completely bordered; anterior margin not excavated and anterior corners not protruding. Propleura with larger punctation than on pronotum, and with short setation. Elytra flat and oval, 1.2 times as long as wide, besides scutellar row and lateral margin with 8 rows of punctures without striae (third row with about 45 punctures). Intervals flat and with finer punctation than on pronotum, punctation nearly invisible, without setation. Abdominal ventrites with short setation, lateral punctures sometimes confluent and surface wrinkled. Legs without peculiarities, male tarsi not dilated, tibiae externally with crenulated indistinct keels. Aedeagus as in Fig. 44.

D i a g n o s i s : *Platydema skalei* n. sp. is similar to the Oriental *P. unicornis* Gebien, 1927 (figured by SCHAWALLER 2004b), both share the broad and flat pronotum and elytra, the single medial horn without setation on the male head, and even the aedeagus with similar fused parameres with an acute apical part. However, in *P. skalei* n. sp. the dorsal punctation, particularly on pronotum and the elytral intervals, is distinctly finer and the dorsal surface is more shining, and the elytra bear in the anterior third a broad yellow band (in *P. unicornis* the elytral spots are sinuated). These differences might appear insignificant, but at present state of knowledge I consider both as different species. The other species of *Platydema* on New Guinea with a single medial horn (*P. novaeguineense* Gebien, 1922 and *P. rectum* Kaszab, 1982) are smaller in average, the pronotum and elytra are much more convex, the dorsal colour pattern is different, and the aedeagi are different.

### *Platydema wamenaicum* **n. sp.**
(Figs. 22, 80–82)

H o l o t y p e (♂): West Papua, Prov. Jayawijaya, Wamena, Pronggoli, 2000–2400 m, 17.–19.IX.1991, leg. A. RIEDEL, SMNS.

P a r a t y p e s : Same data as the holotype, 1 ♀ SMNS. – West Papua, Prov. Paniai, Sinak, 2000–2200 m, 14.–17.XII.1995, leg. A. RIEDEL, 3 ex. ZSM, 1 ex. SMNS.

E t y m o l o g y : Named after the village Wamena, in whose vicinity the holotype was collected.

D e s c r i p t i o n : Body length 4.5–4.7 mm. Dorsal side glabrous and with unicoloured bronze metallic shine; tibiae, tarsi and antenna light (Fig. 22). Head with distinct but separate punctation. Head in males (Fig. 80) without sexual characters. Proportions of the antennal segments as in Fig. 81, antennomere 3 short. Pronotum slightly convex, with somewhat finer punctation than on head, with feeble basal foveae. Basal margin completely unbordered, distal and lateral margins finely and completely bordered; anterior margin feebly excavated and anterior corners not protruding. Propleura with similar punctation as on pronotum, and with short setation. Elytra convex and oval, 1.6 times as long as wide, besides scutellar row and lateral margin with 8 rows of punctures without striae (third row with about 35 punctures). Intervals flat and with distinctly finer and sparser punctation than on pronotum, without setation. Abdominal ventrites with short setation, lateral punctures sometimes confluent and surface wrinkled. Legs without peculiarities, male tarsi not dilated, tibiae externally with crenulated indistinct keels. Aedeagus as in Fig. 82.

D i a g n o s i s : *Platydema wamenaicum* n. sp. can be recognized by the small convex body with unicoloured metallic shine and without armature on the male head. This combination is unique among all Papuan species.

### *Platydema weigeli* **n. sp.**
(Figs. 20, 74–76)

H o l o t y p e (♂): West Papua, Biak Island, Sepse, 3.X.1990, leg. A. RIEDEL, SMNS.

P a r a t y p e s : Same data as the holotype, 2 ex. SMNS. – West Papua, Prov. Raja Ampat, Batanta Island, Waywesar, 13.I.2004, leg. A. WEIGEL, 1 ♂ CRGT. – West Papua, Prov. Raja Ampat, Batanta Island, Waywesar, 12.–15.I.2004, leg. A. SKALE, 1 ♀ CRGT.

E t y m o l o g y : Named in honour of ANDREAS WEIGEL (Wernburg), one of the collectors of the type series.

D e s c r i p t i o n : Body length 3.5–3.8 mm. Dorsal side glabrous and with unicoloured blue metallic shine; tibiae, tarsi and antenna light (Fig. 20). Head with larger but sparse punctation. Head in males (Fig. 74): frons with two asymmetrical horns, left horn longer and pointing more upwards, right horn shorter and pointing forwards, apical part of the left horn with distinct longer setation, apical part of the right horn with reduced shorter setation; clypeus medially with a distinct tooth. Proportions of the antennal segments as in Fig. 75, antennomere 3 short. Pronotum slightly convex, with somewhat finer punctation than on head, with feeble basal foveae. Basal margin completely unbordered, distal and lateral margins finely and completely bordered; anterior margin feebly excavated and anterior corners not protruding. Propleura with similar punctation as on pronotum, and with short setation. Elytra convex and oval, 1.6 times as long as wide, besides scutellar row and lateral margin with 8 rows of punctures without striae (third row with about 40 punctures). Intervals feebly convex and with similar fine punctation as on pronotum, without setation. Abdominal ventrites with short setation, lateral punctures sometimes confluent and surface wrinkled. Legs without peculiarities, male tarsi not dilated, tibiae externally with crenulated indistinct keels. Aedeagus as in Fig. 76.

D i a g n o s i s : *Platydema weigeli* n. sp. belongs to the small group of small Papuan species with unicoloured metallic surface and with armed head, and is most similar to *P. striolatum* Kaszab, 1939. However, in *P. striolatum* the right horn of the male head is longer and with longer setation (the left horn is longer in *P. weigeli* n. sp.), the pronotum is narrower with conical straight lateral margins (broader with rounded sides in *P. weigeli* n. sp.), the antenna is widened from antennomere 5 on (from antennomere 4 on in *P. weigeli* n. sp.), and the aedeagi are different (Figs. 73, 76).

### 4 Key to the Papuan and Moluccan species of *Platydema*

This key may be used for the identification of all species of *Platydema* from the investigasted area (Fig. 1). The key is suitable only for males because of the use of sexual characters. Males of several species can be recognized by a modified head, males of species without such modifications can be separated from females only by dissection of the genitalia.

**1** Dorsal surface unicoloured dull blackish (Figs. 2–4). . . . . **2**
– Dorsal surface shining, either unicoloured dark, with or without metallic shine, or elytra with colour pattern (Figs. 5–14). . . . . **5**
**2** Male head with two distinct teeth on the frons and with additional medial tooth on the clypeus. – Schawaller 2004b: figs. 7, 187–189. . . . . ***tricuspis***
– Male head without modification or at most with an indistinct medial tubercle. . . . . **3**
**3** Pronotum broad with rounded lateral margins, male head unmodified; middle and posterior tibiae in males abruptly bent in variable extent. – Schawaller 2003: figs. 25–27; pl. IV, fig. 6. . . . . ***detersum***
– Pronotum longer, either conical or with rounded margins, in the latter case male head with transverse tubercle; all legs without modifications. . . . . **4**
**4** Pronotum conical, male head without modification, elytra with distinct striae, body length 6.0–9.0 mm. – Figs. 4, 30–32. . . . . ***papuanum* n. sp.**
– Pronotum with rounder lateral margin, male head with transverse tubercle, elytral rows only in feeble striae, body length 5.0–6.0 mm. – Figs. 3, 27–29. . . . . ***pseudofuligineum* n. sp.**
**5** Male head without modifications or frons at most with a feeble medial tubercle (Figs. 33, 45, 80). . . . . **6**
– Male head with a single medial horn or with a pair of symmetrical or asymmetrical horns, horns with or without setation (Figs. 42, 48, 65). . . . . **11**
**6** Dorsal side unicoloured (Figs. 5, 22). . . . . **7**
– Dorsal side with distinct colour pattern (Figs. 6, 10). . . . . **8**
**7** Small species (around 3 mm), pronotum with large punctures at the sides but lacking on the disc, elytral rows with large punctures, intervals slightly convex. – Figs. 5, 33–35. . . . . ***confusum***
– Larger species (4.5–4.7 mm), pronotum with regular fine punctation, elytral rows with fine punctures, intervals flat. – Figs. 22, 80–82. . . . . ***wamenaicum* n. sp.**
**8** Smaller species (around 3 mm), elytral intervals with microsetation. – Schawaller 2004b: figs. 16, 136–138. . . . . ***pallidicolle***
– Larger species (4.0–4.8 mm), elytral intervals completely glabrous (Figs. 6, 10). . . . . **9**
**9** Male head with a feeble medial tubercle, pronotum broad. – Figs. 10, 45–47. . . . . ***bacanicum* n. sp.**
– Male head without modification, pronotum narrower (Fig. 36). . . . . **10**
**10** Elytra in the anterior third with a single light transverse band interrupted at the suture, pronotum dark. – Figs. 6, 36–38. . . . . ***halmahericum* n. sp.**
– Elytra besides the light transverse humeral band in the posterior part with additional light spots, pronotum usually light, but sometimes also dark. – Schawaller 2004b: figs. 17, 190–192. . . . . ***waterhousei***
**11** Male head with a single medial horn without setation (Figs. 39, 42). . . . . **12**
– Male head with a pair of symmetrical or asymmetrical horns, horns with or without setation (Figs. 48, 65, 74). . . . . **14**
**12** Dorsal side light castaneous, elytra with 1–2 dark spots. – Schawaller 2004b: figs. 12, 148–150. . . . . ***rectum***
– Dorsal side dark ferrugineous, elytra in the anterior third with a light transverse band and in the posterior part with or without light spot (Figs. 8–9). . . . . **13**
**13** Larger species (4.5 mm), pronotum broad and flat, elytra flat, elytra in the anterior third with a light transverse band. – Figs. 9, 42–44. . . . . ***skalei* n. sp.**
– Smaller species (3.5–4.0 mm), pronotum and elytra narrower and more convex, elytra in the anterior third with a light transverse band and in the posterior part with an additional light spot. – Figs. 8, 39–41. . . . . ***novaeguineense***
**14** Male head with a pair of symmetrical horns without setation (Figs. 48, 53). . . . . **15**
– Male head with a pair of asymmetrical horns and at least one horn with setation at the apical part (Figs. 65, 74). . . . . **19**
**15** Dorsal side dark ferrugineous, elytra in the anterior third with a light transverse band (♀ see Fig. 7; ♂ see Gebien 1925: pl. 1, fig. 9). . . . . ***furcaticorne***
– Dorsal side unicoloured dark, with metallic shine (Figs. 11, 14). . . . . **16**
**16** Elytra with punctural rows in striae, intervals convex (Figs. 12–13). . . . . **17**
– Elytra with punctural rows without striae, intervals flat (Figs. 11, 14). . . . . **18**
**17** Male head besides the pair of long horns with an additional distinct medial tooth at the clypeus, fused parameres triangular. – Seram Island. Figs. 13, 53–55. . . . ***seramicum* n. sp.**
– Male head without additional tooth at the clypeus, fused parameres pentagonal. – Kai Islands. Figs. 12, 50–52. . . . . ***kaiense* n. sp.**
**18** Pronotum broader, pronotum and elytra flat, lateral margins of pronotum and elytra broadly separated, fused parameres tongue-shaped. – Figs. 11, 48–49. . . . . ***cyclopsicum* n. sp.**
– Pronotum narrower, pronotum and elytra more convex, lateral margins of pronotum and elytra finely separated, fused parameres triangular. – Figs. 14, 56–58. . . . . ***simbangense***
**19** Left horn of the male head longer and with longer and denser setation at the apical part (Figs. 74, 77). . . . . **20**
– Right horn of the male head longer and with longer and denser setation at the apical part (Figs. 65, 83). . . . . **21**
**20** Larger species (4.5–6.0 mm), pronotum and elytra flat, dorsal surface unicoloured blackish without metallic shine, elytral intervals with microsetation. – Figs. 21, 77–79. . . . . ***asymmetricum***
– Smaller species (3.5–3.8 mm), pronotum and elytra convex, dorsal surface with metallic shine, elytral intervals completely glabrous. – Figs. 20, 74–76. . . . . ***weigeli* n. sp.**
**21** Dorsal surface with colour pattern (Fig. 23). . . . . **22**
– Dorsal side unicoloured dark (Figs. 15, 17). . . . . **23**
**22** Larger species (6.5–7.0 mm), elytra with light transverse hu-

meral spots, dorsal side with metallic shine. – Figs. 23, 83–85. . . . . ***djuremnaicum* n. sp.**

– Smaller species (4.0–5.0 mm), elytra with light undulated humeral bands and ill-defined lighter apical area, dorsal side without metallic shine. – SCHAWALLER 2003: figs. 16–18; pl. IV, fig. 4. . . . . ***subfascium***

**23** Right horn of the male head extremely developed and with extended long setation, left horn nearly absent, clypeus with strong medial tooth, aedeagus with long and thin acute apical part of the fused parameres. – Figs. 17, 65–67. . . . . ***biroi***

– Right horn of the male head longer than the left but not extremely developed, setation present at the apical part only, clypeus with smaller medial tooth, shape of the aedeagus different (Figs. 61, 70). . . . . **24**

**24** Body shape globular, eyes narrow, left smaller horn of male head without setation. – Figs. 15, 59–61. . . . . ***globigerum***

– Body shape longer oval, eyes broader, left smaller horn of male head with setation (Figs. 62, 68, 71). . . . . **25**

**25** Somewhat larger species (3.5–4.5 mm), right horn on male head parallel, setation at the apical part in wider extent, fused parameres of aedeagus triangular with acute apical part. – Figs. 18, 68–70. . . . . ***hastatum***

– Somewhat smaller species (3.0–3.2 mm), right horn on male head conical, setation only at the extreme apical part, fused parameres of aedeagus different (Figs. 64, 73). . . . . **26**

**26** Elytral intervals feebly convex, fused parameres of aedeagus broader with rounded apical part. – Figs. 19, 71–73. . . . . ***striolatum***

– Elytral intervals flat, fused parameres of aedeagus narrower with rounded apical part. – Figs. 16, 62–64. . . . ***denticapitis***

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