

## Revision of some species-groups of the genus *Catascopus* Kirby from the Oriental and Australian Regions (Coleoptera, Carabidae, Lebiini)

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### Abstract

The *laevigatus*-group and the *elegans*-subgroup in the sense of Straneo (1994) ("gruppo 6", part of "gruppo 5") of the carabid genus *Catascopus* Kirby, 1825 are revised and additional new taxa of both groups, and of the *facialis*-group ("gruppo 3") are described. The *elegans*-complex [*C. elegans* (Weber, 1801)] is thoroughly examined and provisionally divided into certain subspecies that occupy confined ranges. Following new taxa are described:

"gruppo 6" (*laevigatus*-group): *laevigatus aruanus* from Aru and Buru Islands; *platypennis* from mainland New Guinea; *waigeoensis* from Waigeo Island; *astrum* from eastern Papua Indonesia; *angustatus* from north-eastern Australia; *sidus darlingtoni* from western Papua Indonesia (western New Guinea); *sidus japensis* from Japan Island; *sidus purpurascens* from Huon Peninsula in northern Papua New Guinea.

"gruppo 5" (*elegans*-group): *impressipennis* from northern Thailand, Laos, and south-western Yunnan, related to *C. hexagonus* Straneo, 1994; *elegans*-subgroup: *strigifrons*, from Sumatra; *femoratus* and *fraterculus*, both from Sulawesi. Of the widespread species *C. elegans* (Weber) the previously synonymized variations *C. e. amoenus* Chaudoir, 1861, *C. e. australasiae* Hope, 1842, *C. e. lateralis* Brullé, 1834, and *C. e. scintillans* Bates, 1892 are resurrected to subspecific status, *C. cyaneus* Chaudoir, 1872 is reduced from specific to subspecific status, and *C. elegans elevatus* Schmidt-Goebel, 1846 is raised to specific status. The following additional subspecies are described: *C. elegans andamanicus*, *C. e. biakensis*, *C. e. philippinus*, *C. e. salomonicus*, and *C. e. viridans*.

"gruppo 3, part" (*facialis*-subgroup): The previous *C. facialis* v. *poultoni* Andrewes, 1921 is raised to specific status and, because the name "*poultoni*" is unavailable, is described as *C. cuprascens*; the species *C. facialis* (Wiedemann, 1818), *C. angulatus* Chaudoir, 1861, *C. andamanensis* Chaudoir, 1877, *C. agnathus* Chaudoir, 1872, and *C. alesi* Jedlicka, 1935 are partly redescribed and the following species closely related to these species are newly described: *punctatostrigatus* from Vietnam, *borneensis* from Borneo, Sumatra and Malaysia, *grimmi* from Bali and Java, *cyanoviridis* and *carinipennis* from Seram (Moluccas), *magnicollis* from Morotai (Moluccas), and *weigeli* from Halmahera, Buru and Ambon (Moluccas) and New Guinea.

For *C. elegans elegans* (Weber), *C. elegans amoenus* Chaudoir, *C. elegans cyaneus* Chaudoir, *C. agnathus* Chaudoir, *C. angulatus* Chaudoir, *C. andamanensis* Chaudoir, and *C. virens* Chaudoir lectotypes and if necessary, paralectotypes are designated. For *C. cuprascens* sp. n. (= the unavailable *C. facialis* v. *poultoni* Andrewes, 1921) the holotype is designated.

*C. moorei* Straneo, 1994, described from northern Queensland, is recorded from certain localities in New Guinea and New Britain, and it seems that Darlington's (1968) records of the Asian *C. smaragdulus* Dejean, 1825 from both islands actually refer to *C. moorei*.

For a number of described species from the three mentioned groups additional records are provided.

### Zusammenfassung

Die *laevigatus*-Gruppe und die *elegans*-Untergruppe im Sinne von Straneo (1994) ("gruppo 6", ein Teil der "gruppo 5") der Laufkäfergattung *Catascopus* Kirby, 1825 werden revidiert und zusätzliche Taxa aus beiden Artengruppen und aus der *facialis*-Gruppe ("gruppo 3") werden beschrieben. Der *elegans*-Komplex [*C. elegans* (Weber, 1801)] wird insgesamt untersucht und vorläufig in eine Reihe von Subspecies aufgeteilt, die jeweils bestimmte Gebiete bewohnen. Die folgenden neuen Taxa werden beschrieben:

"gruppo 6" (*laevigatus*-Gruppe): *laevigatus aruanus* von den Aru-Inseln und von Buru; *platypennis* von Neuguinea; *waigeoensis* von Waigeo Island; *astrum* vom östlichen Papua Indonesia; *angustatus* von Nordost-Australien; *sidus darlingtoni* aus dem Westteil von Papua Indonesia (West New Guinea); *sidus japensis* von Japan Island; *sidus purpurascens* von der Huon Peninsula im nördlichen Papua New Guinea.

"gruppo 5" (*elegans*-Gruppe): *impressipennis* aus Nord-Thailand, Laos und Südwest-Yunnan, eine Art, die mit *C. hexagonus* Straneo, 1994 nah verwandt ist; *elegans*-Untergruppe: *strigifrons* von Sumatra; *femoratus* und *fraterculus*, beide von Sulawesi. Aus der sehr weit verbreiteten Art *C. elegans* (Weber) werden die bisher synonymisierten Variationen *C. e. amoenus* Chaudoir, 1861, *C. e. australasiae* Hope, 1842, *C. e. lateralis* Brullé, 1834 und *C. e. scintillans* Bates, 1892 in den Stand von Subspecies erhoben, *C. cyaneus* Chaudoir, 1872 wird vom Artstatus zur Unterart zurückgeführt, und *C. elegans elevatus* Schmidt-Goebel, 1846 wird in den Artstatus erhoben. Die folgenden zusätzlichen Subspecies werden beschrieben: *C. elegans*

*andamanicus*, *C. e. biakensis*, *C. e. philippinus*, *C. e. salomonicus* und *C. e. viridans*.

“gruppo 3” (*facialis*-Untergruppe): Die frühere Variation *C. facialis* v. *poultoni* Andrewes, 1921 wird in den Artstatus erhoben und, weil der Name “*poultoni*” nicht verfügbar ist, als *C. cuprascens* beschrieben; die Arten *C. facialis* (Wiedemann, 1818), *C. angulatus* Chaudoir, 1861, *C. andamanensis* Chaudoir, 1877, *C. agnathus* Chaudoir, 1872 und *C. alesi* Jedlicka, 1935 werden teilweise nachbeschrieben und die folgenden Arten aus der Verwandtschaft der oben genannten Arten werden neu beschrieben: *punctatostratus* von Vietnam, *borneensis* von Borneo, Sumatra und Malaysia, *grimmi* von Bali und Java, *cyannoviridis* und *carinipennis* von Seram (Molukken), *magnicollis* von Morotai (Molukken) und *weigeli* von Halmahera, Buru und Ambon (Molukken) und Neuguinea.

Für *C. elegans elegans* (Weber), *C. elegans amoenus* Chaudoir, *C. elegans cyaneus* Chaudoir, *C. agnathus* Chaudoir, *C. angulatus* Chaudoir, *C. andamanensis* Chaudoir und *C. virens* Chaudoir werden Lectotypen und wenn nötig Paralectotype designiert. Für *C. cuprascens* sp. n. (= der nicht verfügbare *C. facialis* v. *poultoni* Andrewes, 1921) wird der Holotypus designiert.

Die aus Nord-Queensland beschriebene Art *C. moorei* Straneo, 1994, wird von verschiedenen Lokalitäten in Neuguinea und New Britain gemeldet, und es scheint, dass Darlington's (1968) Meldungen der asiatischen Art *C. smaragdulus* Dejean, 1825 von beiden Inseln sich auf *C. moorei* beziehen.

Von einer Reihe von Arten aus den drei genannten Artengruppen werden zusätzliche Funde gemeldet.

## Keywords

Coleoptera, Carabidae, Lebiini, *Catascopus*, new species, Asia, New Guinea, Australia

## Introduction

The lebiine genus *Catascopus* Kirby, 1825 includes medium sized to large, usually colourful, metallic species with large, protruded eyes and not denticulate tarsal claws. They belong to the subtribe Pericalina within the tribe Carabid Lebiini and are well known and, because of their bright colouration and elegant body shape, are eagerly sought for by collectors. The genus ranges through the tropics of all continents, but is by far most numerous in the Oriental, Papuan, and Australian Regions from where about 80 species are recorded, whereas in the Afrotropical and the Neotropical Regions only a handful species occur. The Oriental-Australian *Catascopus* also show a much greater diversity in body shape and structure than those of the other continents.

The Oriental-Australian species of *Catascopus* generally inhabit rain forest and usually are found on the bark of logs and standing trees, also under loose bark, and less commonly even on twigs and leaves. Usually they are active during daytime and beetles can be observed hunting on logs or on the ground stalking their prey by their good eyesight. They are rapid runners and, in spite of their bright colouration, they are not easily detected in the diffuse light on the ground or on moss-covered logs in rain forest.

Straneo (1994) published a review of the Oriental-Australian *Catascopus* and described a couple of additional species. Apart from erecting a new subgenus for a group of species (which name, however, is synonymous of the name for the same subgenus erected earlier by Habu 1967), he divided the majority of the species into six species-groups that are mainly based on certain character states of the apical armature of the elytra and on shape and chetotaxy of the pronotum. Although Straneo's paper actually is merely a key for identification and lacks as well detailed morphological diagnoses of all those species that he did not describe in that paper, as exact information about their distribution, this paper can be used as the basis for any future work on the Oriental-Australian species of the genus.

During the time since my review of the species of the *laevigatus*-group of *Catascopus* (in the sense of Straneo) (Baehr 1997), additional information, new species and many additional records have been accumulated through ample identification work on Australasian *Catascopus*, not only for species of the *laevigatus*-group, but also for a number of species from certain other groups. This information is presented in this paper, which includes the complete revision of the species of the *laevigatus*-group, a partial revision of those of the *elegans*-group with special account on the taxa of the widespread species *C. elegans* (Weber), and descriptions of some additional species from the *facialis*-group.

## Material and methods

The material for this paper has been accumulated through identification work for a couple of private and museum collections that are enumerated under “abbreviations” and “acknowledgements”. Altogether, about 1.500 specimens of Oriental, New Guinean, and Australian *Catascopus* were identified during this time, but a part of these will not be mentioned in the paper, because they belong to well known species and moreover, do not bear additional localities or range extensions. So, in this paper about 1.200 specimens are mentioned.

Measurements were taken using a stereo microscope with an ocular micrometer. Body length was measured from apex of labrum to tip of elytra including any elytral spines. Body lengths, therefore, may slightly differ from those specified in the literature. Length of pronotum was measured along midline, width of base at the widest

diameter of the basal angles. Length of elytra was measured from the most advanced part of the humerus to the very apex, including any spines or denticulations.

For dissection of the male and female genitalia specimens were weakened for a night in a jar under moist atmosphere, then the genitalia were removed and subsequently cleaned for a short while in hot KOH. The habitus photographs were obtained with a digital camera using ProgRes CapturePro 2.6 and AutoMontage and subsequently were worked with Corel Photo Paint 11 and X4.

Label data are exactly noted in all specimens, including all chiffres and abbreviations. A / denotes a new label.

### Abbreviations of Collections

ANIC	- Australian National Insect Collection, Canberra
CAT	- Collection K. Ando, Tokyo
CBM	- Working Collection M. Baehr in ZSM, München
CHP	- Collection M. Häckel, Prague
CHS	- Collection A. Hetzel, Seeheim-Jugenheim
CLT	- Collection W. Lorenz, Tutzing
CMP	- Carnegie Museum of Natural History, Pittsburgh
CNCI	- Agriculture Canada, Ottawa
CRQ	- Collection H. Rudolph, Quedlinburg
CSB	- Collection A. Skale, Bayreuth
CSA	- Collection J. Schmidt, Admannshagen
CWB	- Collection D. Wrase, Berlin
CWP	- Collection A. Weigel, Pössneck
CZW	- Collection H. Zettel, Wien
IRSNB	- Institut Royal des Sciences Naturelles de Belgique, Bruxelles
QDPIB	- Queensland Department of Primary Industries, Brisbane
QDPIM	- Queensland Department of Primary Industries, Mareeba
NHM	- The Natural History Museum, London
NHME	- Naturhistorisches Museum der Stadt Erfurt
MMS	- Macleay Museum of the University of Sydney, Sydney
MNHP	- Museum National de l'Histoire Naturelle, Paris
MNZ	- Museum of New Zealand, Wellington
NHMB	- Naturhistorisches Museum, Basel
NHMW	- Naturhistorisches Museum, Wien
NMPC	- National Museum of Natural History, Prague
QM	- Queensland Museum, Brisbane
RMNH	- Netherlands Centre for Biodiversity Naturalis, Leiden
SMNS	- Staatliches Museum für Naturkunde, Stuttgart
SMTD	- Staatliches Museum für Tierkunde, Dresden
WADA	- Western Australian Department of Agriculture, Perth
ZMUC	- Zoological Museum of the University of Copenhagen, Copenhagen
ZSM	- Zoologische Staatssammlung, München

### Genus *Catascopus* Kirby

Kirby, 1825: 94. – Csiki 1932: 1362; Andrewes 1937: 187; Jedlicka 1963: 379; Habu 1967: 78; Darlington 1968: 101; Moore et al. 1987: 284; Baehr 1997: 228; Lorenz 1998: 429; 2005: 453; Kabak 2003: 435.

**Type species:** *Catascopus hardwickei* Kirby, 1825, by monotypy.

### Diagnosis

Species of the lebiine subtribe Pericalina, characterized by narrow, not excised 4<sup>th</sup> tarsomeres, elongate labrum which is excised at the apex, edentate tarsal claws, concave apex of the clypeus, commonly bright metallic colour, and commonly dentate or spinose apex of the elytra. The male aedeagus is structurally similar, lacking any strongly sclerotized parts in the internal sac, and with asetose parameres. But shape of the aedeagus and the genital

ring is quite different in the species groups. The female gonocoxites likewise are structurally similar, with a large, at the apical rim asetose gonocoxite 1 and a curved, more or less elongate gonocoxite 2 which invariably bears two ventral-lateral ensiform setae and a single dorso-median ensiform seta, and lacks any nematiform setae at or near the apex. Length of gonocoxite 2 and size and position of the setae, however, is different in the species groups.

**The *laevigatus*-group (“gruppo 6” in Straneo 1994)**

This is a well founded species group that is mainly characterized and immediately distinguished by the multiplied number of the anterior lateral setae of the pronotum, the angulate but not spinose external apical angles, and the dentate or shortly spinose sutural angles, of the elytra. The species of this group are medium sized to fairly large, mostly rather wide and depressed, the aedeagus is large and curved, with elongate orificium and a large fold within, and the genital ring has a characteristically divided base.

Within the group two subgroups can be distinguished, according to presence, or absence, of microreticulation on the elytra. Both groups also differ somewhat in shape and structure of their aedeagus and the female gonocoxite 2.

The few recorded species of this well characterized group are distributed through the southernmost part of the Oriental Region and the Australian Region, from the Moluccas to northern Australia, though most taxa occur in New Guinea. Baehr (1997) reviewed the then known species and described a new one from New Guinea. Additional recently collected specimens as well as older material now available, give the opportunity to revise this group again, to correct some misinterpretations, and to add some information as well as a couple of additional taxa.

Unfortunately neither the descriptions of *C. laevigatus* Saunders, 1863 and *C. laticollis* Macleay, 1883, nor the figure of *C. laevigatus* given in the description allow an unambiguous identification of both species, hence examination of the types would have been useful. Unfortunately neither the type(s) of *C. laevigatus* nor those of *C. laticollis* have been found in the respective collections (ANIC, MMS, MNHP, NHM, QMB). However, I now have seen a couple of additional specimens from Australia that are similar inter se but different from any extra-Australian specimens and most probably belong to *C. laticollis*, as well as a number of old specimens in NHM and in the Chaudoir collection in MNHP that were arranged there under *C. laevigatus* Saunders. Therefore I believe that they have been compared with original material either by Chaudoir or Wallace, or even by Saunders himself. Actually, some bear a label written by Andrewes “compared with type” which demonstrates that at that time the types of *C. laevigatus* must have been still available.

Using the mentioned old specimens as representatives of *C. laevigatus*, I now see that the New Guinean specimens that I believed to represent *C. laevigatus* in my review (Baehr 1997), therein following the opinion of Darlington (1968), belong to another, distinct, new species. The same applies for the single specimen that I believed to represent *C. laticollis*: this likewise represents a new species. Because in the meantime I have seen a specimen identified by Darlington himself as *C. sidus* Darlington, 1968, I see that this species was also misinterpreted in my 1987 key. The therein mentioned specimens also belong to a new species.

**Key to the species of the *laevigatus*-group**

- (For better comparison some figures of the review of the *laevigatus*-group [Baehr 1997] are noted as B97 fig.)
- 1. Large species, body length > 17 mm; aedeagus comparatively short and stout (B97 fig. 4). New Guinea..... *latus* Darlington, 1968
  - Smaller species, body length < 14.5 mm; aedeagus longer and narrower (Figs 1-10; B97 fig. 5). New Guinea, north-eastern Australia, Aru Islands, Buru, eastern Moluccas..... (2)
  - 2. Elytra shorter and laterally more rounded (Figs 50-54); surface of elytra glabrous, without any trace of microreticulation; aedeagus slender and elongate (Figs 1-5)..... (3)
  - Elytra longer and more parallel-sided (Figs 55-61); surface of elytra with fine though distinct microreticulation; aedeagus rather short and stout (Figs 6-10)..... (7)
  - 3. Lateral apical angle of elytra markedly acute; colour of elytra brownish-green; striae finely punctate (Fig. 54); apex of aedeagus narrow and elongate (Fig. 5). Waigeo Is. .... *waigeoensis* sp. n.
  - Lateral apical angle of elytra less acute; colour of elytra usually more brightly green; striae variously shaped (Figs 50-53); apex of aedeagus shorter and wider (Figs 1-4). Mainland New Guinea, north-eastern Australia, Aru Islands, Buru, eastern Moluccas..... (4)



4. Lateral margin of elytra in basal third less explanate, elytra laterally less rounded; pronotum more cordiform, with rather deep and short excision near the basal angles, base barely wider than apex (Fig. 50); intervals of elytra with distinct punctation; lower surface of aedeagus more curved (Fig. 1). Moluccas, probably also Sulawesi ..... *laevigatus laevigatus* Saunders, 1863
- Lateral margin of elytra in basal third markedly explanate, elytra laterally more rounded; pronotum less cordiform, with rather shallow but elongate excision near the basal angles, base distinctly wider than apex (Figs 51-53); intervals of elytra at most with extremely fine, inconspicuous punctation; lower surface of aedeagus less curved (Figs 2-4). Mainland New Guinea, north-eastern Australia, Aru Islands, Buru ..... (5)
5. Striae of elytra distinctly impressed, intervals perceptibly convex; lateral margin of elytra in middle less explanate, in basal third perceptibly excised; apical angles of pronotum markedly produced (Figs 51, 52); aedeagus with slightly longer apex (Figs 2, 3). North-eastern Australia, Aru Islands, Buru ..... (6)
- Striae of elytra not or feebly impressed, intervals depressed; lateral margin of elytra in middle remarkably explanate, in basal third not perceptibly excised; apical angles of pronotum less produced (Fig. 53); aedeagus with slightly shorter apex (Fig. 4). New Guinea ..... *platypennis* sp. n.
6. Striae of elytra deeper, intervals more convex; aedeagus wider, particularly towards apex, lower surface more curved (Fig. 3). North-eastern Australia ..... *laticollis* Macleay, 1883
- Striae of elytra shallower, intervals less convex; aedeagus narrower, particularly towards apex, lower surface more curved (Fig. 2). Aru Islands, Buru ..... *laevigatus aruanus* subsp. n.
7. Smaller species, body length c. 10 mm; striae distinctly punctate; colour bright green with conspicuously purplish humerus (Fig. 60); aedeagus with narrow, elongate apex (B97 fig. 5). Vogelkop Peninsula, westernmost Papua Indonesia ..... *riedeli* Baehr, 1997
- Larger species, body length > 12 mm; striae not perceptibly punctate; fore body green with or without golden lustre, elytra green, or blue, or purplish, with or without green or cupreous humerus (Figs 55-59, 61); aedeagus with moderately elongate, triangular apex (Figs 6-10). New Guinea, north-eastern Australia ..... (8)
8. Lateral margin of pronotum markedly excised in front of the basal angles (Figs 59, 61) ..... (9)
- Lateral margin of pronotum little excised in front of the basal angles (Figs 55-58) ..... (10)
9. Anterior angles of pronotum well produced; elytra shorter and wider, ratio length/width 1.58, in apical half distinctly widened (Fig. 59); aedeagus straight, symmetric, with obtusely triangular apex (Fig. 9). eastern central Papua Indonesia ..... *astrum* sp. n.
- Anterior angles of pronotum little produced; elytra longer and narrower, ratio length/width 1.68, almost parallel-sided (Fig. 61); aedeagus slightly sinuate and asymmetric, with less triangular apex (Fig. 10). North-eastern Australia ..... *angustatus* sp. n.
10. Pronotum wider, ratio width/length > 1.45, with wider marginal channel; eye more produced, orbit shorter (Figs 55-57); lower surface of the aedeagus less concave (Figs 6, 7), or aedeagus unknown. Mainland New Guinea ..... (11)
- Pronotum narrower, ratio width/length 1.39, with narrower marginal channel; eye less produced, orbit longer (Fig. 58); lower surface of the aedeagus markedly concave (Fig. 8). Japan Is. .... *sidus japensis* subsp. n.
11. Elytra elongate, ratio length/width 1.7; basal margin markedly concave, humerus produced; elytra in basal half with slight but distinct transverse impression; pronotum narrower, with narrow lateral margins; head and pronotum bright green with bluish lustre, elytra contrastingly violaceous (Fig. 56); aedeagus unknown. Huon Peninsula, northern Papua New Guinea ..... *sidus purpurascens* subsp. n.
- Elytra shorter, ratio length/width < 1.66, commonly less; basal margin almost straight, humerus barely produced; elytra in basal half without perceptible impression; pronotum wider, with wider lateral margins; head and pronotum green, usually with some golden lustre, elytra green or bluish-green (Figs 55, 57); aedeagus see figs 6, 7 ..... 12.
12. Generally larger, 12.5-14.3 mm; elytral intervals more depressed, barely convex; their microreticulation fine though distinct, surface of the elytra moderately glossy; humerus less conspicuously cupreous or rutilous (Fig. 57); apex of aedeagus regularly triangular and rather acute (Fig. 7). Western part of Papua Indonesia ..... *sidus darlingtoni* subsp. n.

- . Generally smaller, 11.8-12.5 mm; elytral intervals distinctly convex; their microreticulation very superficial, surface of elytra glossier; humerus conspicuously cupreous or rutilous (Fig. 55); apex of aedeagus less triangular and less acute (Fig. 6). Papua New Guinea.....*sidus sidus* Darlington, 1968

*Catascopus laevigatus laevigatus* Saunders  
Figs 1, 50

*Catascopus laevigatus* Saunders, 1863: 458; t. 18, figs 2a-b. – Chaudoir 1872: 249; Andrewes 1930: 335; Csiki 1932: 1365; Darlington 1968: 102, 104; Straneo 1994: 170; Baehr 1997: 229; Lorenz 1998: 430; 2005: 454.

Types

Labelled types of this species were not found in NHM nor in MNHP, although the Saunders Collection was divided between both museums and according to Darlington (1968) the type should be located in the Oberthür Collection in MNHP. In NHM, however, two specimens from “Batch” (Bacan) and “Ternate” exist, apparently collected by Wallace and labelled “*Catascopus laevigatus* Saund.” by Wallace himself. They may have been collected together with the type and even could belong to the type series. One specimen from Aru Islands in the Andrewes Collection (NHM) and identified by Andrewes bears the note: “compared with type”. Hence, at Andrewes’ time the type(s) of *C. laevigatus* still must have been available. And in the Chaudoir Collection in MNHP three specimens were found, likewise collected by Wallace but without locality, that also well suit Saunders’ description and also the key of Straneo (1994). The available specimens from Aru Islands in NHM, however, differ from those from Bacan and Ternate and therefore are provisionally described as a separate subspecies.

Because of the uncertainties about the types of *C. laevigatus*, in my review (Baehr 1997) I confounded this species with the new *C. platypennis* described below, herein following Darlington who apparently did a similar mistake in his monograph (Darlington 1968). Hence the figure of the male genitalia in my paper (Baehr 1997, fig. 1) belongs to that new species, and for the real *C. laevigatus* a new figure is drawn in the present paper.

Type localities (from description)

“Batchian, Ternate and Aru”, but the putative specimens from Aru belong to another subspecies (*C. laevigatus aruensis*).

Diagnosis

Distinguished from the most similar species *C. laticollis* Macleay by more cordiform pronotum with narrower marginal channel, distinct punctation of the elytral intervals, and more curved lower surface of the aedeagus; and from the subspecies *C. laevigatus aruanus* subsp. n. by wider aedeagus which has the lower surface more concave.

Partial redescription

**Measurements.** Length: 9.8-11.1 mm; width: 3.7-4.5 mm. Ratios. Width/length of prothorax: 1.60-1.67; width of base/apex of prothorax: 0.99-1.04; width of prothorax/width of head: 1.05-1.11; length/width of elytra: 1.49-1.58; width of elytra/width of prothorax: 1.45-1.51.

**Colour** (Fig. 50). Green, some specimens with slight bluish or aeneous lustre, humerus more or less faintly cupreous, clypeus, labrum and mandibles black. Lower surface piceous-black with slight greenish lustre. Palpi piceous with light reddish apex. Antenna piceous, basal antennomere commonly slightly darker. Legs dark piceous with slight greenish lustre, tarsi slightly lighter.

**Head** (Fig. 50). Rather wide. Eyes large, markedly protruded, orbits small, oblique. Labrum elongate, anterior margin slightly excised in middle. Mandibles of average size. Palpi fairly elongate. Mental tooth large, triangular. Antenna comparatively short, median antennomeres <1.5 x as long as wide. Sulcus medially of eyes rather conspicuous, surpassing the posterior border of eye. Frons on either side with a elongate, irregularly curved groove. Surface very sparsely and finely punctate, without microreticulation, very glossy.

**Pronotum** (Fig. 50). Short and wide, dorsally rather convex. Apex rather deeply excised, slightly projected in middle, anterior angles projected, at tip rounded. Lateral border anteriorly evenly rounded, sinuate in posterior fourth, basal angles rectangular but slightly projected laterad, base gently bisinuate. Apex not margined, base coarsely margined. Lateral margins narrow throughout, barely widened towards apex, only immediately in front of base somewhat explanate. Median line shallow, connecting the shallow anterior sulcus and the deep posterior sulcus. Basal grooves deep, short. Lateral margin with 6-9 marginal setae in anterior 2/3 and with the posterior marginal seta at the basal angle. Surface finely and sparsely punctate, with some superficial, irregular, transverse lines, without microreticulation, very glossy.

**Elytra** (Fig. 50). Rather short and wide, depressed, almost parallel-sided. Humeri rounded but projected, lateral margin barely sinuate in basal third. Lateral apical angle angulate, sutural angle spinose, spines fairly elongate, apical margin concave. Elytra fully striate, but striae at most in basal half finely impressed, apicad not impressed. Striae distinctly and rather coarsely punctate. Intervals at least in basal half very slightly convex. Scutellary stria superficial, moderately elongate. 3<sup>rd</sup> interval tripunctate, anterior puncture and seta situated close to base and adjacent to 3<sup>rd</sup> stria, median and apical punctures adjacent to 2<sup>nd</sup> stria, the apical puncture situated close to apex. Marginal series consisting of 8 punctures behind humerus, 1 intercalary puncture in front of middle, 6 punctures in apical third of lateral margin, and 1 puncture at end of 3<sup>rd</sup> interval. Intervals with an irregular series of fine punctures, without microreticulation, very glossy.

**Lower surface.** Intercostal process shortly setose. Metepisternum elongate, > 2 x as long as wide. Terminal sternum in both sexes quadrisetose, in male in middle deeply excised. Surface of abdomen impunctate, glossy.

**Male genitalia** (Fig. 1). Genital ring irregularly triangular, fairly asymmetric, with deep, convex basal part which is divided in middle; with narrow, elongate apex. Aedeagus narrow and elongate, lower surface deeply concave near base, then but gently concave to almost straight; apex narrow and elongate, narrowly triangular, with acute tip; orificium situated mostly on the left side, fairly elongate, occupying about the apical two fifths of the aedeagus. Internal sac with several very slightly sclerotized folds. Left paramere large and elongate, convexly triangular, right paramere much smaller than the left one, narrow and fairly elongate.

**Female gonocoxites.** As in *C. laticollis* Macleay.

**Variation.** Reasonable variation noted in body size and relative width and length of prothorax and elytra.

### Distribution

Moluccas: Halmahera, Morotai, Bacan, and Ternate; also on Sulawesi, but probably only on the north-eastern arm of that island.

### Collecting circumstances

Largely unrecorded. The recently collected specimens were sampled from “old trees”, in “prim. for”, and on “clearing”, at median altitude.

### Relationships

The species belongs to a subgroup within the *laevigatus*-group which is characterized by wider, glossy elytra, narrow and elongate aedeagus, and stouter, more curved female gonocoxite 2 with larger ensiform setae.

### Additional records (19 ex)

**Bacan:** 1 ♂, Batch / *Catascopus laevigatus* Saund. (NHM). – **Ternate:** 1 ♀, 22992 / Wallace / Moluccas Ternate / *Catascopus laevigatus* Saund. / *Catascopus laevigatus* Saund det. Darl. '66 (NHM). – **Halmahera:** 1 ♀, c/ Moluccas Jilolo / Fry Coll. 1905-100. / *Catascopus smaragdinus* Moluccas / Borrowed from B M (NHM); 1 ♂, Wangonira, ca. 01.37 N 127.51 E, W. LORENZ 28.3.1995 (CLT); 1 ♀, W Paca, ca. 01.35 N 127.52 E, W. LORENZ 27.3.1995 (CLT); 1 ♂, Halmahera NW, 7 km S Jailolo, 200m, 1°1'18" N, 127°31'38" E, 26/27.I.2008, leg. A. Skale (CBM). – **Morotai:** 1 ♂, 6 ♀♀, W Daruba, Reja, 16.-19.XI.1999, 50-300m leg. A. RIEDEL (CBM, SMNS). – **Sulawesi:** 1 ♂, Celebes Catascop / Sammlung O. Langenhan. Kauf 1931.18 / *laevipennis* Saund. / *Catascopus* (SMTD); 1 ♂, Menado (NHM). – ? : 1 ♂, 2 ♀♀, without locality, Ex Musaeo Chaudoir (MNHP).

### *Catascopus laevigatus aruanus* subsp. n.

Figs 2, 51

### Examined types

**Holotype:** ♂, 58 48 Aru Isl / *Catascopus laevigatus* Saund. Compared with type H. E. A. / H. E. Andrewes Coll. B.M.1945-97. (NHM).

**Paratypes:** 1 ♀, Aru Is. / Bowring 63-47. / 3501 / *Catascopus laevigatus* Saund H. E. Andrewes det. / H. E. Andrewes Coll. B.M.1945-97. (NHM); 1 ♀, Aru Islds Elgner 1911 / W. W. Froggatt Collection (ANIC); 1 ♀, Aru Is. H. Eigner / *Catascopus laevicollis* Saunders Id. by T. G. Sloane (SAMA); 1 ♀, L. J. TOXOPEUS Buru Station 5 4.-6.VI.1921 / H. E. Andrewes Coll. B.M.1945-97. (NHM).

### Etymology

The name refers to the occurrence of this subspecies on the Aru Islands south-west of New Guinea.

### Diagnosis

Distinguished from the nominate subspecies by wider lateral margins of the pronotum which is more widely explanate towards base, less deep elytral striae and less convex intervals, and narrower aedeagus with less concave lower surface.

### Description

**Measurements** (Aru Is.). Length: 9.4-11.4 mm; width: 3.8-4.75 mm. Ratios. Width/length of prothorax: 1.67-1.68; width of base/apex of prothorax: 1.01-1.03; width of prothorax/width of head: 1.14-1.16; length/width of elytra: 1.41-1.47; width of elytra/width of prothorax: 1.44-1.48.

**Measurements** (Buru). Length: 11.4 mm; width: 4.8 mm. Ratios. Width/length of prothorax: 1.63; width of base/apex of prothorax: 1.07; width of prothorax/width of head: 1.11; length/width of elytra: 1.46; width of elytra/width of prothorax: 1.53.

**Colour** (Fig. 51). In the mostly old specimens head and pronotum less bright green than in most specimens of the nominate subspecies.

**Head** (Fig. 51). Much as in the nominate subspecies

**Pronotum** (Fig. 51). Much as in the nominate subspecies, but lateral margins slightly wider.

**Elytra** (Fig. 51). Much as in the nominate subspecies, but striae even less impressed and more finely punctate.

**Male genitalia** (Fig. 2). Genital ring convexly triangular, slightly asymmetric, moderately narrow, with deep, convex basal part which is divided in middle, with narrow, elongate, slightly curved apex. Aedeagus narrow and elongate, lower surface in apical half straight; apex narrow and fairly elongate, narrowly triangular, with acute tip; orificium situated mostly on the left side, fairly elongate, occupying about the apical two fifths of the aedeagus. Internal sac with several very slightly sclerotized folds. Left paramere large and elongate, convexly triangular, somewhat odd-shaped, with oblique apex, right paramere much smaller than the left one, narrow and elongate.

**Female gonocoxites.** As in the nominate subgenus.

**Variation.** Due to the small number of available specimens, little variation is noted in the specimens from Aru Is. The specimen from Buru, however, differs somewhat in the proportions of the prothorax, therefore it is tentatively alluded to this subspecies.

### Distribution

Aru Islands and Buru Island in the south-western Moluccas.

### Collecting circumstances

Not recorded.

### *Catascopus laticollis* Macleay

Figs 3, 44, 52

*Catascopus laticollis* Macleay, 1883: 410. – Sloane 1910: 400; Csiki 1932: 1365; Darlington 1968: 105; Moore et al. 1987: 285; Straneo 1994: 170; Baehr 1997: 229, fig. 2.; Lorenz 1998: 430; 2005: 454.

### Types

According to the description (Macleay 1883) and also according to Moore et al. (1987) the type of this species should be lodged in Queensland Museum, Brisbane (QM), but referring to information received from G. Monteith, it cannot be located there and most probably was never given to this collection. As it is likewise not included in the Macleay Collection of the University of Sydney, whose types are now housed in the Australian National Insect Collection, Canberra (ANIC), according to Britton & Stanbury (1981), it must be considered lost.

### Type locality (from description)

“Albania Downs”, most probably in North Queensland, Australia.

### Note

During examination of recently received material, I now see that the single available specimen mentioned in my paper (Baehr 1997: p. 229) actually does not represent *C. laticollis* but belongs to another, new species. Therefore fig. 2. in my review does not show the male genitalia of *C. laticollis* which are figured in the present paper.

## Diagnosis

Distinguished from the most similar species *C. laevigatus* Saunders by less cordiform pronotum with wider marginal channel, less distinct punctation of the elytral intervals, and less curved lower surface of the aedeagus.

## Partial redescription

**Measurements.** Length: 10.2-12.0 mm; width: 4.1-5.0 mm. Ratios. Width/length of prothorax: 1.68-1.72; width of base/apex of prothorax: 1.02-1.06; width of prothorax/width of head: 1.10-1.17; length/width of elytra: 1.46-1.50; width of elytra/width of prothorax: 1.45-1.51.

**Colour** (Fig. 52). Green, humerus more or less faintly cupreous, clypeus, labrum and mandibles black. Lower surface piceous-black with slight greenish lustre. Palpi piceous with light reddish apex. Antenna piceous, basal antennomere commonly slightly darker. Legs dark piceous with slight greenish lustre, tarsi slightly lighter.

**Head** (Fig. 52). Rather wide. Eyes large, markedly protruded, orbits small, oblique. Labrum elongate, anterior margin slightly excised in middle. Mandibles of average size. Palpi fairly elongate. Mental tooth large, triangular. Antenna comparatively short, median antennomeres  $<1.5 \times$  as long as wide. Sulcus medially of eyes rather conspicuous, surpassing posterior border of eye. Frons on either side with a elongate, irregularly curved groove. Surface with extremely fine and sparse punctures, without microreticulation, very glossy.

**Pronotum** (Fig. 52). Short and wide, dorsally rather convex. Apex deeply excised, slightly projected in middle, anterior angles markedly projected, rounded at tip. Lateral border anteriorly evenly rounded, slightly sinuate in posterior fourth, basal angles rectangular but not or barely projected laterad, base gently bisinuate. Apex not margined, base coarsely margined. Lateral margins moderately narrow, slightly widened towards apex, in front of base somewhat explanate. Median line shallow, connecting the shallow anterior sulcus and the deep posterior sulcus. Basal grooves deep, short. Lateral margin with 6-10 marginal setae in anterior 2/3 and with the posterior marginal seta at basal angle. Surface barely punctate, with some superficial, irregular, transverse lines, without microreticulation, very glossy.

**Elytra** (Fig. 52). Rather short and wide, depressed, almost parallel-sided. Humeri rounded but slightly projected, lateral margin barely sinuate in basal third. Lateral apical angle angulate, sutural angle spinose, spines short, apical margin concave. Elytra fully striate, striae comparatively deeply impressed. Striae distinctly but finely punctate. Intervals rather convex throughout. Scutellary stria superficial, moderately elongate. 3<sup>rd</sup> interval tripunctate, anterior puncture and seta situated close to base and adjacent to 3<sup>rd</sup> stria, median and apical punctures adjacent to 2<sup>nd</sup> stria, the apical puncture situated close to apex. Marginal series consisting of 8 punctures behind humerus, 1 intercalary puncture in front of middle, 6 punctures in apical third of lateral margin, and 1 puncture at end of 3<sup>rd</sup> interval. Intervals extremely finely and sparsely punctate, without microreticulation, very glossy.

**Lower surface.** Intercoxal process shortly setose. Metepisternum elongate,  $> 2 \times$  as long as wide. Terminal sternum in both sexes quadrisetose, in male in middle deeply excised. Surface of abdomen impunctate, glossy.

**Male genitalia** (Fig. 3). Genital ring irregularly triangular, fairly asymmetric, rather narrow, with deep, convex basal part which is divided in middle; with narrow, elongate apex. Aedeagus narrow and elongate, lower surface gently concave throughout; apex narrow and fairly elongate, narrowly triangular, with acute tip; orificium situated mostly on the left side, fairly elongate, occupying about the apical two fifth of the aedeagus. Internal sac with several very slightly sclerotized folds. Left paramere large and elongate, convexly triangular, somewhat odd-shaped, with oblique apex, right paramere much smaller than the left one, narrow and elongate.

**Female gonocoxites** (Fig. 44). Gonocoxite 1 large, asetose at apical margin. Gonocoxite 2 remarkably elongate, curved, with acute apex. Two elongate ventro-lateral ensiform setae and the dorso-median ensiform seta situated at the base.

**Variation.** Apart from some differences in relative width of prothorax and length of elytra little variation noted.

## Distribution

North-eastern Queensland.

## Collecting circumstances

Largely unrecorded, but probably most specimens collected from or under bark of trees in rainforest. One specimen caught "on wall of rangers building", another in "rainforest".

## Relationships

The species belongs to a subgroup within the *laevigatus*-group which is characterized by more convex, glossy elytra, narrow and elongate aedeagus, and stouter, more curved female gonocoxite 2 with larger ensiform setae.

**Additional records** (59 ex.)

**Queensland:** Cairns District, Cape York, H. Hacker (SAMA); Cairns distr., A. M. Lea (SAMA); Kuranda, F. P. Dodd (SAMA); Kuranda, G. B. Bryant (NHM); Kuranda (AMS, QM); Whitfield RA. RD., Cairns, 2.xii.71, J. B. Brooks (SAMA); Whitfield RA. RD., Cairns, 31.vii.1971, A. & M. Walford-Huggins (CMP); Whitfield Height, 21.viii.1969, R. E. Parrott (CNCI); Cairns, Whitfield Rd. 31.vii.1971, A. & M. Walford-Huggins (CMP); South Johnstone Campsite Atherton Tablelands. 450 m, 25.3.2007 M. Aristophanous (QM); Mt. Lewis, 14.xii.1984 A. & M. Walford-Huggins (CMP); Windsor Tableland NE Mt. Carbine 30.xii.1984, A. & M. Walford-Huggins (CMP); Cooktown (NHM); Cape York (MMS, NMPC); Iron Range, Cape York Pen. 5-10.v.1968, G. Monteith (QM); Cape York Pen. Iron Range 17-22-iv-1975 A. & M. Walford-Huggins (CMP); West Claudie R., Iron Range, 3-10.xii.1985, G. Monteith & D. Cook (QM); Coen District H. Hacker (AMS); Lockerbie, 7-14.iv.1977, A. & M. Walford-Huggins (CBM, CMP); Lockerbie Scrub via Bamaga, 7-14.iv.1977, R. I. Storey (QDPIB); Queensland / Gehr W. Müller Vermächt. 1909 (SMTD); Queensland E. Weiske /14996 (SMTD).

*Catascopus platypennis* sp. n.

Figs 4, 53

**Examined types**

**Holotype:** ♂, Irian Jaya, Fakfak-Pr., 20 km w. Timika, 30m, 8.-11.1.1996 leg. A. Riedel (CBM).

**Paratypes:** 2 ♂♂, same data (CBM); 4 ♂♂, 1 ♀, Papua New Guinea, West Sepik Pr., Vaimo, 500m Denake Rge. km 12, 28.-29.X.1992, leg. A. Riedel (CBM, ZSM); 1 ♀, Irian Jaya, Jayawi-jaya-Pr. Samboca 200m, 10.-14.X.1995, leg. A. Riedel (CBM); 1 ♂, Irian Jaya, Manokwari, Gn. Meja 200m, 21.24.8.1991, leg. A. Riedel (CBM); 1 ♀, N. Guinea, W-Papua/F015 Prati, 160m. 00.53.57.24S 133.55,13.8E 8.3.2007, Gerstmeier (CBM); 1 ♂, 1 ♀, 24.7.1996 31 Schüle/Stüben West Papua Nabire nach Mapia km117 Unipo Sek.wald/Garten (CBM, ZSM); 1 ♀, Nabire S road km 64 Wegrund Jan 1987 leg. Frank Wolf (CSA); 2 ♂♂, DUTCH NEW GUINEA: Cyclops Mts. Sabron. Camp 2: 2,000 ft. vii.1936. L. E. Cheesman. B.M.1936-271. / *Catascopus laevigatus* Saun. det. Darl. '66 (NHM); 1 ♀, DUTCH NEW GUINEA: Humboldt Bay Dist. Bewandt Mts. 400 metres. vii.1937 / W. Stüber B.M. 1938-177. / *Catascopus laevigatus* det. 1966 Darlington (NHM); 1 ♀, Coll. I.R.Sc.N.B. PAPUA NEW GUINEA Canopy Mission Madang Province Baiteta Light M 8 27-IV-1996 Leg. Olivier Missa (IRSNB).

**Etymology**

The name refers to the wide and depressed elytra of this species.

**Note**

In my review (Baehr 1997) this species was erroneously identified as *C. laevigatus* Saunders, herein following the opinion of Darlington (1968).

**Diagnosis**

Distinguished from both, *C. laevigatus* Saunders and *C. laticollis* Macleay by barely impressed elytral striae, markedly explanate but not excised margin of the elytra; less produced apical angles of the pronotum, and shorter apex of the aedeagus.

**Description**

**Measurements.** Length: 9.9-11.7 mm; width: 4.75-5.0 mm. Ratios. Width/length of prothorax: 1.64-1.74; width of base/apex of prothorax: 1.07-1.15; width of prothorax/width of head: 1.16-1.19; length/width of elytra: 1.38-1.45; width of elytra/width of prothorax: 1.46-1.49.

**Colour** (Fig. 53). Head and pronotum bright green, though labrum and mandibles black. Elytra bright green, in some specimens with faint golden or bronzed lustre, lateral margin violaceous. Lower surface piceous-black with slight greenish lustre. Palpi piceous with light reddish apex. Antenna piceous, basal antennomere blackish with slight metallic lustre. Legs dark piceous, tarsi slightly lighter.

**Head** (Fig. 53). Of average size. Eyes large, laterally protruded, orbits small, oblique. Labrum elongate, anterior margin slightly excised in middle. Mandibles of average size. Palpi fairly elongate. Mental tooth triangular, well developed. Antenna comparatively short, median antennomeres c. 1.5 x as long as wide. Sulcus medially of eyes deep, surpassing posterior border of eye. Frons medially near clypeal suture with a shallow v-shaped groove, on either side with an elongate, deep, straight sulcus, in some specimens in middle with a few inconspicuous transverse lines. Surface impunctate, without microreticulation, very glossy.

**Pronotum** (Fig. 53). Short and very wide, rather depressed. Apex deeply excised, slightly convex in middle, anterior angles well produced, at tip rounded off. Lateral border anteriorly evenly rounded, sinuate in posterior fourth, parallel-sided in front of the basal angles. Basal angles rectangular, base gently bisinuate. Apex not margined, lateral margins in anterior half comparatively wide, apicad explanate, base margined, but margin interrupted in middle. Median line shallow, connecting the shallow anterior sulcus and the deep posterior sulcus. Basal grooves deep, short. Lateral margin with 5-6 elongate marginal setae in anterior 2/3, the posterior marginal seta at basal angle, and several shorter setae around the apical angles. Surface very feebly and sparsely punctate, almost devoid of transverse lines, without microreticulation, very glossy.

**Elytra** (Fig. 53). Rather wide, fairly depressed, lateral margins evenly convex. Humeri produced, rounded but very slightly obtuse, lateral margin not incurved in basal third. Lateral apical angle angulate, not spinose. Sutural angle spinose, spines moderately elongate, slightly dehiscent, apical margin concave. Elytra fully striate, though all striae very faint, not impressed but merely consisting of rows of fine punctures. Scutellary stria elongate, slightly impressed. 3<sup>rd</sup> interval quadripunctate, both anterior punctures and setae located adjacent to the 3<sup>rd</sup> stria, the median and apical punctures adjacent to the 2<sup>nd</sup> stria. Marginal series consisting of 7-10 punctures behind humerus, 1 intercalary puncture in front of middle, 4-6 punctures in apical third of lateral margin, and 1 puncture at the end of the 3<sup>rd</sup> interval. Intervals almost impunctate, without microreticulation, very glossy.

**Lower surface.** Intercostal process with two short setae. Metepisternum elongate, slightly less than 2.5 x as long as wide. Terminal sternum of male bisetose, apex in middle excised, in female quadrisetose and with straight apex. Surface of abdomen impunctate, glossy.

**Male genitalia** (Fig. 4). Genital ring convexly triangular, fairly asymmetric, rather narrow, with deep, convex basal part which is divided in middle, with narrow, elongate, slightly curved apex. Aedeagus elongate, very narrow, lower surface gently concave throughout; apex narrow but comparatively short, narrowly triangular, with slightly obtuse tip; orificium situated mostly on the left side, fairly elongate, occupying about the apical two fifths of the aedeagus. Internal sac with several faintly sclerotized folds. Left paramere fairly large and elongate, convexly triangular, somewhat odd-shaped, with convexly triangular apex, right paramere much smaller than the left one, narrow and fairly elongate.

**Female gonocoxites.** As in *C. laticollis* Macleay.

**Variation.** Apart from some variation of body size, some variation noted in relative width of pronotum and relative width of its base. It seems that the smallest specimens have a rather narrow pronotum. The specimens from western Papua Indonesia are remarkably similar in shape and structure of the elytral striae, the eastern specimens and those from Cyclops Mts. seem to be more varied.

## Distribution

Mainland of New Guinea

## Collecting circumstances

The specimens collected by A. Riedel mostly were sampled by sifting bark from logs in rain forest. The specimen from Prafi was collected under bark of a log in rain forest at median altitude. Two specimens were collected in "secondary forest/garden" and one specimen apparently was sampled at light.

## Relationships

The species belongs to a subgroup within the *laevigatus*-group which is characterized by more convex, glossy elytra, narrow and elongate aedeagus, and stouter, more curved female gonocoxite 2 with larger ensiform setae.

## *Catascopus waigeoensis* sp. n.

Figs 5, 54

## Examined types

**Holotype:** ♂, N. DUTCH NEW GUINEA: Waigeu, Camp Nok. 2,500 ft. iv.1938. L. E. Cheesman, B. M. 1938-593. / *Catascopus laevigatus* Saund. det. Darl. (NHM).

## Etymology

The name refers to occurrence of this species on Waigeo Island off the west coast of Papua Indonesia.

## Note

This specimen has been noted by Darlington (1968) in his description of *C. sidus* Darlington under "Additional material". However, it does not match the paratypes of this species.

## Diagnosis

Distinguished from all species of the *laevigatus*-subgroup by the markedly acute lateral apical angle of the elytra and the narrow and elongate apex of the aedeagus.

## Description

**Measurements.** Length: 10.4 mm; width: 4.3 mm. Ratios. Width/length of prothorax: 1.68; width of base/apex of prothorax: 1.08; width of prothorax/width of head: 1.11; length/width of elytra: 1.44; width of elytra/width of prothorax: 1.53.

**Colour** (Fig. 54). Head and pronotum green, slightly olivaceous, though labrum and mandibles black. Elytra greenish with faint golden to violaceous lustre, lateral margin violaceous. Lower surface of head and prothorax almost black, of abdomen piceous. Palpi piceous with light reddish apex. Antenna piceous, basal antennomere blackish. Legs dark piceous, tarsi barely lighter.

**Head** (Fig. 54). Of average size. Eyes large, laterally protruded, orbits small, oblique. Labrum elongate, anterior margin slightly excised in middle. Mandibles of average size. Palpi fairly elongate. Mental tooth triangular, well developed. Antenna comparatively short, median antennomeres c. 1.5 x as long as wide. Sulcus medially of eyes deep, ended well in front of the posterior border of the eye. Frons medially near clypeal suture with a shallow v-shaped groove, on either side with an elongate, deep, curved sulcus. Surface with very scattered, extremely fine, barely recognizable punctures, without microreticulation, very glossy.

**Pronotum** (Fig. 54). Short and very wide, rather depressed. Apex deeply excised, slightly convex in middle, anterior angles well produced, at tip rounded off. Lateral border anteriorly evenly rounded, sinuate in posterior fourth, parallel in front of the basal angles. Basal angles rectangular, base gently bisinuate. Apex not margined, lateral margins in anterior half narrow, then explanate, base only laterally margined. Median line shallow, connecting the shallow anterior sulcus and the deep posterior sulcus. Basal grooves deep, short. Lateral margin with 4-5 elongate marginal setae in anterior 2/3, the posterior marginal seta at basal angle, and a few shorter setae around the apical angles. Surface with very sparse and extremely fine, barely recognizable punctures, almost devoid of transverse lines, without microreticulation, very glossy.

**Elytra** (Fig. 54). Rather short and wide, fairly depressed, lateral margins evenly convex. Humeri produced but rounded, lateral margin not incurved in basal third but lateral sulcus slightly widened. Lateral apical angle markedly produced, very acute. Sutural angle spinose, spines elongate, slightly dehiscent, apical margin deeply concave. Elytra fully striate, though all striae very faint, very slightly impressed, finely punctate. Scutellary stria elongate, slightly impressed. 3<sup>rd</sup> interval quadripunctate, both anterior punctures and setae located adjacent to the 3<sup>rd</sup> stria, the median and apical punctures adjacent to the 2<sup>nd</sup> stria. Marginal series consisting of 7-8 punctures behind humerus, 1 intercalary puncture in front of middle, 6 punctures in apical third of lateral margin, and 1 puncture at the end of the 3<sup>rd</sup> interval. Intervals very sparsely and finely punctate, without microreticulation, very glossy.

**Lower surface.** Intercoxal process with two short setae. Metepisternum elongate, slightly less than 2.5 x as long as wide. Terminal sternum of male quadrisetose, apex in middle excised. Surface of abdomen impunctate, glossy.

**Male genitalia** (Fig. 5). Genital ring irregularly triangular, slightly asymmetric, comparatively narrow, with deep, convex basal part which is divided in middle; with rather narrow, comparatively short, straight apex. Aedeagus narrow and elongate, in middle not widened, lower surface gently concave throughout, but even less so in apical half; apex narrow and elongate, narrowly triangular, with rather acute tip; orificium situated mostly on the left side, fairly elongate, occupying almost the apical two fifths of the aedeagus. Internal sac with several very slightly sclerotized folds. Left paramere fairly large and elongate, convexly triangular, with convexly triangular apex, right paramere much smaller than the left one, narrow and elongate.

**Female gonocoxites.** Unknown.

**Variation.** Unknown.

## Distribution

Waigeo Island off the west coast of Papua Indonesia. Known only from type locality.

## Collecting circumstances

Largely unknown. The specimen was collected under bark of a log in rain forest at median altitude.

## Relationships

The species belongs to a subgroup within the *laevigatus*-group which is characterized by more convex, glossy elytra, narrow and elongate aedeagus, and stouter, more curved female gonocoxite 2 with larger ensiform setae.



*Catascopus latus* Darlington

*Catascopus latus* Darlington, 1968: 102, 104, fig. 60. – Straneo 1994: 170; Baehr 1997: 230; Lorenz 1998: 430; 2005: 454.

**Diagnosis**

Immediately distinguished from all other species of the *laevigatus*-group by its very large body size.

**Partial redescription** (a complete redescription and a figure of the male aedeagus is in Baehr 1997).

Measurements. Length: 17.3 mm; width: 6.1 mm. Ratios. Width/length of prothorax: 1.52; width of base/apex of prothorax: 1.06; width of prothorax/width of head: 1.13; length/width of elytra: 1.69; width of elytra/width of prothorax: 1.40.

**Additional records**

None. I have seen only the female holotype and a male specimen (see Baehr 1997).

*Catascopus sidus* Darlington

Figs 6-8, 45, 55-58

*Catascopus sidus* Darlington 1968: 105. – Straneo 1994: 170; Baehr 1997: 230, fig. 3.; Lorenz 1998: 430; 2005: 454.

**Note**

A couple of populations from different parts of New Guinea are alluded to this species and provisionally regarded as subspecies. They differ in certain aspects of their external morphology: body size, shape of pronotum and elytra, width of the lateral margins of the pronotum, structure of the elytra, and colouration, whereas the male genitalia which are known only from two subspecies are quite similar.

**Diagnosis**

Distinguished from the other species with microreticulate elytra by combination of moderately large body size and shallow prebasal excision of the margin of the pronotum.

**Relationships**

The species belongs to a subgroup within the *laevigatus*-group which is characterized by less convex, finely microreticulate elytra, shorter and stouter aedeagus, and narrow, almost straight female gonocoxite 2 with small ensiform setae.

*Catascopus sidus sidus* Darlington

Figs 6, 55

**Examined types**

**Paratype:** 1 ♂, Wau Ck. 1200-1500 m, Sept. 16-18, 1964, Sedlacek (MCZ).

**Type locality**

“Wau”, Papua New Guinea.

**Diagnosis**

Distinguished from other subspecies by combination of green colour, wide pronotum with wide marginal channel, and rather short elytra. Further distinguished from the most similar *C. sidus darlingtoni* subsp. n. by lesser body size, more convex, glossier elytral intervals, and more conspicuously cupreous humerus.

**Partial redescription**

**Measurements.** Length: 11.8-12.5 mm; width: 4.5-4.75 mm. Ratios. Width/length of prothorax: 1.55-1.62; width of base/apex of prothorax: 1.10-1.12; width of prothorax/width of head: 1.08-1.11; length/width of elytra: 1.60-1.63; width of elytra/width of prothorax: 1.46-1.50.

**Colour** (Fig. 55). Head and pronotum bright green with or without some golden reflexions, though labrum

and mandibles black. Elytra bright green or bluish-green, humeri and lateral part of apex cupreous. Lower surface piceous-black with slight greenish lustre. Palpi piceous with light reddish apex. Antenna piceous, basal antennomere blackish with slight metallic lustre. Legs dark piceous, tarsi slightly lighter.

**Head** (Fig. 55). Of average size. Eyes large, protruded, orbits rather small, oblique. Labrum elongate, anterior margin slightly excised in middle. Mandibles of average size. Palpi fairly elongate. Mental tooth triangular, Antenna comparatively short, median antennomeres  $<1.5 \times$  as long as wide. Sulcus medially of eyes rather inconspicuous, surpassing the posterior border of eye. Frons medially near clypeal suture almost not impressed, with short and shallow, straight frontal sulci which attain the middle of the eyes. Surface impunctate, without microreticulation, very glossy.

**Pronotum** (Fig. 55). Short and wide, disk rather convex. Apex slightly excised, anterior angles slightly projected, rounded off. Lateral border anteriorly evenly rounded, sinuate in posterior fourth, parallel in front of the basal angles. Basal angles rectangular, base in middle slightly concave. Apex not margined, lateral margins moderately narrow, basal barely explanate, base coarsely margined. Median line shallow, connecting the shallow anterior sulcus and the deep posterior sulcus. Basal grooves deep, short. Lateral margin with 4-6 marginal setae in anterior 2/3 and with the posterior marginal seta at basal angle. Surface very finely and sparsely punctate, with some superficial transverse lines, without microreticulation, very glossy.

**Elytra** (Fig. 55). Rather elongate, almost parallel-sided, disk fairly convex. Humeri evenly rounded, lateral margin barely incurved in basal third. Lateral apical angle angulate, not spinose. Sutural angle spinose, spines rather short and stout, dehiscent, apical margin concave and very oblique. Elytra fully striate, striae well impressed throughout and finely punctulate. Intervals more or less distinctly convex throughout. Scutellary stria little impressed, but punctulate, elongate. 3<sup>rd</sup> interval tripunctate, anterior puncture and seta situated close to base and adjacent to 3<sup>rd</sup> stria, median and apical punctures adjacent to 2<sup>nd</sup> stria. Marginal series consisting of 8 punctures behind humerus, 1 intercalar puncture in front of middle, 4-6 punctures in apical third of lateral margin, and 1 puncture at end of 3<sup>rd</sup> interval. Intervals extremely finely and sparsely punctate, with very superficial, extremely fine microreticulation of transverse meshes, glossy.

**Lower surface.** Intercoxal process with two short setae. Metepisternum very elongate, almost 3 x as long as wide. Terminal sternum of male bisetose, apex in middle gently excised, of female quadrisetose. Surface of abdomen impunctate, glossy.

**Male genitalia** (Fig. 6). Genital ring convexly triangular, slightly asymmetric, rather wide, with deep, convex basal part which is divided in middle; with rather narrow but comparatively short apex. Aedeagus moderately narrow and elongate, in middle perceptibly widened, lower surface deeply concave in basal half, very slightly concave in apical half; apex rather short, triangular, with obtuse tip; orificium situated mostly on the left side, fairly elongate, occupying almost the apical two fifths of the aedeagus. Internal sac with several very slightly-clerotized folds. Left paramere fairly large and elongate, convexly triangular, with obliquely convex apex, right paramere much smaller than the left one, narrow and elongate.

**Female gonocoxites.** As in *C. sidus darlingtoni* subsp. n.

**Variation.** Some variation noted in colour and in relative width of prothorax.

## Distribution

Papua New Guinea.

## Collecting circumstances

Not recorded.

## Additional records (4 ex.)

**Papua New Guinea:** 1 ♂, New Guinea Wau, 1300 m (?) XII. 1965 / P. Shanahan Collector Bishop (CMP); 2 ♀♀, N 20/ii / NdG (unreadable) Car (ANIC); 1 ♀, New Guinea Aseki Feb 1972 / H. Ohlms Collector (ANIC).

## *Catascopus sidus purpurascens* subsp. n.

Fig. 56

## Examined types

**Holotype:** ♀, Neu Guinea Finschhafen Wareo 1931 leg. L. Wagner (CBM).

## Etymology

The name refers to the colour of the elytra.

**Diagnosis**

Distinguished from other subspecies by purpureous-violaceous, elongate elytra with a distinct transverse impression in basal third, and distinctly produced humerus.

**Description**

**Measurements.** Length: 11.8 mm; width: 4.4 mm. Ratios. Width/length of prothorax: 1.59; width of base/apex of prothorax: 1.10; width of prothorax/width of head: 1.10; length/width of elytra: 1.70; width of elytra/width of prothorax: 1.47.

**Colour** (Fig. 56). Head and pronotum bright green with bluish lustre, elytra contrastingly purpureous-violaceous.

**Head** (Fig. 56). As in the nominate subspecies.

**Pronotum** (Fig. 56). As in the nominate subspecies, but comparatively narrow and with narrow lateral margin. Prebasal sinuosity comparatively deep.

**Elytra** (Fig. 56). Much as in the nominate subspecies, but longer, with a shallow but distinct transverse impression in basal third. Humerus distinctly produced. Striae well impressed, finely crenulate; intervals slightly convex throughout. Microreticulation comparatively superficial, therefore intervals markedly glossy.

**Male genitalia.** Unknown.

**Female gonocoxites.** As in *C. sidus darlingtoni* subsp. n.

**Variation.** Unknown.

**Distribution**

Extreme eastern part of Huon Peninsula, northern Papua New Guinea. Known only from type locality.

**Collecting circumstances**

Not recorded.

*Catascopus sidus darlingtoni* subsp. n.

Figs 7, 45, 57

*Catascopus sidus* Darlington 1968: 105 (part). – Baehr 1997: 230, fig. 3 (as *C. sidus* Darlington).

**Examined types**

**Holotype:** ♂, Irian Jaya, Pr. Manokwari, Meydougda, 1200-1450m, 5.4.1993, leg. A. Riedel (CBM).

**Paratypes:** 1 ♀, Irian Jaya, Pr. Manokwari, Testega, 1100-1300m, 30.3.-12.4.1993, leg. A. Riedel (CBM); 1 ♂, Irian Jaya, Panai-Pr. Epomanni, Ugida, km 179, 1350-1400m, 19.-20.1.1996, leg. A. Riedel (CBM); 3 ♂♂, W-PA-PUA Manokwari Prov. vic. Mokwam (Siyoubbrig), 1400-1800m, 01°06'26''S, 133°54'41''E 24.-28.II.2007 leg. A. Skale (CBM, CSB); 1 ♂, 1 ♀, W-PAPUA Manokwari Prov. vic. Mokwam (Siyoubbrig), 1400-1800m, 01°06'26''S, 133°54'41''E 24.-28.II.2007 leg. A. Weigel UWP/UWS (CBM, CWP).

**Etymology**

Named in honour of the late P. J. Darlington Jr., the famous biogeographer and carabidologist who wrote the comprehensive, four volume monography about the Carabidae of New Guinea which still is the basis for all work done on carabid beetles of that island.

**Diagnosis**

Distinguished from other subspecies by combination of large body size, more or less green colour, impunctate elytral striae and depressed intervals, and more distinct elytral microreticulation.

**Description**

**Measurements.** Length: 12.5-14.3 mm; width: 4.75-5.5 mm. Ratios. Width/length of prothorax: 1.57-1.68; width of base/apex of prothorax: 1.10-1.17; width of prothorax/width of head: 1.08-1.13; length/width of elytra: 1.60-1.66; width of elytra/width of prothorax: 1.40-1.50.

**Colour** (Fig. 57). Head and pronotum bright green or golden-green, elytra more or less dark green to almost blackish, with not or but moderately golden or cupreous humerus.

**Head** (Fig. 57). As in the nominate subspecies.

**Pronotum** (Fig. 57). As in the nominate subspecies, but comparatively narrow and with narrow lateral margin. Prebasal sinuosity comparatively deep.

**Elytra** (Fig. 57). Much as in the nominate subspecies, but longer, without distinct transverse impression in basal third. Humerus slightly produced. Striae not or but slightly impressed, impunctate or almost so; intervals almost depressed. Microreticulation comparatively distinct, therefore intervals slightly less glossy.

**Male genitalia** (Fig. 7). Genital ring convexly triangular, slightly asymmetric, wide, with deep, convex basal part which is divided in middle; with rather narrow but comparatively short apex. Aedeagus moderately narrow and elongate, in middle but svery slightly widened, lower surface concave throughout, but more so in basal half; apex rather short, triangular, with slightly obtuse tip; orificium situated mostly on the left side, fairly elongate, occupying almost the apical two fifths of the aedeagus. Internal sac with several very slightly sclerotized folds. Left paramere fairly large and elongate, convexly triangular, with obliquely convex apex, right paramere much smaller than the left one, narrow and elongate.

**Female gonocoxites** (Fig. 45). Gonocoxite 1 large, asetose at apical margin. Gonocoxite 2 remarkably narrow and elongate, almost straight, with acute apex. Two small ventro-lateral ensiform setae and the likewise small dorso-median ensiform seta situated at the base.

**Variation.** Some variation noted in colouration of elytra and in depth of elytral striae.

### Distribution

Western part of Papua Indonesia.

### Collecting circumstances

All specimens were collected at median to rather high altitude, most probably on or under bark of trunks and logs in montane rain forest.

### *Catascopus sidus japensis* subsp. n.

Figs 8, 58

### Examined types

**Holotype:** ♂, DUTCH NEW GUINEA: Japen I. Mt. Baduri. 1000 ft., viii.1938. L. E. Cheesman. B.M. 1938-593. / Drawn 1966 Mary Catron No. 144 / *Catascopus sidus* Darl. det. Darlington '66 (NHM).

### Etymology

The name refers to the provenance of this subspecies, Japen Island off the north-west coast of New Guinea.

### Note

This specimen had been noted by Darlington (1968) in his description of *C. sidus* Darlington under "Additional material". However, it does not match the paratypes of this species, nor the specimen from Star Range in NMNL that likewise was noted by Darlington under "Additional material".

### Diagnosis

Distinguished from other subspecies by combination of narrower pronotum, narrow margin of pronotum, less produced eye and rather large, oblique orbit, green head and pronotum, but blue elytra, and the deeply concave lower surface of the aedeagus.

### Description

**Measurements.** Length: 12.5 mm; width: 4.6 mm. Ratios. Width/length of prothorax: 1.50; width of base/apex of prothorax: 1.10; width of prothorax/width of head: 1.07; length/width of elytra: 1.67; width of elytra/width of prothorax: 1.53.

**Colour** (Fig. 58). Head and pronotum bright green with golden reflexions. Elytra blue-green with conspicuous violaceous reflexions, without distinct cupreous humerus or lateral margins.

**Head** (Fig. 58). As in the nominate subspecies, but eyes slightly less produced and orbits slightly larger.

**Pronotum** (Fig. 58). Much as in the nominate subspecies, but decidedly narrower and with slightly narrower lateral margin. Anterior transverse sulcus very shallow.

**Elytra** (Fig. 58). Much as in the nominate subspecies, but lateral margins in basal third more distinctly sinuate, and elytra in apical half slightly widened. Striae well impressed, but almost impunctate, intervals almost depressed. Microreticulation comparatively distinct, therefore surface slightly less glossy.

**Male genitalia** (Fig. 8). Genital ring convexly triangular, slightly asymmetric, rather wide, with deep, convex basal part which is divided in middle; with rather narrow but comparatively short apex. Aedeagus moderately narrow and elongate, in middle perceptibly widened, lower surface deeply concave in basal half, very slightly concave in apical half; apex rather short, triangular, with obtuse tip; orificium situated mostly on the left side, fairly elongate, occupying almost the apical two fifths of the aedeagus. Internal sac with several very slightly sclerotized folds. Left paramere fairly large and elongate, convexly triangular, with obliquely convex apex, right paramere much smaller than the left one, narrow, moderately elongate.

**Female gonocoxites.** Unknown.

**Variation.** Unknown.

### Distribution

Japan Island off the north-west coast of Papua Indonesia. Known only from type locality.

### Collecting circumstances

Largely unknown. The unique specimen was collected at rather low altitude.

### *Catascopus astrum* sp. n.

Figs 9, 59

### Examined types

**Holotype:** ♂, Museum Leiden Neth. New Guinea Exp. Star Range 1260 m Sibil op licht 16.V.1959 / Borrowed from Leiden Mus. Jan. 1962 / Drawn 1966 Mary Catron No. 143 / ♂ *sidus* / *Catascopus sidus* Darl. Darlington 66 (RMNH).

### Etymology

The name refers to occurrence of this species on the Star Mountains in eastern Papua Indonesia.

### Note

This specimen had been noted by Darlington (1968) in his description of *C. sidus* Darlington under "Additional material". However, it does not match the paratypes of this species.

### Diagnosis

Distinguished from the other species with microreticulate elytra by combination of bright green colour with purplish humerus, wide, near base distinctly sinuate pronotum with produced apical angles, apicad distinctly widened elytra, and regularly symmetric, on lower surface markedly concave aedeagus with obtusely triangular apex.

### Description

**Measurements.** Length: 12.8 mm; width: 5.05 mm. Ratios. Width/length of prothorax: 1.65; width of base/apex of prothorax: 1.15; width of prothorax/width of head: 1.13; length/width of elytra: 1.58; width of elytra/width of prothorax: 1.50.

**Colour** (Fig. 59). Bright green, though labrum and mandibles black. Humerus and lateral part of apex of the elytra cupreous. Lower surface piceous-black with slight greenish lustre. Palpi piceous with light reddish apex. Antenna piceous, basal antennomere blackish with slight metallic lustre. Legs dark piceous, tarsi slightly lighter.

**Head** (Fig. 59). Of average size. Eyes large, protruded, orbits rather small, oblique. Labrum elongate, anterior margin slightly excised in middle. Mandibles of average size. Palpi fairly elongate. Mental tooth triangular. Antenna comparatively short, median antennomeres slightly  $>1.5$  x as long as wide. Sulcus medially of eyes rather inconspicuous, almost attaining the posterior border of the eye. Frons irregularly impressed, frontal sulci likewise very irregular. Surface extremely finely and sparsely punctate, without microreticulation, very glossy.

**Pronotum** (Fig. 59). Short and wide, disk rather convex. Apex rather deeply excised, anterior angles projected, rounded off. Lateral border anteriorly evenly rounded, suddenly and deeply sinuate in posterior fourth, parallel-sided in front of the basal angles. Basal angles rectangular, base in middle slightly concave. Apex not margined, lateral margins comparatively wide, basad slightly explanate, base coarsely margined. Median line shallow, connecting the shallow anterior sulcus which is only impressed in middle, and the deep posterior sulcus. Basal grooves deep, short. Lateral margin with 6 marginal setae in anterior 2/3 and with the posterior marginal

seta at basal angle. Surface extremely finely and sparsely punctate, with some superficial transverse lines, without microreticulation, very glossy.

**Elytra** (Fig. 59). Moderately elongate, disk fairly convex. Humeri evenly rounded, lateral margin slightly incurved in basal third, elytra distinctly widened apicad. Lateral apical angle angulate, not spinose. Sutural angle spinose, spines comparatively elongate, dehiscent, apical margin concave and very oblique. Elytra fully striate, striae impressed throughout but shallow, only near base slightly deeper. Striae finely punctulate at least in basal half. Intervals rather depressed, only near base slightly convex. Scutellary stria little impressed, but punctulate, elongate. 3<sup>rd</sup> interval tripunctate, anterior puncture and seta situated close to base and adjacent to 3<sup>rd</sup> stria, median and apical punctures adjacent to 2<sup>nd</sup> stria. Marginal series consisting of 8 punctures behind humerus, 1 intercalary puncture in front of middle, 6 punctures in apical third of lateral margin, and 1 puncture at end of 3<sup>rd</sup> interval. Intervals extremely finely and sparsely punctate, with very superficial, extremely fine microreticulation of transverse meshes, glossy.

**Lower surface.** Intercoxal process with two short setae. Metepisternum very elongate, almost 3 x as long as wide. Terminal sternum of male bisetose, apex in middle gently excised. Surface of abdomen impunctate, glossy.

**Male genitalia** (Fig. 9). Genital ring convexly triangular, slightly asymmetric, rather wide, with deep, convex basal part which is divided in middle; with rather narrow but comparatively short apex. Aedeagus moderately narrow and elongate, in middle perceptibly widened, lower surface deeply concave in basal half, very slightly concave in apical half; apex rather short, triangular, with obtuse tip; orificium situated mostly on the left side, fairly elongate, occupying almost the apical two fifths of the aedeagus. Internal sac with several very slightly sclerotized folds. Left paramere fairly large and elongate, convexly triangular, with obliquely convex apex, right paramere much smaller than the left one, narrow, comparatively short.

**Female gonocoxites.** Unknown.

**Variation.** Unknown.

## Distribution

Star Range in eastern central Papua Indonesia. Known only from type locality.

## Collecting circumstances

Largely unknown. The specimen was collected at median altitude.

## Relationships

The species is closely related to *C. sidus* Darlington.

## *Catascopus riedeli* Baehr

Fig. 60

*Catascopus riedeli* Baehr 1997: 105. – Lorenz 1998: 430; 2005: 454.

## Examined types

**Holotype**; ♂, Irian Jaya, Pr. Manokwari, Meydoudga, 1200-1400m, 5.4.1993 leg. A. Riedel (CBM).

## Diagnosis

Distinguished from the other species with microreticulate elytra by combination of small body size, bright green colour with conspicuously purplish humerus, and narrow, elongate apex of the aedeagus.

## Partial redescription

**Measurements.** Length: 10.2 mm; width: 3.9 mm. Ratios. Width/length of prothorax: 1.62; width of base/apex of prothorax: 1.04; width of prothorax/width of head: 1.09; length/width of elytra: 1.62; width of elytra/width of prothorax: 1.42.

**Colour** (Fig. 60). Head and pronotum dark green, elytra bright green, humeri cupreous-violaceous.

**Male genitalia** (see fig. 5 in Baehr 1997). Genital ring rather short and wide, laterally convex, fairly asymmetric, with very short apex and elongate base. Aedeagus moderately elongate, lower surface almost evenly concave, apex elongate, narrow, at the very tip slightly curved down, orificium slightly shifted to the left side, fairly elongate, occupying about the apical two fifths of the aedeagus. Apex of internal sac with gently sclerotized folds. Left paramere large and elongate, right paramere comparatively short.

**Female gonocoxites.** Unknown.

**Variation.** Unknown.

### Distribution

Vogelkop Peninsula, westernmost New Guinea (Papua Indonesia). Known only from type locality.

### Collecting circumstances

Largely unrecorded. Holotype collected at rather high altitude, probably in rain forest by sifting log litter.

### Additional records

None. Apparently only the holotype is known.

### *Catascopus angustatus* sp. n.

Figs 10, 61

### Examined types

**Holotype:** ♂, Australien ne. Qld. 1960 (CBM).

### Etymology

The name refers to the comparatively narrow elytra.

### Note

This is the specimen that in my review (Baehr 1997) was erroneously identified as *C. laticollis* Macleay.

### Diagnosis

Distinguished from the other species with microreticulate elytra by combination of bright green colour with cupreous humerus, narrow, near base distinctly sinuate pronotum, elongate and parallel-sided elytra, and on lower surface markedly concave aedeagus with slightly obtuse apex.

### Description

**Measurements.** Length: 12.0 mm; width: 4.5 mm. Ratios. Width/length of prothorax: 1.51; width of base/apex of prothorax: 1.12; width of prothorax/width of head: 1.09; length/width of elytra: 1.68; width of elytra/width of prothorax: 1.47.

**Colour** (Fig. 61). Bright green, though labrum and mandibles black. Humerus and lateral part of apex of the elytra cupreous. Lower surface piceous-black with slight greenish lustre. Palpi piceous with light reddish apex. Antenna piceous, basal antennomere blackish with slight metallic lustre. Legs dark piceous, tarsi slightly lighter.

**Head** (Fig. 61). Of average size. Eyes comparatively large, well protruded, orbits rather small, oblique. Labrum elongate, anterior margin slightly excised in middle. Mandibles of average size. Palpi fairly elongate. Mental tooth triangular. Antenna comparatively short, median antennomeres c. 1.5 x as long as wide. Sulcus medially of eyes rather inconspicuous, slightly surpassing the posterior border of the eye. Frons irregularly impressed, frontal sulci likewise very irregular. Surface barely punctate, without microreticulation, very glossy.

**Pronotum** (Fig. 61). Comparatively narrow, disk rather convex. Apex slightly excised, anterior angles slightly projected, rounded off. Lateral border anteriorly evenly rounded, comparatively deeply sinuate in posterior fourth, slightly oblique and directed laterad in front of the basal angles. Basal angles slightly less than rectangular, base in middle slightly concave. Apex not margined, lateral margins comparatively narrow, basad slightly explanate, base coarsely margined. Median line shallow, connecting the shallow anterior sulcus and the deep posterior sulcus. Basal grooves deep, short. Lateral margin with 6 marginal setae in anterior 2/3 and with the posterior marginal seta at the basal angle. Surface extremely finely and sparsely punctate, without microreticulation, very glossy.

**Elytra** (Fig. 61). Comparatively narrow and elongate, parallel-sided, disk fairly convex. Humeri evenly rounded, lateral margin barely incurved in basal third, elytra not widened apicad. Lateral apical angle angulate, not spinose. Sutural angle spinose, spines comparatively elongate, dehiscent, apical margin concave and very oblique. Elytra fully striate, striae impressed throughout but shallow, only near base slightly deeper. Striae finely punctulate at least in basal half. Intervals rather depressed, only near base slightly convex. Scutellary stria little impressed, but punctulate, elongate. 3<sup>rd</sup> interval tripunctate, anterior puncture and seta situated close to base and adjacent to 3<sup>rd</sup> stria, median and apical punctures adjacent to 2<sup>nd</sup> stria. Marginal series consisting of 8 punctures behind humerus, 1 intercalar puncture in front of middle, 6 punctures in apical third of lateral margin,

and 1 puncture at end of 3<sup>rd</sup> interval. Intervals extremely finely and sparsely punctate, with very superficial, fine microreticulation of transverse meshes, glossy.

**Lower surface.** Intercoxal process with two short setae. Metepisternum very elongate, almost 3 x as long as wide. Terminal sternum of male bisetose, apex in middle gently excised. Surface of abdomen impunctate, glossy.

**Male genitalia** (Fig. 10). Genital ring convexly triangular, slightly asymmetric, moderately wide, with deep, convex basal part which is divided in middle, with rather narrow, comparatively short, straight apex. Aedeagus moderately narrow and elongate, in middle slightly widened, lower surface gently concave throughout, but slightly less so in apical half; apex rather short, triangular, with obtuse tip; orificium situated mostly on the left side, fairly elongate, occupying almost the apical two fifths of the aedeagus. Internal sac with several very slightly sclerotized folds. Left paramere fairly large and elongate, convexly triangular, with obliquely convex apex, right paramere much smaller than the left one, narrow and rather elongate.

**Female gonocoxites.** Unknown.  
**Variation.** Unknown.

Distribution

North-eastern Australia, without definite locality.

Collecting circumstances

Not recorded.

Tab. 1. Measurements and ratios of the species of the *laevigatus*-group

N = number of specimens measured; body length in mm; w/l pron = ratio width/length of pronotum; b/a pron = ratio width of base/width of apex of pronotum; w pr/h = ratio width of pronotum/width of head; l/w elytra = ratio length/width of elytra; w el/pr = ratio width of elytra/width of pronotum.

	N	body length	w/l pron	b/a pron	w pr/h	l/w elytra	w el/pr
<i>angustatus</i>	1	12.0	1.51	1.12	1.09	1.68	1.47
<i>astrum</i>	1	12.8	1.65	1.15	1.13	1.58	1.50
<i>laevigatus aruanus</i>	4	9.4-11.4	1.67-1.68	1.01-1.03	1.14-1.16	1.41-1.47	1.44-1.48
<i>l. aruanus</i> (Buru)	1	11.4	1.63	1.07	1.11	1.46	1.53
<i>laevigatus laevigatus</i>	6	9.8-11.1	1.60-1.67	0.99-1.04	1.05-1.11	1.49-1.58	1.45-1.51
<i>laticollis</i>	6	10.2-12.0	1.68-1.72	1.02-1.06	1.10-1.17	1.46-1.50	1.45-1.51
<i>latus</i>	1	17.3	1.52	1.06	1.13	1.69	1.40
<i>platypennis</i>	6	9.9-11.7	1.64-1.74	1.07-1.15	1.16-1.19	1.38-1.45	1.46-1.49
<i>riedeli</i>	1	10.2	1.62	1.04	1.09	1.62	1.42
<i>sidus darlingtoni</i>	6	12.5-14.3	1.57-1.68	1.10-1.17	1.08-1.13	1.60-1.66	1.40-1.50
<i>sidus japensis</i>	1	12.5	1.50	1.10	1.07	1.67	1.53
<i>sidus purpurascens</i>	1	11.8	1.59	1.10	1.10	1.70	1.47
<i>sidus sidus</i>	4	11.8-12.3	1.55-1.62	1.07-1.10	1.08-1.10	1.58-1.65	1.48-1.54
<i>waigeoensis</i>	1	10.4	1.68	1.08	1.11	1.44	1.53



**The *elegans*-group (“gruppo 5” in Straneo 1994)**

This group includes quite differently shaped species which lack any apical spines or denticles at the apex of their elytra, possess a shallow neck impression and a bisetose pronotum. One small, depressed, brightly coloured new species of this group is closely related to *C. hexagonus* Straneo, 1994 from north-western India. The other new taxa are more or less closely related to *C. elegans* (Weber) or are considered subspecies of that species.

***Catascopus impressipennis* sp. n.**

Figs 11, 46, 62

**Examined types**

**Holotype:** ♂, CHINA: S-YUNNAN (Xishuangbanna) 37 km NW Jinghong vic. Guo Men Shan / N22°17.91, E100°38.85 NNNR 1100m 28.VI.2008 leg. L. Meng. EKL (CBM).

**Paratypes:** 1 ♀, same data (NHME); 1 ♀, NW THAILAND 1200m Mae Hong Song pr. BAN SI LANG, 20-22.v. Sv. Bílý leg. 1996 (CBM); 2 ♀♀, LAOS-NE, Xieng Khouan prov., 19°37-8'N 103°20-1'E Phonsavan (30 km NE): Phou Sane Mt. 1400-1700 m. 10.-30.v.2009, D. Hauck leg. / NHMB Basel, NMPC Prague **Laos 2009** Expedition M. Brancucci, M. Geiser, Z. Kraus, D. Hauck, V. Kubáň (NHMB).

**Etymology**

The name refers to the presence of impressions in the basal and in the apical half of the elytra.

**Diagnosis**

Species of the *elegans*-group in a wide sense (group 5 of Straneo 1994), characterized by wide and depressed elytra, presence of a transverse impression in the basal half and an elongate impression at the 6<sup>th</sup> interval in the apical half of the elytra, wide 5<sup>th</sup> interval, and carinate 7<sup>th</sup> interval. It is distinguished from the most similar species *C. hexagonus* Straneo, 1994 by lesser body size, less deep transverse impression on the elytra, coarser punctuation of the elytral striae, and less hexagonal pronotum.

**Description**

**Measurements.** Length: 7.7-8.7 mm; width: 3.1-3.35 mm. Ratios. Width/length of prothorax: 1.48-1.51; width of base/apex of prothorax: 0.92-0.95; width of prothorax/width of head: 0.96-0.98; length/width of elytra: 1.49-1.53; width of elytra/width of prothorax: 1.50-1.56.

**Colour** (Fig. 62). Uniformly bright green, though labrum, mandibles, and palpi except for the apex black. Lower surface black. Antenna reddish-brown. Legs dark piceous to black, femora with greenish lustre.

**Head** (Fig. 62). Large, slightly wider than prothorax. Eyes large, markedly protruded, orbits very small, oblique. Labrum elongate. Mandibles of average size. Palpi fairly elongate. Mental tooth feeble. Antenna comparatively short, median antennomeres <1.5 x as long as wide. A single sulcus and ridge present mediad of the eye, surpassing the posterior border of the eye. Mediad of the sulcus with two very shallow, narrow, longitudinal lines. Frons near clypeal suture with an irregular, shallow groove on either side. Surface finely and sparsely punctate, without microreticulation, very glossy.

**Pronotum** (Fig. 62). Short and wide, rather convex. Apex slightly excised, anterior angle slightly projected, rounded off. Lateral border at apical third slightly angulate, with shallow, elongate sinuation in posterior fourth. Basal angle rectangular, base very gently bisinuate. Apex not margined, lateral sulcus narrow throughout, base coarsely margined. Median line rather deep, connecting the shallow anterior sulcus and the deep posterior sulcus. Basal grooves deep, short. The anterior marginal seta situated at widest diameter in apical third, the posterior marginal seta at basal angle. Surface very feebly punctate, with a few superficial transverse lines, without microreticulation, very glossy.

**Elytra** (Fig. 62). Moderately elongate, almost parallel-sided, dorsal surface moderately convex. Surface with a distinct transverse impression in basal third. Humerus evenly rounded, lateral margin distinctly incurved at basal third, posteriad very slightly widened. Lateral apical angle obtusely rounded. Apical margin sinuate-oblique, incurved towards suture. Elytra fully striate, striae slightly impressed and coarsely punctate throughout. Intervals very slightly convex, 7<sup>th</sup> interval faintly carinate at median margin. 5<sup>th</sup>-7<sup>th</sup> intervals in apical fourth with a very shallow impression, 7<sup>th</sup> interval laterad of the impression slightly outturned. Scutellary stria rather elongate, slightly impressed, punctate. 3<sup>rd</sup> interval tripunctate, anterior puncture and seta situated close to base and adjacent to 3<sup>rd</sup> stria, median and apical punctures situated in middle and close to apex, and in middle of 3<sup>rd</sup> interval. Marginal series consisting of 8 punctures and setae behind humerus, 1 intercalary puncture in front of

middle, 6-7 punctures in apical third of lateral margin, and one puncture with a very elongate seta and another with a short seta at end of 3<sup>rd</sup> interval. Intervals without microreticulation, with an irregular row of extremely fine punctures, very glossy.

**Lower surface.** Metepisternum very elongate, almost 3 x as long as wide. Terminal sternum of male bisetose, apex in middle gently excised, of female quadrisetose. Surface of abdomen impunctate, glossy.

**Legs.** Of average size. 1<sup>st</sup>-3<sup>rd</sup> tarsomeres of male protarsus biserially squamose.

**Male genitalia** (Fig. 11). Genital ring convexly triangular, slightly asymmetric, moderately wide, with deep, convex basal part, with rather narrow and elongate, slightly curved apex. Aedeagus moderately narrow and elongate, very slightly sinuate, lower surface gently concave throughout; apex rather short, triangular, with obtuse tip; orificium short, situated mostly on the left side. Internal sac with several not or very slightly sclerotized folds. Left paramere fairly large and elongate, convexly triangular, right paramere much smaller than the left one, with short and rather wide apex.

**Female gonocoxites** (Fig. 46). Gonocoxite 1 large, asetose at apical margin. Gonocoxite 2 remarkably elongate, narrow, curved, with acute apex. Two rather small ventro-lateral ensiform setae and the small dorso-median ensiform seta situated near the base.

**Variation.** Very little variation noted.

### Distribution

China: south-western Yunnan, Laos, adjacent north-western Thailand.

### Collecting circumstances

Little recorded. All specimens were collected at median altitude.

### Relationships

Closely related to *C. hexagonus* Straneo, 1994 from northern Pakistan (Straneo has "India" but the locality is in north-eastern Pakistan) which shares the short and depressed elytra and the preapical elytral impressions at the 6<sup>th</sup> interval. It should be noted that key and description of *C. hexagonus* in Straneo (1994) do not agree as to the number of punctures and setae on the 3<sup>rd</sup> interval of the elytra. Whereas in the key explicitly only two punctures are noted which even are used as key characters, the description notes three punctures. I believe that the mistake is in the key, because *C. impressipennis* likewise has three punctures, but the third one is situated close to the apex far down the apical declivity.

### The *elegans*-subgroup

This group of closely related species covers comparatively small species which are characterized by not denticulate or spinose external and sutural angles of the elytra, bisetose pronotum with more or less regularly convex lateral angles, not or barely developed transverse impression in the basal half of the elytra, shallow transverse neck impression, and presence of one or two distinct sulci and ridges medially of the eyes. Usually the species are rather narrow and dorsally convex, the aedeagus is fairly elongate and curved, with short orificium, and the base of the genital ring is not divided.

So far this group includes the very widespread species *C. elegans* (Weber, 1801) (see below), *C. balthasari* Jedlicka, 1935 and *C. elegantulus* Jedlicka, 1935 from the Philippines, *C. hardwickei* Kirby, 1825 from India, *C. hinei* Straneo, 1994 from "Larat" which most probably is a locality on Tenimber Islands, *C. ignicinctus* Bates, 1883 from East Asia, *C. jenkinsi* Andrewes, 1937, from India, *C. simillimus* Straneo, 1994 from Thailand and Laos, *C. virens* Chaudoir, 1872 from Sulawesi and the Moluccas, and *C. viridis* Jedlicka, 1935 from the Philippines which, according to the label of the holotype, was described as "*C. elegans viridis*".

The group is rather clearly divided into two subgroups according to the number of paraorbital ridges and sulci, degree of sclerotization of the aedeagus, and shape of the genital ring.

*C. balthasari*, *C. hardwickei*, *C. hinei*, *C. ignicinctus*, and *C. jenkinsi* are reasonably easily identified by external characters of size, shape, colouration, and structure of elytra striae and intervals, while the other species are more difficult to tell from three newly described species. *C. elegans* is a complex of quite differently coloured and structured populations which in this paper receive special notice.

Key to the species of the *elegans*-subgroup

1. All elytral intervals markedly raised and almost carinate (Fig. 74); aedeagus with narrow and elongate apex (Fig. 23). Burma, Philippines ..... *elevatus* Schmidt-Goebel, 1846
- Only the 7<sup>th</sup> interval markedly raised and carinate ..... (2)
2. Head with two distinct ridges and sulci median of the eye; 5<sup>th</sup> interval at least in posterior part not narrowed and raised; body length usually well <10 mm; aedeagus not extremely heavily sclerotized, apex of genital ring angulate, not widely rounded (Figs 18-24)..... (3)
- Head with a single ridge and sulcus median of the eye, but commonly with several additional irregular striae medially; 5<sup>th</sup> interval also in posterior part distinctly narrowed and raised; body length usually >10 mm; aedeagus extremely heavily sclerotized, apex of genital ring widely rounded (Figs 12-17) ..... (8)
3. Femora contrastingly reddish; apical angles of pronotum markedly produced; microreticulation of elytra composed of distinct, transverse meshes (Fig. 70); aedeagus markedly curved, apex asymmetric (Fig. 19). Sulawesi..... *femoratus* sp. n.
- Femora dark; apical angles of pronotum less produced; usually microreticulation of elytra composed of very fine, far less conspicuous, transverse lines, only in *C. hardwickei* composed of almost isodiametric meshes, but in this species head and pronotum rather dull from distinct microreticulation ..... (4)
4. Head with coarse punctures ..... (5)
- Head with fine punctures..... (6)
5. Larger species, length usually >8 mm; pronotum always considerably wider than long, head little wider than pronotum (Figs 75-85); aedeagus wider, with shorter apex (Figs 24-33). South Asia to northern Australia, New Guinea, and Solomon Islands (for subspecies see special key)..... *elegans* (Weber, 1801)
- Smaller species, length c. 7 mm; pronotum little wider than long, head considerably wider than pronotum (Fig. 72); aedeagus narrower, with longer apex (Fig. 21). Philippines ..... *balthasari* Jedlicka, 1935
6. Elytra short and wide; head and pronotum blue, elytra almost black on disk (Fig. 69); head and pronotum distinctly microreticulate, rather dull; microreticulation of elytra conspicuous, almost isodiametric; aedeagus compact, lower surface evenly curved, apex rather wide, obtusely rounded at tip (Fig. 18). India ..... *hardwickei* Kirby, 1825
- Elytra narrow and elongate; colour different; head and pronotum far less distinctly microreticulate, rather glossy; microreticulation of elytra inconspicuous, composed of transverse lines. Sulawesi and Tenimber Islands..... (7)
7. Larger species, length >8.8 mm; colour bronzed; median intervals in basal half depressed (Fig. 73); aedeagus compact, apex asymmetric, slightly curved right (Fig. 22). Tenimber Islands..... *hinei* Straneo, 1994
- Smaller species, length <7.8 mm; colour green, elytra laterally cupreous (Fig. 71); median intervals in basal half distinctly convex; aedeagus sinuate, apex slightly curved right (Fig. 20). Sulawesi..... *fraterculus* sp. n.
8. Elytra depressed, dark blue, with bright cupreous margin, in basal half perceptibly impressed (Fig. 63); aedeagus compact, widened apically, lower surface markedly bisinuate, apex asymmetric, acute, slightly curved right (Fig. 12). Japan, China, Taiwan, Laos ..... *ignicinctus* Bates, 1883 (= *szelessyi* Jedlicka, 1952)
- Elytra rather convex, green, or blue, or largely cupreous, in basal half not impressed (Figs 64-68). Assam, Thailand, Laos, Sumatra, Borneo, Philippines, Sulawesi, Halmahera..... (9)
9. Head and elytra with isodiametric microreticulation; elytra blue. Assam ..... *jenkinsi* Andrewes, 1937
- Head without microreticulation, but punctate, elytra with transverse microreticulation. Thailand, Laos, Sumatra, Borneo, Philippines, Sulawesi, Halmahera ..... (10)
10. Elytra markedly cupreous (Fig. 65); aedeagus compact, barely sinuate, slightly widened apically, lower surface regularly concave, apex almost symmetric, rather obtuse at tip (Fig. 14). Philippines ..... *elegantulus* Jedlicka, 1935
- Elytra green or blue with at most a faint cupreous lustre (Figs 64, 66-68); aedeagus various, but always

- distinctly sinuate, with asymmetric apex (Figs 13, 15-17). Thailand, Laos, Sumatra, Borneo, Philippines, Sulawesi, Halmahera ..... (11)
11. Elytra blue or greenish-blue, the median part in apical two thirds blackish (Fig. 66); aedeagus compact, moderately sinuate, widened apicad, lower surface regularly concave, apex slightly asymmetric, narrow and elongate (Fig. 15). Northern Thailand, Laos.....*simillimus* Straneo, 1994
- Elytra uniformly green (Figs 64, 67, 68); aedeagus differently shaped, apex either elongate but curved right, or short and stout (Figs 13, 16, 17). Sumatra, Borneo, Philippines, Sulawesi, Halmahera ..... (12)
12. Basal angles of pronotum perceptibly projected laterad, margins near base distinctly divergent; either elytra elongate and with barely sinuate apex (Fig. 67), or elytra short and with distinctly sinuate apex (Fig. 68); aedeagus varied (Figs 16, 17). Sumatra, Borneo, Sulawesi, Halmahera ..... (13)
- Basal angles of pronotum not projected laterad, margins near base parallel; elytra short and with barely sinuate apex (Fig. 64); aedeagus with short and stout, obtusely triangular apex (Fig. 13). Philippines ..... *viridis* Jedlicka, 1935
13. Elytra longer and with barely sinuate apex; lateral striae less coarsely punctate and median striae usually less deep (Fig. 67); aedeagus with narrow, elongate apex (Fig. 16). Sulawesi, Halmahera .*virens* Chaudoir, 1872
- Elytra shorter and with distinctly sinuate apex; lateral striae very coarsely punctate and median striae deep (Fig. 68); aedeagus with short and stout, very obtuse apex (Fig. 17). Sumatra, Borneo.....*strigifrons* sp. n.

*Catascopus ignicinctus* Bates  
Figs 12, 63

*Catascopus ignicinctus* Bates, 1883: 280. – Csiki 1932: 1365; Jedlicka 1963: 386; Straneo 1994: 166; Lorenz 1998: 430; 2005: 454.  
*Catascopus szekessyi* Jedlicka, 1952: 81. – Jedlicka 1963: 387.

**Examined types**

**Holotype** of *ignicinctus*: ♀, Type H.T. / Yuyama. 10.V.-14.V.81. / Japan. G. Lewis. 1910-320. / *Catascopus ignicinctus* Bates (NMH).  
**Cotype** of *szekessyi*: ♀, Formosa Sauter / Fuhosho 1909IX. / Cotype / *Széekessyi* sp. n. det. ING. JEDLICKA (NHMNP).

**Type localities**

Of *ignicinctus*: “Yuyama”, Japan. – Of *szekessyi*: “Formosa”.

**Diagnosis**

Belongs to a subgroup that is characterized by presence of only one paraorbital sulcus, strongly sclerotized aedeagus, and wide apex of the genital ring. Distinguished from other species of this subgroup by blue colouration and the distinct transverse impression in basal half of the elytra.

**Partial redescription**

**Measurements.** Length: 10.5-12.2 mm; width: 3.9-4.4 mm. Ratios. Width/length of prothorax: 1.30-1.34; width of base/apex of prothorax: 0.90-0.93; width of prothorax/width of head: 0.92-0.98; length/width of elytra: 1.57-1.64; width of elytra/width of prothorax: 1.64-1.70.

**Colour** (Fig. 63). Blue, elytra sometimes with violaceous lustre, always the lateral margins bright cupreous.

**Head** (Fig. 63). Wide and depressed. Eyes moderately large, laterad moderately protruded, orbits elongate, oblique. Mental tooth triangular. Antenna moderately short, median antennomeres about 1.5 x as long as wide. A single deep sulcus medially of the eye which attains the posterior border of eye. Frons with deep, rather straight frontal sulci which attain the middle of the eye. Surface very coarsely punctate, only in middle of frons with finer and less dense punctures, without microreticulation, very glossy.

**Pronotum** (Fig. 63). Comparatively wide (in group), remarkably cordiform, dorsal surface depressed. Apex deeply excised, anterior angles projectied, rounded off. Lateral border deeply sinuate in posterior fourth, parallel in front of the rectangular basal angles. Apex not margined, lateral margins narrow throughout, base coarsely margined. Median line very deep, sulcate, almost complete, anterior sulcus rather shallow, posterior sulcus deep.

Basal grooves deep, short. Anterior marginal seta situated slightly behind apical third. Surface barely punctate, with more or less numerous and deep transverse striae, without microreticulation, glossy.

**Elytra** (Fig. 63). Elongate, depressed, almost parallel-sided. Humeri evenly rounded, lateral margin barely incurved in basal third. Apex oblique, barely sinuate. Disk in basal third with shallow but distinct transverse impression. Elytra fully striate, deeply impressed and coarsely punctate. Intervals rather depressed, 7<sup>th</sup> interval narrower and slightly carinate, 5<sup>th</sup> interval slightly narrower than the even ones. 3<sup>rd</sup> interval tripunctate, anterior puncture and seta situated close to base and adjacent to 3<sup>rd</sup> stria, median and apical punctures adjacent to 2<sup>nd</sup> stria, posterior puncture close to apex. Intervals very finely and sparsely punctate, with extremely superficial and fine microreticulation of transverse lines which is only recognizable at high magnification, glossy.

**Lower surface.** Thoracic sterna with very sparse and short, barely perceptible, erect pilosity. Intercoxal process with a few short setae. Abdominal sterna with very sparse and very short, declined pilosity which is only perceptibly at high magnification. Metepisternum elongate, c. 2 x as long as wide. Terminal sternum of male bisetose, of female quadrisetose.

**Male genitalia** (Fig. 12). Genital ring large, almost parallel-sided, almost symmetric, moderately wide, with deep, convex basal part and with very wide, evenly rounded apex. Aedeagus moderately stout, slightly curved and slightly widened towards apex, lower surface distinctly bisinuate; apex rather short, asymmetrically triangular, curved right, with slightly obtuse tip; orificium short, situated mostly on the left side. Internal sac with several not or very slightly sclerotized folds. Left paramere large and short, convexly triangular, slightly odd-shaped, with convexly triangular apex, right paramere much smaller than the left one, with short apex.

**Female gonocoxites.** Much as in *C. virens* Chaudoir.

**Variation.** Some variation noted in body size and relative width of prothorax and length of elytra.

#### Distribution

Japan and Taiwan.

#### Collecting circumstances

Not recorded.

#### Additional records (10 ex.)

**Japan:** 3 ♂♂, 3 ♀♀, G. Lewis. 1910-320. (CBM, NHM); 1 ♀, Hitoyoshi 15.V.-17.V.81. / G. Lewis. 1910-320. (NHM); 1 ♀, Ichiuschi 30.IV.-3.V.81. / G. Lewis. 1910-320. (NHM); 1 ♂, 1 ♀, *Catascopus ignicinctus* Bates. Higo. Lewis / G. Lewis. 1910-320. / Sharp Coll. 1905-313. (NHM).

### *Catascopus viridis* Jedlicka

Figs 13, 64

*Catascopus viridis* Jedlicka, 1935: 12. – Jedlicka 1963: 387; Straneo 1994: 167; Lorenz 1998: 430; 2005: 454.

#### Examined types

**Holotype:** ♂, Aorey Philippin / Type / bought from Vitalis de Salvaza 1928 / *Catascopus elegans* v. *viridis* sp. n. det. ING. JEDLICKA / H. E. Andrewes Coll. B.M.1945-97. (NNM).

**Paratype:** ♂, Aorey Philippin / Cotype / Nat.Mus. Pragae Inv. 24693 / *Catascopus viridis* sp. n. Cotype det. ING. JEDLICKA (NMPC).

#### Diagnosis

Belongs to a subgroup that is characterized by presence of only one paraorbital sulcus, strongly sclerotized aedeagus, and wide apex of the genital ring. Distinguished from other species of this subgroup by combination of uniformly green colouration, laterad not projected basal angles of pronotum, and short elytra with barely sinuate apex.

#### Partial redescription

**Measurements.** Length: 9.8-9.9 mm; width: 3.75 mm. Ratios. Width/length of prothorax: 1.29-1.30; width of base/apex of prothorax: 1.0-1.02; width of prothorax/width of head: 0.98-0.99; length/width of elytra: 1.49; width of elytra/width of prothorax: 1.55-1.56.

**Colour** (Fig. 64). Surface uniformly green but 8<sup>th</sup> interval of elytra inconspicuously cupreous.

**Head** (Fig. 64). Wide and depressed. Eyes moderately large, laterad moderately protruded, orbits comparatively

elongate, oblique. Mental tooth triangular. Antenna moderately short, median antennomeres about 1.5 x as long as wide. A single deep sulcus medially of the eye which attains the posterior border of eye. Frons in middle of anterior part with an irregular impression, with deep, rather straight frontal sulci which attain the middle of the eye, and with one or two short, about longitudinal sulci in lateral-anterior part of the frontal sulci. Posterior part of frons and neck moderately coarsely punctate, without microreticulation, very glossy.

**Pronotum** (Fig. 64). Comparatively wide, cordiform, dorsal surface convex. Apex somewhat excised, anterior angles slightly projected, rounded off. Lateral border deeply sinuate in posterior fourth, parallel in front of the rectangular basal angles which are not produced laterad. Apex not margined, lateral margins narrow throughout, base coarsely margined. Median line very deep, sulcate, almost complete, anterior sulcus rather shallow, posterior sulcus deep. Basal grooves deep, short. Anterior marginal seta situated slightly behind the apical third. Surface barely punctate, with a few fine and very superficial transverse striae, with finest and very superficial traces of transverse microreticulation, glossy.

**Elytra** (Fig. 64). Short and wide, dorsal surface rather convex but disk in middle depressed, slightly widened apicad. Humeri evenly rounded, lateral margin very slightly incurved in basal third. Apex oblique, barely sinuate. Disk without transverse impression in basal half. Elytra fully striate, four median striae impressed and finely punctate or crenulate. Lateral striae more coarsely punctate. Intervals rather depressed, but 3<sup>rd</sup> and 5<sup>th</sup> intervals slightly narrower than the even ones and slightly convex. 7<sup>th</sup> interval narrower and distinctly carinate. 3<sup>rd</sup> interval tripunctate, anterior puncture and seta situated close to base and adjacent to 3<sup>rd</sup> stria, median and apical punctures in middle of interval, posterior puncture close to apex. Intervals very finely and sparsely punctate, with very fine but distinct microreticulation of transverse lines which is only recognizable at high magnification, moderately glossy.

**Lower surface.** Thoracic sterna with extremely sparse and short, barely perceptible, erect pilosity. Intercoxal process with a few very short setae. Abdominal sterna with extremely sparse and very short, declined pilosity which is only perceptibly at very high magnification. Metepisternum elongate, c. 2 x as long as wide. Terminal sternum of male bisetose.

**Male genitalia** (Fig. 13). Genital ring large, almost parallel-sided, slightly asymmetric, moderately wide, with deep, convex basal part and very wide, very obtusely angulate apex. Aedeagus stout, rather curved right and widened towards apex, lower surface evenly concave; apex short, straight, slightly asymmetric, stout, obtusely triangular; orificium short, situated mostly on the left side. Internal sac with several not sclerotized folds. Left paramere large and short, convexly triangular, slightly odd-shaped, with convexly triangular apex, right paramere much smaller than the left one, concave on upper rim, with short apex.

**Female gonocoxites.** Unknown.

**Variation.** Barely noted.

## Distribution

Masbate Island, Philippines. Known only from type locality.

## Collecting circumstances

Not recorded.

## Additional records

None.

## *Catascopus elegantulus* Jedlicka

Figs 14, 65

*Catascopus elegantulus* Jedlicka, 1935: 12. – Jedlicka 1963: 384; Lorenz 1998: 430; 2005: 454.

## Examined types

**Holotype:** ♂, Type / Philippine Is. C. H. Bottcher. B.M. 1929-201. / *Catascopus elegantulus* type n. sp. det. ING. JEDLIČKA (NHM).

## Diagnosis

Belongs to a subgroup that is characterized by presence of only one paraorbital sulcus, strongly sclerotized aedeagus, and wide apex of the genital ring. Immediately distinguished from other species of this subgroup by the markedly cupreous colouration, laterad slightly projected basal angles of pronotum, and short elytra.

## Description

**Measurements.** Length: 9.7 mm; width: 3.75 mm. Ratios. Width/length of prothorax: 1.29; width of base/apex of prothorax: 0.94; width of prothorax/width of head: 0.96; length/width of elytra: 1.47; width of elytra/width of prothorax: 1.62.

**Colour** (Fig. 65). Head and pronotum green, labrum and mandibles black. Elytra green, but lateral margin from 6<sup>th</sup> interval markedly cupreous, only the very margin green.

**Head** (Fig. 65). Wide and depressed. Eyes moderately large, laterad moderately protruded, orbits fairly elongate, oblique. Mental tooth triangular. Antenna moderately short, median antennomeres about 1.5 x as long as wide. A single deep sulcus medially of the eye which attains the posterior border of eye. Frons in middle of anterior part with an irregular impression, with deep, rather straight frontal sulci which attain the middle of the eye, and with one or two short, about longitudinal sulci in lateral-anterior part of the frontal sulci. Posterior part of frons and neck rather coarsely punctate, without microreticulation, very glossy.

**Pronotum** (Fig. 65). Comparatively wide, cordiform, dorsal surface convex. Apex somewhat excised, anterior angles slightly projected, rounded off. Lateral border deeply sinuate in posterior fourth, parallel in front of posterior angles. Basal angles rectangular, slightly produced laterad. Apex not margined, lateral margins narrow throughout, base coarsely margined. Median line very deep, sulcate, almost complete, anterior sulcus rather shallow, posterior sulcus deep. Basal grooves deep, short. Anterior marginal seta situated slightly behind apical third. Surface barely punctate, with a few fine and very superficial transverse striae, with finest and very superficial traces of transverse microreticulation, glossy.

**Elytra** (Fig. 65). Short and wide, dorsal surface rather convex but disk in middle depressed, slightly widened apicad. Humeri evenly rounded, lateral margin slightly incurved in basal third. Apex oblique, moderately sinuate. Disk with very shallow transverse impression in basal half. Elytra fully striate, four median striae impressed and in the basal half rather coarsely punctate. Lateral striae more coarsely punctate. Intervals slightly convex, but 3<sup>rd</sup> and 5<sup>th</sup> intervals slightly narrower than the even ones and slightly more convex. 7<sup>th</sup> interval narrower and distinctly carinate. 3<sup>rd</sup> interval tripunctate, anterior puncture and seta situated close to base and adjacent to 3<sup>rd</sup> stria, median and apical punctures in middle of interval, posterior puncture close to apex. Intervals very finely and sparsely punctate, with very fine but distinct microreticulation of transverse lines which is only recognizable at high magnification, moderately glossy.

**Lower surface.** Thoracic sterna with extremely sparse and short, barely perceptible, erect pilosity. Intercoxal process with a few very short setae. Abdominal sterna with extremely sparse and very short, declined pilosity which is only perceptibly at very high magnification. Metepisternum elongate, c. 2 x as long as wide. Terminal sternum of male bisetose.

**Male genitalia** (Fig. 14). Genital ring large, almost parallel-sided, slightly asymmetric, moderately wide, with deep, convex basal part and very wide, rounded apex. Aedeagus stout, slightly curved right and widened towards apex, lower surface evenly and very deeply concave; apex rather short, straight, slightly asymmetric, stout, obtuse at apex; orificium short, situated mostly on the left side. Internal sac with several not sclerotized folds. Left paramere large and short, convexly triangular, slightly odd-shaped, with convexly triangular apex, right paramere much smaller than the left one, concave on upper rim, with short apex.

**Female gonocoxites.** Unknown.

**Variation.** Unknown.

## Distribution

Philippine Islands, not specified.

## Collecting circumstances

Not recorded.

## New records

None.

*Catascopus simillimus* Straneo

Figs 15, 66

*Catascopus simillimus* Straneo 1994: 169. – Lorenz 1998: 430; 2005: 454.**Examined types.**

None.

**Diagnosis**

Belongs to a subgroup that is characterized by presence of only one paraorbital sulcus, strongly sclerotized aedeagus, and wide apex of the genital ring. Distinguished from other species of this subgroup by combination of blue or bluish-green colouration of the elytra, wide pronotum with accentuate lateral angle, short elytra with distinctly sinuate apex, rather coarsely punctate elytral striae, and distinct punctuation of the median intervals.

**Partial redescription**

**Measurements.** Length: 9.3–11.4 mm; width: 3.5–4.3 mm. Ratios. Width/length of prothorax: 1.29–1.36; width of base/apex of prothorax: 0.92–0.94; width of prothorax/width of head: 0.95–0.97; length/width of elytra: 1.51–1.52; width of elytra/width of prothorax: 1.53–1.57.

**Colour** (Fig. 66). Head and pronotum green, labrum and mandibles black. Elytra blue or blue-green, apical half in middle blackish. 8<sup>th</sup> interval inconspicuously cupreous, not contrasting.

**Head** (Fig. 66). Wide and depressed. Eyes moderately large, laterad moderately protruded, orbits fairly elongate, oblique. Mental tooth triangular. Antenna moderately short, median antennomeres about 1.5 x as long as wide. A single deep sulcus medially of the eye which attains the posterior border of eye. Clypeus and anterior part of frons in middle irregularly impressed. Frons with deep, rather straight frontal sulci which attain the middle of the eye, and with a few short, about longitudinal sulci in lateral-anterior part of the frontal sulci. Posterior part of frons and neck moderately coarsely punctate, with finest traces of about isodiametric microreticulation which is perceptible only at very high magnification, glossy.

**Pronotum** (Fig. 66). Comparatively wide, cordiform, dorsal surface convex. Apex somewhat excised, anterior angles slightly projected, rounded off. Lateral border deeply sinuate in posterior fourth, parallel in front of the basal angles. Lateral angles accentuate. Basal angles rectangular, not produced laterad. Apex only laterally margined, lateral margins narrow throughout, base coarsely margined. Median line very deep, sulcate, almost complete, anterior sulcus rather shallow, posterior sulcus deep. Basal grooves deep, short. Anterior marginal seta situated slightly behind apical third. Surface with fine though distinct, very sparse punctures, with several rather distinct transverse striae, with finest and very superficial traces of transverse microreticulation, glossy.

**Elytra** (Fig. 66). Short and wide, dorsal surface moderately convex but disk in middle of anterior half somewhat depressed, slightly widened apicad. Humeri evenly rounded, lateral margin slightly incurved in basal third. Apex oblique, distinctly sinuate. Disk without transverse impression in basal half. Elytra fully striate, four median striae well impressed and rather coarsely punctate. Lateral striae even more coarsely punctate. Intervals slightly convex. 7<sup>th</sup> interval narrower and distinctly carinate, 5<sup>th</sup> interval also slightly narrower than the others and distinctly convex. 3<sup>rd</sup> interval tripunctate, anterior puncture and seta situated close to base and adjacent to 3<sup>rd</sup> stria, median and apical punctures in middle of interval, posterior puncture very close to apex. Intervals finely and sparsely punctate but punctures coarser than in other species and well visible, with very fine but distinct microreticulation of transverse lines which is only recognizable at high magnification, moderately glossy.

**Lower surface.** Thoracic sterna with very sparse and short, barely perceptible, erect pilosity. Intercoxal process with a few very short setae. Abdominal sterna with extremely sparse and very short, declined pilosity which is only perceptible at very high magnification. Metepisternum elongate, c. 2 x as long as wide. Apparently terminal sternum of male and female bisetose.

**Male genitalia** (Fig. 15). Genital ring large, almost parallel-sided, slightly asymmetric, wide, with deep, convex basal part and very wide, rounded apex. Aedeagus stout, rather curved right, slightly widened towards apex, lower surface evenly concave; apex narrow, elongate, almost straight, symmetric, slightly obtuse at tip; orificium short, situated mostly on the left side. Internal sac with several not sclerotized folds. Both parameres very large and short, left paramere convexly triangular, slightly odd-shaped, with convexly triangular apex, right paramere much smaller than the left one, with very short apex.

**Female gonocoxites.** Much as in *C. virens* Chaudoir.

**Variation.** Some variation noted in body size.



**Distribution**

Northern Thailand, Laos.

**Collecting circumstances**

Not recorded.

**Additional records** (4 ex.)

**Laos:** 2 ♂♂, LAOS centr. Knammouan prov. NAKAI env. 4-8.5.1998 Route No 8 alt.  $560 \pm 20$  m N 17°42.8, E 105°08.9 (GPS) E. Jendek & O. Sauča leg. (CBM); 1 ♂, 1 ♀, Umg. Vientiane III.-VI.1963 / *jenkinsi* Andr. det. Ing. Jedlička (NMPC).

*Catascopus virens* Chaudoir

Figs 16, 47, 67

*Catascopus virens* Chaudoir, 1872: 245. – Csiki 1932: 1367; Straneo 1994: 166; Lorenz 1998: 430; 2005: 454.

**Examined types**

**Lectotype** (by present designation): ♂, Ex coll. Chaudoir (MNHP).

**Paralectotypes:** 2 ♂♂, same data (MNHP).

**Type locality** (from description)

“Manado, Célèbes”.

**Diagnosis**

Characterized by presence of only one paraorbital sulcus, strongly sclerotized aedeagus, and wide apex of the genital ring. Distinguished from other species of this subgroup by combination of uniformly green colouration, elongate elytra with barely sinuate apex, and the narrow, elongate apex of the aedeagus.

**Partial redescription**

**Measurements.** Length: 9.3-11.2 mm; width: 3.3-4.05 mm. Ratios. Width/length of prothorax: 1.19-1.27; width of base/apex of prothorax: 0.94-0.97; width of prothorax/width of head: 0.97-0.99; length/width of elytra: 1.54-1.58; width of elytra/width of prothorax: 1.48-1.59.

**Colour** (Fig. 67). Head and pronotum green, though labrum and mandibles black. Elytra bright green with some golden lustre, the 8<sup>th</sup> interval more or less conspicuously cupreous.

**Head** (Fig. 67). Of average size. Eyes large, well protruded, orbits rather small, oblique. Sulcus medially of eyes rather inconspicuous, surpassing posterior border of eye. Frontal sulci short, rather deep, but somewhat irregular. Laterad of frontal sulci with 3-4 short, longitudinal sulci and ridges. Anterior part of frons almost impunctate, posterior part rather densely and coarsely punctate. Surface at most with finest and very superficial traces of about isodiametric microreticulation, glossy.

**Pronotum** (Fig. 67). Rather wide, cordiform, dorsal surface convex. Anterior angles moderately projected. Basal angles rectangular, but slightly produced laterad. Base considerably narrower than apex. Surface finely and very sparsely punctate, usually with some superficial transverse striae, with very fine and somewhat superficial, very transverse microreticulation, rather glossy. Punctures and microreticulation usually only visible at high magnification.

**Elytra** (Fig. 67). Moderately elongate, convex but on disk depressed, almost parallel-sided to slightly widened apicad. Lateral margin in basal third very slightly incurved. Apex oblique, barely sinuate. Elytra fully striate, striae well impressed, four median striae more or less distinctly punctate. Median intervals very slightly convex, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, the 5<sup>th</sup> interval slightly narrower than the other intervals and slightly more convex. Four median intervals irregularly uni- to biserially punctate, punctures fine, with very fine though rather distinct microreticulation which is composed of very transverse meshes, fairly glossy.

**Lower surface.** Prosternum, mesosternum, and metasternum in middle with sparse and very short, erect pilosity. Intercoxal process with some very short setae. Also the abdominal sterna with very sparse and very short, declined pilosity. Metepisternum elongate, > 2 x as long as wide. Terminal sternum of male bisetose, of female quadrisetose.

**Male genitalia** (Fig. 16). Genital ring large, almost parallel-sided, rather asymmetric, wide, with deep, convex

basal part and very wide, asymmetrically rounded apex. Aedeagus moderately stout, rather curved right, but not widened towards apex, lower surface evenly and deeply concave; apex rather short, straight, asymmetric, stout, very obtuse at apex; orificium short, situated mostly on the left side. Internal sac with several not sclerotized folds. Left paramere large and short, convexly triangular, with wide, convex apex, right paramere much smaller than the left one, concave on upper rim, with short apex.

**Female gonocoxites** (Fig. 47). Gonocoxite 1 large, asetose at apical margin. Gonocoxite 2 moderately elongate, curved, with acute apex. Two very elongate ventro-lateral ensiform setae situated slightly below middle, the likewise elongate dorso-median ensiform seta situated at middle.

**Variation.** Some variation noted in body size, width of prothorax and relative length of elytra.

### Distribution

Sulawesi, Halmahera, Seram.

### Collecting circumstances

Largely unrecorded. One specimen was collected at light in “multistr. ever-green forest edge”, another in “rain forest”.

### Additional records (18 ex.)

**Sulawesi:** 1 ♂, 1 ♀, RMNH/pw31 N SULAWESI:DUMOGA BONE NP Malibagu Rd alt.m 110 19-20. XI.1985 J. Krikken / multistr. ever-green forest edge at light (RMNH); 1 ♂, C. J. LOUWERENS W-Celebes 4500' Sidaonta-Paloe VIII 1937 / Museum Leiden ex. collection C. J. Louwerens rec. 1979 (RMNH); 1 ♂, INDONESIA Sulawesi-Utara Dumoga-Bone N.P. 8 Aug. 1985 Coll. Chen Young / EdwardsCamp644m PROJECT WALLACE / *Catascopus ? elegans* Web. det. S. L. Straneo 1992 (RMNH); 1 ♀, INDONESIA: N. SULAWESI 7km Nn. Malibagu, ca. 125m 0°27'N123°58'E 12.XI.1985 C. v. Achternberg RMNH'86 (RMNH); 1 ♀, Indonesia: C. Sulawesi Tonusu nr. Tentana, Poso-Lake (rain forest) R. Gerstmeier, 21.4.1994 (CLT); 1 ♂, SULAWESI TENGAH: Nr. Morowali, Ranu River Area 27.i.-20.iv.1980 / M.J.D. Brendell B.M.1980-280 (NHM); 5 ♂♂, 2 ♀♀, INDONESIA C-SULAWESI W coast of Lake POSO TAIPA env. 10.-11.iv.1999 BEČVÁŘ & ZÁBRANSKÝ leg. (CBM). – **Halmahera:** 1 ♀, Halmahera NW 7 km S Jailolo, 200m 1°1'18"N, 127°31'39"E 27.I.2006, leg. A. Weigel (CBM); 1 ♂, 1 ♀, Indonesia, Maluku- Utara/Halmahera Umg. Labi Labi 20.-30. N. 1998 leg. Horst Rudolph (CBM, CRQ). – **Seram:** 1 ♂, SOLEA. 12 km SE WAHAI SERAM MALUKU 17.I.-18.II.1997 J. HORÁK leg (CBM).

### *Catascopus strigifrons* sp. n.

Figs 17, 68

### Examined types

**Holotype:** ♂, NORD-SUMATRA Umg. Prapat 1.-15.IV.1983, DIEHL (SMNS).

**Paratypes:** 1 ♀ (abdomen damaged), NORD-SUMATRA: Aek Tarum, am Asahan 150 m, 21.I.84, DIEHL (CBM); 1 ♀, SARAWAK: 4th Division Gn. Mulu NP. / nr. Base Camp 50-100m. / P.M.Hammond & J.E.Marshall v-viii.1978 B.M.1978-49 (NHM).

### Etymology

The name refers to the finely strigose frons.

### Diagnosis

Belongs to a subgroup that is characterized by presence of only one paraorbital sulcus, strongly sclerotized aedeagus, and wide apex of the genital ring. Distinguished from other species of this subgroup by combination of green colouration with some golden lustre and conspicuously cupreous 8<sup>th</sup> interval, laterad slightly projected basal angles of pronotum, and short elytra with distinctly sinuate apex.

### Description

**Measurements.** Length: 9.1-10.4 mm; width: 3.5-3.9 mm. Ratios. Width/length of prothorax: 1.26-1.29; width of base/apex of prothorax: 0.92-0.97; width of prothorax/width of head: 0.97-0.99; length/width of elytra: 1.49-1.53; width of elytra/width of prothorax: 1.55-1.58.

**Colour** (Fig. 68). Head and pronotum green, labrum and mandibles black. Elytra green with distinct golden or bronzed lustre, 8<sup>th</sup> interval conspicuously golden or cupreous. In both specimens from Sumatra also head and pronotum with golden tinge.

**Head** (Fig. 68). Wide and depressed. Eyes rather large, laterad moderately protruded, orbits moderately elongate, oblique. Mental tooth triangular. Antenna moderately short, median antennomeres about 1.5 x as long as wide. A single deep sulcus medially of the eye which attains the posterior border of eye. Anterior part of frons in middle irregularly impressed. Frons with deep, rather straight frontal sulci which attain the middle of the eye, and with a few short, about longitudinal sulci in lateral-anterior part of the frontal sulci. Posterior part of frons and neck moderately coarsely to coarsely punctate, with finest traces of about isodiametric microreticulation which is perceptible only at very high magnification, glossy.

**Pronotum** (Fig. 68). Comparatively wide, cordiform, dorsal surface convex. Apex somewhat excised, anterior angles slightly projected, rounded off. Lateral border deeply sinuate in posterior fourth, slightly oblique in front of the posterior angles. Lateral angles rather accentuate. Basal angles rectangular, but perceptibly produced laterad. Apex only laterally margined, lateral margins narrow throughout, base coarsely margined. Median line very deep, sulcate, almost complete, anterior sulcus rather shallow, posterior sulcus deep. Basal grooves deep, short. Anterior marginal seta situated behind apical third. Surface with fine though distinct, very sparse punctures, with very fine, rather superficial transverse striae, and with fine and superficial traces of transverse microreticulation, glossy.

**Elytra** (Fig. 68). Short and wide, dorsal surface moderately convex but disk in middle depressed, slightly widened apicad. Humeri evenly rounded, lateral margin very slightly incurved in basal third. Apex oblique, distinctly sinuate. Disk without transverse impression in basal half. Elytra fully striate, four median striae well impressed, rather finely punctate. Lateral striae more coarsely punctate. Intervals slightly convex. 7<sup>th</sup> interval narrower and distinctly carinate, 5<sup>th</sup> interval also narrower than the others and distinctly convex. 3<sup>rd</sup> interval tripunctate, anterior puncture and seta situated close to base and adjacent to 3<sup>rd</sup> stria, median and apical punctures in middle of interval, posterior puncture very close to apex. Intervals very finely and sparsely punctate, with very fine but distinct transverse microreticulation, punctures and microreticulation only recognizable at high magnification, moderately glossy.

**Lower surface.** Thoracic sterna with extremely sparse and short, barely perceptible, erect pilosity. Intercoxal process with a few very short setae. Abdominal sterna with extremely sparse and very short, declined pilosity which is only perceptible at very high magnification. Metepisternum elongate, c. 2 x as long as wide. Terminal sternum of male bisetose, of female quadrisetose.

**Male genitalia** (Fig. 17). Genital ring large, with slightly convex lateral margins, rather asymmetric, wide, with deep, convex basal part and wide, convexly obtuse apex. Aedeagus moderately stout, rather curved right and slightly widened towards apex, lower surface in basal half slightly convex, the apical part markedly curved downwards; apex narrow and elongate, almost parallel-sided, slightly curved right, slightly asymmetric, slightly obtuse at tip; orificium short, situated mostly on the left side. Internal sac with several not sclerotized folds. Both parameres comparatively elongate, left paramere large, with wide, convexly triangular apex, right paramere much smaller than the left one, concave on upper rim, with rather elongate apex.

**Female gonocoxites.** Much as in *C. virens* Chaudoir.

**Variation.** Some apparent regional variation noted, because the single specimen from Borneo is slightly smaller, head and pronotum lack any distinct golden lustre, and the microreticulation of head and pronotum is less distinct.

## Distribution

Northern Sumatra, Sarawak, northern Borneo.

## Collecting circumstances

Largely unknown. The specimen from Borneo was collected at low altitude.

## *Catascopus hardwickei* Kirby

Figs 18, 69

*Catascopus hardwickei* Kirby, 1825: 98. – Andrewes 1919: 130; 1937: 189; Csiki 1932: 1365; Straneo 1994: 167; Lorenz 1998: 430; 2005: 454.

*Catascopus aeneipennis* Chaudoir, 1861: 118. – Andrewes 1924: 593.

## Examined types

**Holotype** of *hardwickei*: ♀, Type / Kirby / *hardwickei* (NHM).

## Diagnosis

Belongs to a subgroup that is characterized by presence of two paraorbital sulci, moderately sclerotized aedeagus, and narrow apex of the genital ring. Distinguished from other species of this subgroup by the bluish-blackish-purplish colour, distinct transverse basal impression of the elytra, coarsely punctate and even somewhat sulcate lateral striae, and the distinct and isodiametric microreticulation of the elytra.

## Partial redescription

**Measurements.** Length: 8.9-9.1 mm; width: 3.4-3.5 mm. Ratios. Width/length of prothorax: 1.28-1.31; width of base/apex of prothorax: 0.97-1.0; width of prothorax/width of head: 0.91-0.93; length/width of elytra: 1.51-1.54; width of elytra/width of prothorax: 1.65-1.70.

**Colour** (Fig. 69). Head and pronotum dark blue, sometimes with slight greenish or violaceous tinge, labrum and mandibles black. Elytra in middle black with very slight violaceous or purplish lustre, the 5<sup>th</sup> or 6<sup>th</sup> interval sometimes slightly greenish, the lateral margin again dark cupreous or purplish, but little contrasting.

**Head** (Fig. 69). Moderately wide and depressed. Eyes large, laterad well protruded, orbits short, oblique. Mental tooth triangular. Antenna moderately short, median antennomeres about 1.5 x as long as wide. Medially of the eye with two sulci and ridges which almost attain the posterior border of eye. Anterior part of frons in middle irregularly triangularly impressed. Frons with short, irregular, barely recognizable frontal sulci which are irregularly striolate as most of the anterior half of frons. Posterior part of frons and neck apparently impunctate, but with dense but fine, very irregular, coriaceous striae, with distinct, isodiametric microreticulation, rather dull.

**Pronotum** (Fig. 69). Rather wide, cordiform, dorsal surface convex. Apex straight, anterior angles not projected, lateral border deeply sinuate in posterior fourth, slightly oblique in front of the posterior angles. Lateral angles rounded. Basal angles rectangular, but slightly produced laterad. Apex only laterally margined, lateral margins narrow throughout, base coarsely margined. Median line very deep, sulcate, almost complete, anterior sulcus rather shallow, posterior sulcus deep. Basal grooves deep, short. Anterior marginal seta situated behind apical third. Surface with fine, moderately sparse punctures, with fine, rather superficial transverse striae, and with very fine but distinct, microreticulation which is composed of very transverse meshes, moderately glossy.

**Elytra** (Fig. 69). Short and wide, dorsal surface moderately convex, rather uneven, in anterior half with wide, shallow but distinct, transverse impression, slightly widened apicad. Humeri evenly rounded, lateral margin distinctly incurved in basal third. Apex oblique, comparatively deeply sinuate. Elytra fully striate, four median striae well impressed, moderately finely punctate, except at base where they are coarsely punctate. Lateral striae very coarsely punctate, in particular the 5<sup>th</sup> stria which is even somewhat sulcate. Intervals slightly convex. 7<sup>th</sup> interval narrower and conspicuously carinate, 5<sup>th</sup> interval laterally and 6<sup>th</sup> interval medially in middle also slightly carinate. 3<sup>rd</sup> interval tripunctate, all punctures located in middle of interval. The anterior puncture and seta situated in basal third, the median puncture in middle, the posterior puncture at apical sixth. Intervals very finely and sparsely punctate but the punctures almost invisible within the comparatively coarse, about isodiametric microreticulation. Surface comparatively dull.

**Lower surface.** All thoracic sterna and the lower surface of the head with rather dense and elongate, erect pilosity. Intercoxal process with several rather elongate setae. Abdominal sterna with fairly dense and comparatively elongate, declined pilosity. Metepisternum moderately elongate, < 2 x as long as wide. Terminal sternum of male bisetose, of female quadrisetose.

**Male genitalia** (Fig. 18). Genital ring large, with slightly oblique lateral margins, almost symmetric, with moderately deep, convex basal part and narrow, obtusely triangular apex. Aedeagus moderately stout, slightly sinuate and slightly widened in middle, lower surface moderately concave; apex rather stout, moderately elongate, straight, symmetric, obtuse at tip; orificium short, situated mostly on the left side. Internal sac with several not sclerotized folds. Left paramere large, with wide, convex apex, right paramere much smaller than the left one, with short, triangular apex.

**Female gonocoxites.** Much as in *C. virens* Chaudoir.

**Variation.** Rather little variation noted except for colour which is somewhat varied.

## Distribution

Northern India.

## Collecting circumstances

Not recorded.

**Additional records** (7 ex.)

**India:** 1 ♀, Haldwani Dist. Kumaon, India H. G. Champion / *Catascopus hardwicki* Kirby compared with type H.E.A. (NHM); 1 ♂, 1 ♀, Haldwani Dist. Kumaon, India H. G. Champion (CBM, NHM); 2 ♂♂, Haldwani Dist. Kumaon, India H. G. Champion / *Catascopus hardwickei* Kirby / *Catascopus hardwicki* Kirby H. E. Andrewes det. (NHM); 1 ♂, Haldwani Dist. Kumaon, India H. G. Champion / *Catascopus aeneipennis* Chaud. compared with type H.E.A. (NHM); 1 ♀, Mukki, Beihar Balaghat C.P. B.M. Bhatia. 28.XII.1926 / *Catascopus hardwicki*, Kirby G. B. Pont. det. (NHM).

*Catascopus femoratus* sp. n.

Figs 19, 70

**Examined types**

**Holotype:** ♂, Sulawesi, Poso-Bez. Tentena-Bada, Poso-see, 20.4-2.5.1994 leg. Hiermeier (CBM).

**Paratype:** 1 ♂, same data (CBM).

**Etymology**

The name refers to the contrastingly yellow femora of this species.

**Diagnosis**

Belongs to a subgroup that is characterized by presence of two paraorbital sulci, moderately sclerotized aedeagus, and narrow apex of the genital ring. Distinguished from other species of this subgroup by combination of greenish-cupreous elytra, contrastingly red femora, narrow pronotum with protruded apical angles, narrow and elongate elytra, and only in basal third weakly carinate 7<sup>th</sup> interval.

**Description**

**Measurements.** Length: 10.3-10.4 mm; width: 3.6-3.7 mm. Ratios. Width/length of prothorax: 1.21-1.22; width of base/apex of prothorax: 0.97; width of prothorax/width of head: 0.93-0.94; length/width of elytra: 1.69-1.70; width of elytra/width of prothorax: 1.60-1.65.

**Colour** (Fig. 70). Head and pronotum green with slight golden lustre, labrum and mandibles black. Elytra greenish with distinct cupreous tinge, the lateral margin rather contrastingly bright green. Antenna black, palpi piceous. Femora red, tibiae and tarsi contrastingly black. Lower surface dark piceous to black.

**Head** (Fig. 70). Of average size. Eyes very large, laterad markedly protruded, orbits very short, oblique. Mental tooth triangular. Antenna moderately short, median antennomeres c. 1.5 x as long as wide. Medially of the eye with two sulci and ridges which attain the posterior border of eye. Clypeus and anterior part of frons in middle with small, shallow impressions. Frons with very short, almost circular, relatively deep frontal sulci. Middle of frons with several fine, short, irregular striae. Clypeus finely punctate, anterior part of frons sparsely, posterior part and neck more densely punctate, punctures rather fine. Clypeus with fine though distinct, isodiametric microreticulation, frons and neck with far less distinct, very fine and superficial, about isodiametric microreticulation, surface moderately glossy.

**Pronotum** (Fig. 70). Rather narrow, cordiform, dorsal surface very convex. Apex rather deeply excised, anterior angles well projected, obtuse at tip. Lateral border moderately sinuate in posterior third, straight in front of the basal angles. Lateral angles rounded without any angulation. Basal angles rectangular, not produced laterad. Base slightly narrower than apex, in middle slightly produced. Apex superficially margined, lateral margins narrow throughout, base coarsely margined. Median line very deep, sulcate, almost complete, anterior transverse sulcus rather shallow, posterior sulcus deep. Basal grooves circular, very deep. Anterior marginal seta situated far behind apical third. Surface with very sparse, fine, almost not perceptible punctures, with moderately fine, somewhat superficial transverse striae, and with very fine and somewhat superficial microreticulation which is composed of very transverse meshes, moderately glossy.

**Elytra** (Fig. 70). Narrow and elongate, dorsal surface moderately convex, in basal half with a very shallow transverse impression, barely widened apicad. Humeri evenly rounded, lateral margin very slightly incurved in basal third. Apex oblique, elongate, very slightly sinuate. Elytra fully striate, four median striae shallowly impressed, rather finely punctate. Lateral striae deeper, rather coarsely punctate. Median intervals almost depressed. 7<sup>th</sup> interval narrower and in basal third inconspicuously carinate, 5<sup>th</sup> interval slightly narrower than the others and more convex. 3<sup>rd</sup> interval tripunctate, the anterior puncture attached to the 3<sup>rd</sup> stria, both posterior punctures located in middle of interval. The anterior puncture and seta situated in basal third, the median puncture in middle, the posterior puncture at apical sixth. Intervals very finely and sparsely punctate but the

punctures almost invisible within the comparatively distinct, slightly transverse microreticulation. Surface moderately glossy.

**Lower surface.** All thoracic sterna and the lower surface of the head with rather sparse but fairly elongate, erect pilosity. Intercoxal process with a few rather elongate setae. Abdominal sterna with sparse but comparatively elongate, declined pilosity. Metepisternum very elongate, almost 2.5 x as long as wide. Terminal sternum of male bisetose.

**Legs.** Of average size. 1<sup>st</sup>-3<sup>rd</sup> tarsomeres of the male protarsus biserially squamose.

**Male genitalia** (Fig. 19). Genital ring large, convexly triangular, slightly asymmetric, with moderately deep, convex basal part and rather narrow, obtuse apex. Aedeagus rather slender, slightly sinuate, not widened towards apex, lower surface only concave in basal fourth, then almost straight; apex rather narrow and fairly elongate, straight, asymmetric, rounded obtuse at tip; orificium short, situated mostly on the left side. Internal sac with several not sclerotized folds. Left paramere large, with wide, convex apex, right paramere much smaller than the left one, with rather short, oblique apex.

**Female gonocoxites.** Unknown.

**Variation.** Little variation noted.

### Distribution

Central Sulawesi. Known only from type locality.

### Collecting circumstances

Little recorded. The specimens most probably were collected by sieving bark of logs in rain forest at median altitude.

## *Catascopus fraterculus* sp. n.

Figs 20, 71

### Examined types

**Holotype:** ♂, Indonesia, SE Sulawesi Sulawesi-Tenggara Abuki reg. Sambeani env. 10.X.1999, native collector (CBM).

**Paratype:** 1 ♀, same data (CBM).

### Etymology

The Latin word “*fraterculus*” means “*small brother*” and refers to the similarity but smaller size of this species, as compared with *C. femoratus* sp. n. which likewise occurs on Sulawesi.

### Diagnosis

Belongs to a subgroup that is characterized by presence of two paraorbital sulci, moderately sclerotized aedeagus, and narrow apex of the genital ring. Distinguished from other species of this subgroup by combination of green colouration with cupreous 7<sup>th</sup> and 8<sup>th</sup> intervals, small body size, finely punctate head, and in basal half distinctly convex median elytral striae.

### Description

**Measurements.** Length: 7.3-7.6 mm; width: 2.7-2.8 mm. Ratios. Width/length of prothorax: 1.23-1.25; width of base/apex of prothorax: 0.96-1.0; width of prothorax/width of head: 0.92-0.97; length/width of elytra: 1.61-1.66; width of elytra/width of prothorax: 1.65-1.67.

**Colour** (Fig. 71). Surface green, labrum and mandibles black. 7<sup>th</sup> and 8<sup>th</sup> intervals conspicuously cupreous. Antenna black, palpi piceous. Legs black. Lower surface dark piceous to black.

**Head** (Fig. 71). Of average size. Eyes very large, laterad markedly protruded, orbits very short, oblique. Mental tooth triangular. Antenna moderately short, median antennomeres c. 1.5 x as long as wide. Medially of the eye with two sulci and ridges which attain the posterior border of eye. Clypeus and anterior part of frons in middle with small, shallow impressions. Frons with short, irregular, rather deep frontal sulci. Posterior part of frons and neck with or without several very fine, longitudinal striae. Clypeus finely punctate, anterior part of frons sparsely, posterior part and neck more densely punctate, punctures fine. Clypeus as well as frons and neck here and there only with finest and very superficial traces of about isodiametric microreticulation, surface very glossy.

**Pronotum** (Fig. 71). Rather narrow, cordiform, dorsal surface very convex. Apex shallowly excised, anterior

angles slightly projected. Lateral border moderately sinuate in posterior third, straight in front of the basal angles. Lateral angles very slightly angulate. Basal angles rectangular, not or very little produced laterad. Base slightly narrower than apex, in middle barely produced. Apex in middle not margined, lateral margins narrow throughout, base coarsely margined. Median line very deep, sulcate, almost complete, anterior transverse sulcus rather shallow, posterior sulcus deep. Basal grooves circular, deep. Anterior marginal seta situated slightly behind apical third. Surface with sparse, very fine punctures, with fine and very superficial transverse striae, and with more or less distinct traces of very fine and very superficial microreticulation which is composed of very transverse meshes, glossy. Punctures and microreticulation only visible at high magnification.

**Elytra** (Fig. 71). Rather narrow and elongate, dorsal surface convex, in basal half on either side with a very shallow impression, slightly widened apicad. Humeri evenly rounded, lateral margin distinctly incurved in basal third. Apex oblique, elongate, slightly sinuate. Elytra fully striate, four median striae well impressed, moderately finely punctate. Lateral striae deeper, rather coarsely punctate. Median intervals in basal half distinctly convex. 7<sup>th</sup> interval narrower and conspicuously carinate, 5<sup>th</sup> interval slightly narrower than the others and slightly more convex. 3<sup>rd</sup> interval tripunctate, in the paratype unilaterally quadripunctate, the anterior puncture attached to the 3<sup>rd</sup> stria, both posterior punctures attached to the 2<sup>nd</sup> stria. The anterior puncture and seta situated in basal third, the median puncture in middle, the posterior puncture at or before the apical sixth. Intervals very finely and sparsely punctate, with very fine, rather superficial microreticulation which is composed of very transverse meshes. Surface glossy.

**Lower surface.** All thoracic sterna with sparse but fairly elongate, erect pilosity, the lower surface of the head apparently impilose. Intercoxal process with a few rather elongate setae. Abdominal sterna with extremely sparse and short, almost invisible, declined pilosity. Metepisternum elongate, c. 2.25 x as long as wide. Terminal sternum of male bisetose, of female quadrisetose.

**Legs.** Of average size. 1<sup>st</sup>-3<sup>rd</sup> tarsomeres of the male protarsus biseriately squamose.

**Male genitalia** (Fig. 20). Genital ring large, asymmetrically triangular, with moderately deep, convex basal part and slightly curved, narrow, acute apex. Aedeagus rather slender, sinuate, not widened towards apex, lower surface evenly concave; apex rather narrow and fairly elongate, slightly curved right, asymmetric, slightly obtuse at tip; orificium short, situated mostly on the left side. Internal sac with several not sclerotized folds. Left paramere large, with wide, convexly transverse apex, right paramere much smaller than the left one, with rather short, obliquely rounded apex.

**Female gonocoxites.** Much as in *C. virens* Chaudoir.

**Variation.** Minor variation noted in relative length of elytra.

### Distribution

South-eastern Sulawesi. Known only from type locality.

### Collecting circumstances

Largely unknown. The specimens most probably were collected from the bark of logs in rain forest.

### *Catascopus balthasari* Jedlicka

Figs 21, 72

*Catascopus balthasari* Jedlicka, 1935: 12. – Jedlicka 1963:386; Straneo 1994: 167; Lorenz 1998: 429; 2005: 454.

### Examined types

**Holotype:** ♂, Type / Philippine Is. C. H. Bottcher. B.M. 1929-201. / *Catascopus Balthasari* type n. sp. det. ING. JEDLIČKA (NHM).

### Diagnosis

Belongs to a subgroup that is characterized by presence of two paraorbital sulci, moderately sclerotized aedeagus, and narrow apex of the genital ring. Distinguished from other species of this subgroup by combination of small body size, narrow, little cordiform prothorax with remarkably wide base, greenish-golden colour of the elytra, and rather coarse punctation of the median elytral striae.

### Description

**Measurements.** Length: 7.2 mm; width: 2.7 mm. Ratios. Width/length of prothorax: 1.18; width of base/apex of prothorax: 1.04; width of prothorax/width of head: 0.89; length/width of elytra: 1.55; width of elytra/width of prothorax: 1.73.

**Colour** (Fig. 72). Head and pronotum dull green, labrum and mandibles black. Elytra greenish with strong purplish-cupreous tinge which is less distinct in middle, the 6<sup>th</sup> - 8<sup>th</sup> intervals more distinctly purplish.

**Head** (Fig. 72). Of average size, distinctly wider than the prothorax. Eyes very large, laterad well protruded, orbits very short, oblique. Mental tooth triangular. Both antennae broken in the holotype. Medially of the eye with two sulci and ridges which almost attain the posterior border of eye. Anterior part of frons in middle irregularly triangularly impressed. Frons with short, irregular, barely recognizable frontal sulci which are irregularly striolate as most of the anterior half of frons. Posterior part of frons and neck with few rather coarse punctures, with about 10 fine, rather regular, longitudinal striae, with finest traces of very superficial, about isodiametric microreticulation, glossy.

**Pronotum** (Fig. 72). Remarkably narrow, little cordiform, dorsal surface convex. Apex straight, anterior angles not projected. Lateral border only slightly sinuate behind middle, straight in basal third. Lateral angles rounded. Basal angles rectangular, not produced laterad. Base wider than apex. Apex only laterally margined, lateral margins narrow throughout, base coarsely margined. Median line very deep, sulcate, almost complete, anterior sulcus rather shallow, posterior sulcus deep. Basal grooves deep, short. Anterior marginal seta situated behind apical third. Surface with very fine, sparse punctures, with many distinct, transverse striae, and with very fine but distinct microreticulation which is composed of very transverse meshes, glossy.

**Elytra** (Fig. 72). Rather short and wide, dorsal surface convex, without any transverse impression, slightly widened apicad. Humeri evenly rounded, lateral margin barely incurved in basal third. Apex oblique, little sinuate. Elytra fully striate, four median striae well impressed, in basal half moderately coarsely punctate, in apical half impunctate or almost so. Lateral striae coarsely punctate. Intervals slightly convex. 7<sup>th</sup> interval narrower and distinctly carinate, 5<sup>th</sup> interval little narrower than the others, only slightly more convex. 3<sup>rd</sup> interval tripunctate, all punctures located in middle of interval. The anterior puncture and seta situated in basal third, the median puncture in middle, the posterior puncture at apical sixth. Intervals finely and sparsely punctate, with fine though distinct microreticulation which is composed of but slightly transverse meshes. Surface moderately glossy.

**Lower surface.** All thoracic sterna and the lower surface of the head with rather dense and elongate, erect pilosity. Intercoxal process with several rather elongate setae. Abdominal sterna with fairly dense and comparatively elongate, declined pilosity. Metepisternum elongate, slightly > 2 x as long as wide. Terminal sternum of male bisetose.

**Male genitalia** (Fig. 21). Genital ring large, convexly triangular, very slightly asymmetric, with rather deep, convex basal part and rather narrow, obtusely rounded apex. Aedeagus rather slender, almost straight, not widened towards apex, lower surface moderately, evenly concave; apex rather narrow and fairly elongate, narrowly triangular, slightly asymmetric, rather acute at tip; orificium short, situated mostly on the left side. Internal sac with several not sclerotized folds. Left paramere large, slightly triangular with moderately wide, transverse apex which is even slightly sinuate in middle, right paramere much smaller than the left one, with comparatively elongate, rounded apex.

**Female gonocoxites.** Unknown.

**Variation.** Unknown.

### Distribution

Philippine Islands, not further specified.

### Collecting circumstances

Not recorded.

### Additional records

None.

### *Catascopus hinei* Straneo

Figs 22, 73

*Catascopus hinei* Straneo, 1994: 167, 169. – Lorenz 1998: 430; 2005: 454.

### Examined types

**Paratype:** ♂, Larat F. Muir B.M.1914-413 / Paratypus *Catascopus hinei* Str. / *Catascopus hinei* n. sp. det. S. L. Straneo 1993 Paratypus (NHM).



## Diagnosis

Belongs to a subgroup that is characterized by presence of two paraorbital sulci, moderately sclerotized aedeagus, and narrow apex of the genital ring. Distinguished from other species of this subgroup by combination of uniformly blackish-purplish colouration, very glossy elytra due to very superficial microreticulation, little impressed median elytral striae, and but faintly carinate 7<sup>th</sup> interval.

## Description

**Measurements.** Length: 8.8-9.1 mm; width: 3.2-3.3 mm. Ratios. Width/length of prothorax: 1.23-1.28; width of base/apex of prothorax: 0.93-0.96; width of prothorax/width of head: 0.88-0.95; length/width of elytra: 1.60-1.62; width of elytra/width of prothorax: 1.57-1.67.

**Colour** (Fig. 73). Whole surface blackish-purplish, laterally slightly more distinct than in middle, labrum and mandibles black. 8<sup>th</sup> interval not contrastingly coloured.

**Head** (Fig. 73). Of average size, distinctly wider than the prothorax. Eyes very large, laterad well protruded, orbits very short, oblique. Mental tooth triangular. Antenna comparatively short, median antennomeres <1.5 x as long as wide. Medially of the eye with two sulci and ridges which almost attain the posterior border of eye. Anterior part of frons in middle irregularly impressed. Frons with short, irregular, barely recognizable frontal sulci which are irregularly striolate. Posterior part of frons and neck with sparse, fine punctures, without or here and there with finest traces of very superficial, about isodiametric microreticulation, very glossy.

**Pronotum** (Fig. 73). Moderately narrow, moderately cordiform, dorsal surface convex. Apex straight, anterior angles not projected,. Lateral border only moderately sinuate behind middle, straight or slightly oblique in basal third. Lateral angles very slightly angulate. Basal angles almost rectangular, not produced laterad. Base narrower than apex. Apex only laterally margined, lateral margins narrow throughout, base coarsely margined. Median line very deep, sulcate, almost complete, anterior sulcus rather shallow, posterior sulcus deep. Basal grooves deep, short. Anterior marginal seta situated behind apical third. Surface with very fine, sparse punctures, with some fine, very superficial, transverse striae, and only here and there with extremely fine and superficial traces of transverse microreticulation, very glossy.

**Elytra** (Fig. 73). Moderately elongate, dorsal surface convex, with a very shallow, barely perceptible transverse impression in basal half, slightly widened apicad. Humeri evenly rounded, lateral margin slightly incurved in basal third. Apex oblique, moderately sinuate. Elytra fully striate, four median striae shallowly impressed, very finely punctate, in apical half impunctate or almost so. Punctuation of lateral striae not much coarser. Median intervals almost depressed. 7<sup>th</sup> interval narrower and distinctly carinate, but carina very low. 5<sup>th</sup> interval barely narrower than the others, barely more convex. 3<sup>rd</sup> interval tripunctate, all punctures located in middle of interval. The anterior puncture and seta situated in basal third, the median puncture in middle, the posterior puncture at apical sixth. Intervals sparsely and extremely finely punctate, with very fine, superficial microreticulation which is composed of transverse meshes. Surface very glossy.

**Lower surface.** All thoracic sterna and the lower surface of the head apparently with sparse and short, erect pilosity. Intercoxal process with a few short setae. Abdominal sterna with extremely sparse and short, declined pilosity. Metepisternum elongate, > 2 x as long as wide. Terminal sternum of male bisetose.

**Male genitalia** (Fig. 22). Genital ring not recorded. Aedeagus moderately slender, slightly sinuate, not widened towards apex, lower surface evenly concave; apex rather narrow and fairly elongate, slightly curved right, very asymmetric, slightly obtuse at tip; orificium short, situated mostly on the left side. Internal sac with several not sclerotized folds. Left paramere large, convexly triangular with moderately wide, convex apex, right paramere much smaller than the left one, with comparatively elongate, rounded apex.

**Female gonocoxites.** Unknown.

**Variation.** Very little variation noted.

## Distribution

Tenimber Islands.

## Collecting circumstances

Largely unknown. The specimens most probably were collected from the bark of logs in rain forest.

## New record (20 ex.)

**Tenimber Islands:** Yamdena is. 20kmNE Saumlaki: Lorulun 150m XII-2006 lgt. S. Jakl (CHP); Yamdena isl. 20 km NE Saumlaki: Lorulun env. 50m 15.-23.XI.2006 M. Oboni (CBM, CWB).

### The *C. elegans*-complex

*Elaphrus elegans* Weber, 1801: 45.

*Catascopus elegans*, Chaudoir 1861: 120; Andrewes 1930: 335; 1931: 61; 1937: 189; Csiki 1932: 1363; Louwerens 1949: 315; 1956: 226; 1964: 188; Jedlicka 1963: 385; Darlington 1968: 103; Stork 1986: 15; Straneo 1994: 166; Moore et al. 1987: 284; Lorenz 1998: 430; 2005: 454; Kabak 2003; 435.

*Catascopus nitidulus* Castelnau, 1834: 60. – Csiki 1932: 1363; Lorenz 1998: 430; Kabak 2003; 435.

*Catascopus lateralis* Brullé, 1834: 233. – Csiki 1932: 1363; Jedlicka 1963: 385; Straneo 1994: 167; Lorenz 1998: 430; 2005: 454; Kabak 2003; 435.

*Catascopus australasiae* Hope, 1842: 426. – Chaudoir 1861: 122; 1872: 247; Sloane 1910: 400; Csiki 1932: 1363; van Emden 1937: 35; Darlington 1968: 103; Moore et al. 1987: 284; Straneo 1994: 167; Lorenz 1998: 430; 2005: 454; Kabak 2003; 435.

*Catascopus elegans* Schmidt-Goebel, 1846: 83. [non *Catascopus elegans* (Weber, 1801)].

*Catascopus celebensis* Thomson, 1857: 282. – Chaudoir 1872: 247; Csiki 1932: 1363; Jedlicka 1963: 385; Lorenz 1998: 430; 2005: 454; Kabak 2003; 435.

*Catascopus amoenus* Chaudoir, 1861: 120. – Chaudoir 1872: 247; Csiki 1932: 1363; Darlington 1968: 103; Moore et al. 1987: 285; Lorenz 1998: 430; 2005: 454; Kabak 2003; 435.

*Catascopus elegans* var. *cyaneus* Chaudoir, 1872: 247. – Csiki 1932: 1364; Moore et al. 1987: 285; Straneo 1994: 165; Lorenz 1998: 430; 2005: 454.

*Catascopus obliquatus* Fairmaire, 1881: 381. – Csiki 1932: 1363; Darlington 1968: 103; Moore et al. 1987: 285; Lorenz 1998: 430; 2005: 454; Kabak 2003; 435.

*Catascopus scintillans* Bates, 1892: 411. – Csiki 1932: 1363; Andrewes 1937: 189; Jedlicka 1963: 385; Straneo 1994: 167; Lorenz 1998: 430; 2005: 454; Kabak 2003; 435.

### Note

*Catascopus elegans* (Weber) is the commonest and altogether most widespread Australasian species of the genus. It was described from Sumatra, but is distributed through almost the whole range of the genus in the Oriental-Australian Region, from Nepal and India in the northwest through Indochina, the Philippine and Sunda Archipelagos to the Moluccas, New Guinea, New Britain, Australia, and Solomon Islands. It has been stressed repeatedly that *C. elegans* varies greatly within its range, therefore a number of variations viz. subspecies have been named that partly were used for populations with restricted ranges (Straneo 1994).

Darlington (1968) and the recent catalogues (Lorenz 1998, 2005, Kabak 2003) render all names enumerated above as merely synonymes of *C. elegans*, and Moore et al. (1987), probably following therein Csiki (1932), even included *C. cyaneus* Chaudoir, 1872 from northern Australia as a synonym, whereas this “variation” was determined as a distinct species by Straneo (1994) and Lorenz (1998, 2005). Also some of the other mentioned synonymized names for many years were taken as variations or even subspecies. This applies in particular for the following names:

- *lateralis* Brullé (= *celebensis* Thomson) was mentioned as a variation by Csiki (1932), Jedlicka (1963), and Straneo (1994) and is said to occur on Sulawesi and New Guinea.
- *scintillans* Bates (= *elegans* Schmidt-Goebel, 1846) was likewise taken for a variation by the above authors and by Andrewes (1937). It is said to occur from north-eastern India to East India and Andaman Islands, and according to Jedlicka (1963) even on the Philippine Islands, where Jedlicka regarded it an own subspecies.
- *elevatus* Schmidt-Goebel was rendered a “malformation” by Andrewes (1930), but Jedlicka (1963) distinguished it as a subspecies, because according to this author it also occurs on the Philippine Islands.
- *australasiae* Hope was taken as a subspecies by van Emden (1937) and Straneo (1994), whereas Darlington (1968) rendered it synonymous to *elegans*. It was used for the population from north-eastern Australia, but also for specimens from Solomon Islands (van Emden 1937).
- *obliquatus* Fairmaire from New Britain was simply synonymized with *C. elegans* by Darlington (1968), and in shape and structure it most probably comes closest to the New Guinean specimens.

Meanwhile I have seen large numbers of specimens from continental Asia including North India, Nepal, Assam, Thailand, Laos, Vietnam, “Tonkin”, south-eastern China, Malaysia, Andaman Islands, the Greater and many of the Lesser Sunda Islands, including Bali, Lombok, and Sumbawa, certain Philippine islands, Sulawesi, Halmahera and several Islands of the Moluccas, Buru, Aru and Kei Islands, New Guinea and several surrounding islands (Waigeo, Salawati, Batanta, Japen, Biak, Goodenough Islands), New Britain, New Ireland, Solomon Islands, and northern Australia.

Having examined specimens from all these areas, a number of rather clear-cut populations is becoming evident which differ in certain structures of their external morphology, e.g. colouration, structure of the elytral intervals, and punctuation, though the male genitalia are quite similar in all examined populations. Most of these populations occur in restricted areas either on the Asian or Australian mainland, either on a single island, or on a precinct group of islands, or even on different parts of a larger island. The latter applies for Sulawesi where two quite differently coloured and structured populations exist in different parts of the island. This is not too surprising, because it is well known that Sulawesi is composed from a number of micro-terranes of different provenances.

In spite of a rather wide range of body size and relative shape of pronotum and elytra, all populations rather agree in overall shape and structure of their head, apart from the very similar aedeagi, so that I have little doubt that they all belong to the same species. However, certain differences in colouration and structure of the surface of the elytra, e.g. striation and punctuation of the striae seem to be restricted to certain well circumscribed ranges and so may indicate subspecific differentiation. In particular this is true for following populations:

- Mainland South-east Asia and the Larger and Lesser Sunda Islands (*elegans*)
- Northern India, Nepal, Sikkim, Assam (*scintillans*)
- Andaman Islands (*andamanicus* subsp. n.)
- Philippine islands (*philippinus* subsp. n.)
- northern Sulawesi, Halmahera, Buru, Seram, Bacan, Ambon (*lateralis*)
- south-eastern Sulawesi (*viridans* subsp. n.)
- New Guinea including Japen, Salawati, Goodenough, Aru, and Kei Islands, New Britain, New Ireland (*amoenus*)
- Biak Island north-west of New Guinea (*biakensis* subsp. n.)
- northern Australia, in Queensland south of Cape York Peninsula (*australasiae*)
- north-eastern Australia: northern part of Cape York Peninsula (*cyaneus*)
- Solomon Islands (*salomonicus* subsp. n.)

Mainly for heuristic reasons these populations are defined or redefined as subspecies, because they seem to inhabit restricted ranges and in their external morphology they clearly differ from neighbouring populations. Only *C. elegans elevatus* Schmidt-Goebel is raised to full specific status, because not only the structure of the elytra, but also shape of the aedeagus considerably differs from all other subspecies or variations of *C. elegans*.

### *Catascopus elevatus* Schmidt-Goebel

Figs 23, 74

*Catascopus elevatus* Schmidt-Goebel, 1846: 84. – Chaudoir 1861: 122; Andrewes 1923: 48; Csiki 1932: 1363; Jedlicka 1963: 386; Lorenz 1998: 430; 2005: 435.

*Catascopus elegans elevatus*, Jedlicka 1963: 386.

#### Examined types

**Holotype:** ♀, MUS. PRAGENSE COLL. HELFER / Moulm. Helfer / Typus! teste Obenberger / *elevatus* Sch.G. COLL. HELFER (MNHNP).

#### Note

The reasonably large number of specimens with tectiform elytral striae from the Philippine Islands demonstrates that this species is not a “malformation” as Andrewes (1930) postulated, but a well characterized species which is quite distinct from the sympatric *C. philippinus* sp. n.

#### Diagnosis

Easily distinguished from all other species of the *elegans*-group by the elevated and ridge-like median elytral intervals.

#### Partial redescription

**Measurements.** Length: 7.6-8.9 mm; width: 2.85-3.4 mm. Ratios. Width/length of prothorax: 1.24-1.29; width of base/apex of prothorax: 0.98-1.0; width of prothorax/width of head: 0.96-0.98; length/width of elytra: 1.51-1.55; width of elytra/width of prothorax: 1.62-1.66.

**Colour** (Fig. 74). Head and pronotum green or blue-green, elytra contrasting, largely golden-cupreous, usually only two to three median intervals contrastingly green or blackish-green; labrum and mandibles black.

**Head** (Fig. 74). Of average size. Frontal sulci short, very shallow, somewhat irregular. Surface with moderately dense, coarse punctures, commonly the anterior part of frons with irregular transverse sulci, the posterior part with shallow, irregular, longitudinal sulci, surface usually without traces of microreticulation, glossy.

**Pronotum** (Fig. 74). Moderately wide, cordiform, dorsally convex. Lateral margin in basal third straight, parallel. Basal angles rectangular. Surface with fine and sparse punctures, usually with distinct transverse striae, and with very fine traces of transverse microreticulation, glossy. Punctures and microreticulation only visible at high magnification.

**Elytra** (Fig. 74). Comparatively short and wide, dorsally convex, slightly widened apically. Disk not perceptibly impressed in basal third. Lateral margin in basal third barely to faintly incurved. Elytra fully striate, four median striae almost impunctate to very finely crenulate. Lateral striae coarsely punctate. Four median intervals markedly raised and tectiform, the 7<sup>th</sup> interval narrower and distinctly carinate on median side; the 5<sup>th</sup> interval barely narrower than the other intervals and less tectiform. Punctures on the four median intervals even under high magnification barely perceptible. Intervals with very fine, markedly superficial microreticulation which is composed of very transverse meshes, very glossy.

**Lower surface.** All thoracic sterna with moderately dense, erect pilosity. Intercoxal process with several short setae. Abdominal sterna with sparse and very short, declined pilosity. Metepisternum elongate, > 2 x as long as wide. Terminal sternum of male bisetose, of female quadrisetose.

**Male genitalia** (Fig. 23). Genital ring not recorded. Aedeagus rather slender, remarkably sinuate, very slightly widened in middle, lower surface in basal two thirds slightly concave, in apical third more concave; apex rather narrow and fairly elongate, slightly curved right, narrowly triangular, asymmetric, acute at tip; orificium short, situated mostly on the left side. Internal sac with several not sclerotized folds. Left paramere large, rather short, with wide, transverse but slightly oblique apex, right paramere much smaller than the left one, with comparatively elongate, rounded apex.

**Female gonocoxites.** Much as in *C. elegans amoenus* Chaudoir.

**Variation.** Minor variation noted in body size and relative width, or length, of prothorax and elytra.

## Distribution

Burma, Philippine Islands.

## Collecting circumstances

Not recorded.

## Additional records (9 ex.)

**Philippines:** 1 ♂, Philippine Is. Coll. Bottcher. B.M.1929-201. / *elegans* s. *elevatus* Schm-Goeb. det. Ing. Jedlicka (NMPC); 2 ♂♂, 2 ♀♀, Philippine Is. Coll. Bottcher B.M.1929-201. / Philippine Islands Basilan Is. ex coll. Bottcher (CBM, NHM); 2 ♂♂, Philippine Is. Coll. Bottcher B.M.1929-201. (NHM); 1 ♀, Kolumbugan Mindanao / *Catascopus elegans* Weber (NMPC); 1 ♀, Philippines: Batangas Bauan, San Pedro 25.5.2004, leg. C. Pnganthon (P102) (CZW).

## *Catascopus elegans* (Weber)

*Elaphrus elegans* Weber, 1801: 45. 454.

*Catascopus elegans*, Csiki 1932: 1363; Andrewes 1937: 189; Jedlicka 1963: 385; Hansen 1967: 180; Stork 1986: 15; Straneo 1994: 166; Lorenz 1998: 430; 2005: 454.

## Note

This species is very variable in body size, shape, colouration, and structure of elytral striae and intervals, whereas the male and female genitalia do not exhibit major differences. Therefore the subdivision into a number of subspecies largely depends on character states of the external morphology, far less so on differences in genital structure.

Certain character states are common to all subspecies, of which the most important are: presence of two sulci and ridges medially of the eye, rather coarse punctuation of the head, fairly elongate elytra with rounded apical angles and usually distinctly sinuate apex, carinate 7<sup>th</sup> elytral interval, elongate, > 2x longer than wide metepisternum, in male bisetose, in female quadrisetose terminal abdominal sternum, not heavily sclerotized aedeagus, and angulate apex of the genital ring.

All subspecies possess large, laterally far projected eyes, well impressed elytral striae, all thoracic sterna bear an erected pilosity, and the abdomen is shortly pilose.

These mentioned character states are not repeated in the following descriptions.

### Key to the subspecies of *C. elegans*

1. Colour more or less dark or bright green, with distinct cupreous or golden lustre at the sides of the elytra **and** median elytral striae coarsely punctate **and** median intervals convex (Fig. 75). c. India, Burma, Thailand, Laos, Vietnam, se. China, Malaysia, Borneo, Sumatra, Java, Bali, Lombok, Sumbawa, Timor ..... *elegans* (Weber, 1801)
- **Either** colour uniformly green or blue or blackish-green without distinct golden or cupreous lustre at the sides of the elytra (Figs ) **or** cupreous colour of elytra extended over much of the elytra (Figs ); commonly median elytral striae less coarsely punctate and median intervals more or less depressed. n. India, Nepal, Sikkim, Assam, Andaman Is., Sulawesi. Moluccas, New Guinea and surrounding islands, n. Australia, Solomon Is. .... (2)
2. Elytra largely cupreous (Figs 78, 79, 81) ..... (3)
- Elytra almost unicolourous green or blue or blackish-green (Figs 76, 77, 80, 82-85) ..... (5)
3. Median intervals usually somewhat raised; median striae distinctly punctate; cupreous colour usually more extended medially (Figs 78, 79). Sulawesi, Moluccas, Philippines ..... (4)
- Median intervals almost depressed, median striae barely or but finely punctate; cupreous colour usually more restricted to the lateral intervals (Fig. 81). New Guinea including Japen, Salawati, and Goodenough Islands, New Britain, New Ireland, Aru and Kei Islands ..... *amoenus* Chaudoir, 1861
4. Microreticulation of pronotum distinct, microreticulation of elytra conspicuous; elytra longer and narrower, ratio length/width > 1.58, usually more; lower surface of the aedeagus slightly less concave, apex slightly shorter and stouter (Fig. 28). Sulawesi, Moluccas: Halmahera, Buru, Seram, Bacan, Ambon ..... *lateralis* Brullé, 1834
- Microreticulation of pronotum indistinct, microreticulation of elytra less conspicuous; elytra shorter and wider, ratio length/width < 1.57, usually less; lower surface of the aedeagus slightly more concave, apex slightly longer and narrower (Fig. 27). Philippines ..... *philippinus* subsp. n.
5. Elytra dark green, blackish in middle; median intervals convex; median striae coarsely punctate (Figs 76, 77). n. India, Nepal, Sikkim, Assam, Andaman Islands ..... (6)
- Elytra unicolourous green or blue; median intervals not or barely convex; median striae more or less finely punctate (Figs 80, 82-85). se. Sulawesi, Biak Island, n. Australia, Solomon Islands ..... (7)
6. Median margin of 8<sup>th</sup> interval distinctly carinate; median intervals but moderately convex (Fig. 76); aedeagus slightly narrowed towards apex, with asymmetrically triangular apex (Fig. 25). n. India, Nepal, Sikkim, Assam ..... *scintillans* Bates, 1892
- Median margin of 8<sup>th</sup> interval barely carinate; median intervals rather convex (Fig. 77); aedeagus slightly widened towards apex, with symmetrically triangular apex (Fig. 26). Andaman Islands ..... *andamanicus* subsp. n.
7. Colour blue (Fig. 84); aedeagus distinctly widened in apical third (Fig. 32). Australia: northern half of Cape York Peninsula, North Queensland ..... *cyaneus* Chaudoir, 1872
- Colour plain green (Figs 80, 82, 83, 85); aedeagus not or but faintly widened in apical third (Figs 30, 31, 33). se. Sulawesi, Biak Is., Solomon Islands, n. Australia south of mid Cape York Peninsula ..... (8)
8. Body size large and pronotum comparatively narrow and base of pronotum perceptibly wider than apex (Tab. 2, Fig. 85); apex of aedeagus short (Fig. 33). Solomon Islands ..... *salomonicus* subsp. n.
- Body size various; pronotum commonly wider; base of pronotum usually narrower than apex (Tab. 2, Figs 80, 82, 83); apex of aedeagus longer (Figs 30, 31), or unknown. se. Sulawesi, Biak Is., n. Australia ..... (9)

9. Body size moderately large; elytra comparatively elongate (Tab. 2, Fig. 82); lower surface of aedeagus evenly concave, apex asymmetrically triangular (Fig. 30). Biak Island ..... *biakensis* subsp. n.
- Body size rather large to large; elytra shorter (Tab. 2, Figs 80, 83); apex of aedeagus slightly turned down, symmetrically triangular (Fig. 31), or unknown. se. Sulawesi, n. Australia..... (10)
10. Median intervals distinctly convex, 5<sup>th</sup> interval considerably narrower than the median intervals and markedly convex (Fig. 80); aedeagus unknown. se. Sulawesi ..... *viridans* subsp. n.
- Median intervals barely convex, 5<sup>th</sup> interval barely narrower than the median intervals and but slightly convex (Fig. 83); apex of aedeagus slightly turned down, symmetrically triangular (Fig. 31). Australia. n. Northern Territory, n. Queensland north to base of Cape York Peninsula ..... *australasiae* Hope, 1842

*Catascopus elegans elegans* (Weber)

Figs 24, 75

*Elaphrus elegans* Weber, 1801: 45. 454.

*Catascopus elegans*, Csiki 1932: 1363; Andrewes 1937: 189; Jedlicka 1963: 385; Hansen 1967: 180; Stork 1986: 15; Straneo 1994: 166; Lorenz 1998: 430; 2005: 454.

*Catascopus elegans* Schmidt-Goebel, 1846: 83 (**syn. n.**). – Chaudoir 1861: 120; Andrewes 1923: 48.

**Examined types**

Of *elegans* (Weber): **Lectotype (by present designation)**: ♂, TYPE / Sumatra Daldorff. Mus. L.(?)T.L. *Carabus elegans* F. (ZMUC).

**Paralectotype**: 1 ♀, TYPE (ZMUC).

Of *elegans* Schmidt-Goebel: **Syntypes**: 1 ♂, 1 ♀, MUS. PRAGENSE TEMASSERIM COLL. HELFER / Typus! teste Obenberger / *elegans* Sch.G. COL. HELFER (NMPC); 1 ♂, MUS. PRAGENSE COLL. HELFER / Moulmein Heller / Typus! teste Obenberger / *elegans* Sch.G. COL. HELFER (NMPC).

**Type localities**

Of *elegans* (Weber): “Sumatra”.

Of *elegans* Schmidt-Göbel: “Tenasserim”, Burma.

**Note**

Previously *Catascopus elegans* Schmidt-Goebel was regarded as synonymous to *C. elegans scintillans* Bates, but examination and comparison of the types demonstrates that they are similar to those of *C. elegans* (Weber).

**Diagnosis**

Distinguished from other subspecies by combination of green elytra with golden or cupreous margins, and convex and coarsely punctate median intervals.

**Partial redescription**

**Measurements.** Length: 8.0-9.6 mm; width: 3.05-3.55 mm. Ratios. Width/length of prothorax: 1.28-1.34; width of base/apex of prothorax: 0.96-1.0; width of prothorax/width of head: 0.93-1.0; length/width of elytra: 1.56-1.61; width of elytra/width of prothorax: 1.61-1.71.

**Colour** (Fig. 75). More or less bright green, with or without some golden reflections, though labrum and mandibles black. The 8<sup>th</sup> interval, commonly also the 7<sup>th</sup> interval, golden-cupreous.

**Head** (Fig. 75). Of average size. Frontal sulci short, very shallow, somewhat irregular. Clypeus and frons in middle usually either with a shallow impression. Surface with moderately dense, usually rather coarse punctures, with or without very fine traces of about isodiametric microreticulation, glossy.

**Pronotum** (Fig. 75). Rather wide, cordiform, dorsally convex. Basal angles about rectangular. Surface with very fine and sparse punctures, with more or less distinct traces of very fine, transverse microreticulation, glossy. Punctures and microreticulation only visible at very high magnification.

**Elytra** (Fig. 75). Moderately elongate, dorsally convex, usually slightly widened apicad. Lateral margin in basal third distinctly incurved. Elytra fully striate, four median striae distinctly and rather coarsely punctate, at least in basal half. Lateral striae coarsely punctate. Four median intervals very slightly convex, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, at least in basal three fourths, the 5<sup>th</sup> interval slightly narrower than the other intervals and slightly more convex. Four median intervals irregularly uni- to biserially punctate,

punctures fine, with very fine though distinct microreticulation which is composed of very transverse meshes, fairly glossy.

**Male genitalia** (Fig. 24). Genital ring moderately large, with oblique-convex lateral margins, rather asymmetric, with moderately deep, convex basal part and narrow, convexly triangular apex. Aedeagus narrow, sinuate, not widened in middle, lower surface in basal half deeply concave, in apical half almost straight; apex short, triangular and acute, symmetric; orificium short, situated mostly on the left side. Internal sac with several not sclerotized folds. Left paramere large, with wide, convex apex, right paramere much smaller than the left one, with short, wide apex.

**Female gonocoxites.** As in *C. elegans amoenus* Chaudoir.

**Variation.** Some variation noted in colouration. in particular width and extent of the cupreous colour, relative width, or length, of pronotum and elytra, and punctation of the surface.

### Distribution

Central eastern India, Burma, Thailand, Laos, Cambodja, Vietnam, south-eastern China, Malaysia, Borneo, Sumatra, Java, Bali, Lombok, Sumbawa, Flores, Andonare Is., Timor.

### Collecting circumstances

Mostly not recorded.

### Additional records (92 ex.)

**India:** Sunderbans, Bengal. C.F.C. Beeson. 29.XII.1920 / For. Res. Inst. Dehra Dun / H. E. Andrewes Coll. B.M.1945-967. (NHM); For. Zool. Coll. Sunderbans Division. 9-2-1916 C.F.C. Beeson / For. Res. Inst. Dehra Dun / *C. elegans* W. v. *Scintillans* Bates Compared with type H.E.A. / H. E. Andrewes Coll. B.M.1945-967. (NHM). – **Burma:** Tenasserim / *elegans*? Sch.-Goebel. (NHM); 62211 / Doherty / Tenasserim Victoria / Fry Coll. 1905.100 (NHM). – **Thailand:** NW Thailand, Chang Dao, Ban San Pakia, 5-10.V.2004, Sv. Bilý leg. (NMPC); NW Thailand, 1200m Mae Hong Son Pr., BAN SI LANG, 20-22.v.2004, Sv. Bilý leg. (CBM); Renong Siam Doherty / H. E. Andrewes Coll. B.M.1945-967. (NHM); THAI-N, 1-15.x.1998, Chiang Mai prov. 19°19'N98°50'E, SANPAKIA, 1400m, Vit Kubán leg. (NHMB); Siam (NHM). – Laos: Umg. Vientiane III-VI.1963 / *Catascopus elegans* v. *elevatus* SchG det. ING. JEDLIČKA (NMPC); Pak Leung. 7.II.1918 R. V. de Salvaza / H. E. Andrewes Coll. B.M.1945-967. (NHM); Pak Pha. 4.II.1918 R. V. de Salvaza / Indo China. R. V. de Salvaza 1918-1 (NHM); Haut Mékong. Vien Poukha. 3.V.1918 R. V. de Salvaza / *Catascopus elegans* Weber / H. E. Andrewes Coll. B.M.1945-967. (NHM); LAOS-C, 24-29.iv.2001, Kham Mouan prov. 18°07'N 104°29'E, BAN KHOUN NGEUN, ~200m, C. I. Peša leg. (CBM). – **Vietnam:** Tonkin. Hoabinh. Jan.1917 R. V. de Salvaza / *Catascopus elegans* Fab. H. E. Andrewes det. / H. E. Andrewes Coll. B.M.1945-967. (NHM). – **Malaysia:** Penang / Bowring 63-47. (NHM); Perak Malacca (Doherty) / H. E. Andrewes Coll. B.M.1945-967. (NHM); Pakang Puplau Tio-man Tekek, 16.-22.VII.92, Heiss (CBM); West Malaysia, Perak, 26.-28.i.1995 PUHAU PANGKOR centre part of island lgt. S. BECVAR j. & s. (CBM). – **Sumatra:** Doherty / Sumatra Merang (NHM); ? Sumatra / H. E. Andrewes Coll. B.M.1945-967. (NHM); W-SUNMATRA VI 1995 (CBM); West Sumatra Lembah Anai III 1989 ex coll. Takeshi Itoh / *Catascopus elegans* Web. det.S. L. Straneo 1992 (CWB); W-Sumatra Bukittingi 2.1992, leg. Jakl (CBM); Sumatra May 2004 / *Catascopus smaragdulus* Dejean det. R. Davidson (CMP); *illustris* Sumatra / Museum Leiden ex collectie Prof v. d. Hoeven (RMNH); W-Sumatra is: Tandikat Mt. 25km N of Pariaman 400-600m I-2007 lgt. S. Jakl (CHP). – **Borneo:** Quop. W. Sarawak. G. E. Bryant. 8.4.16 / G. Bryant Coll. 1919-147 (NHM); Doherty / Borneo Pengaron (NHM); 3225 / Sarawak. / Bowring 63-47. (NHM); SARAWAK: Nth Division Gn. Mulu NP: / nr. Base Camp 50-100m. / P. M. Hammond & J. E. Marshall v-viii.1978 B.M.1978-49 (NHM); S-Kalimantan Papagam 16.-19.10.2005 leg. Yokoi (CBM); SARAWAK: foot of Mt. Dulit, Junction of rivers Tinjar & Lejok. 27.ix.1932. / *Catascopus elegans* F. Det. G. E. Bryant / *Catascopus elegans* Weber H. E. Andrewes det. (NHM); Sabah, Kudat, Bak Bak, 25.03.2007 R. Grimm (CBM); Sabah, Deramakot Camp C. BRÜHL 4.5.1998 (CLT); Sarawak, Belaga leg. Hiermeier (CBM). – Java: Java / Bowring 63-47. (NHM); Java / Bowring 63-47. / *Catascopus elegans* Fabr. From Chaudoirs Descript.<sup>n</sup> (NHM); Bonvoloir Collection / *Nitidulus* Buq.<sup>1</sup> Java. / H. E. Andrewes Coll. B.M.1945-967. (NHM); O-Java: Tengger Nongkudjadjan 1300m, Wegener / Gesch. 12.1935 von Overbeck / F. van Emden Bequest. B.M.1960-129. (NHM); Dammerman Krakatau IV 1934 / Ex Mus. Buitenzorg / H. E. Andrewes Coll. B.M.1945-967. (NHM); Dammerman Verlaten Eil. XII 1933 / Ex Mus. Buitenzorg / H. E. Andrewes Coll. B.M.1945-967. (NHM); Samarang, Drescher 9-10.1905 / Samml. O. Langenhan Kauf 1913. 18 (SMTD); Java occident Sulcabumi 2000' 1893 R. FRUSTORFER / Gesch. 2 1934 von Prof. Noesske / *elegans* Andr. det. 35 / F. van Emden Bequest. B.M. 1960-129. (NHM); NEJava Isl. BALURAN N.P., ca 600m. 16.-19.iv.1996, R. Zajiček leg. (NHMB). – **Bali:** Bali E N Semarapura, Gembalan, 12.12.2007 R. Grimm (CBM); Marqarana, 15 km E Gilimanuk 23.II.1994 leg. Bolm (SMNS). – **Lombok:** Pa-

suk22.-23.4.2005 leg. Yokoi (CBM); SENARO n: SLOPE OF Rinjani 2.-6.Feb. 1994 Bolm lgt. 1100m (CBM, SMNS). – **Sumbawa:** W SUMBAWA BATUDULANG, 30 km S. of Sumb. Besar, 1000m Bolm lgt. 10.Feb.1994 (CBM, SMNS); NE SUMBAWA CALABAI (TAMBORA N.P.) 11-13.Feb.1994 Bolm lgt. (CBM). – **Flores:** Flores / Fry Coll. 1905-100 (NHM). – **Andonare:** Laboenarang Andonare 2-4000' Doherty IX / H. E. Andrewes Coll. B.M.1945-967. (NHM). – **Timor:** G<sup>ng</sup> Leo Ned. Timor2. 4000' Doherty XI-XII / H. E. Andrewes Coll. B.M.1945-967. (NHM).

*Catascopus elegans scintillans* Bates

Figs 25, 76

*Catascopus scintillans* Bates, 1892: 411. – Csiki 1932: 1363; Andrewes 1937: 189; Jedlicka 1963: 385; Straneo 1994: 166; Lorenz 1998: 430; 2005: 454.

**Examined types.**

None.

**Note**

So far *Catascopus elegans* Schmidt-Goebel was regarded as synonymous to *C. elegans scintillans* Bates, but examination and comparison of the types of *C. elegans* Schmidt-Goebel demonstrates that they are similar to *C. elegans* (Weber). Hence this name is removed from *C. elegans scintillans* and transferred as a new synonymy to *C. elegans* (Weber).

**Diagnosis**

Distinguished from other subspecies by combination of blackish-green elytra, indistinct cupreous colour of the 8<sup>th</sup> interval, rather wide, not conspicuous 5<sup>th</sup> interval, and convex and coarsely punctate median intervals.

**Partial redescription**

**Measurements.** Length: 8.5-9.5 mm; width: 3.2-3.55 mm. Ratios. Width/length of prothorax: 1.35-1.38; width of base/apex of prothorax: 1.03-1.05; width of prothorax/width of head: 0.98-0.99; length/width of elytra: 1.60-1.63; width of elytra/width of prothorax: 1.60-1.61.

**Colour** (Fig. 76). Head and pronotum dark green or blue-green, labrum and mandibles black. Elytra blackish green or dark violaceous, usually in the middle of the apical half almost black, the 8<sup>th</sup> interval not or inconspicuously cupreous.

**Head** (Fig. 76). Of average size. Frontal sulci short, very shallow, somewhat irregular. Frons in middle usually with a shallow impression. Surface with fairly sparse, rather fine punctures. usually with extremely fine traces of very superficial, about isodiametric microreticulation, glossy.

**Pronotum** (Fig. 76). Wide, cordiform, dorsally convex. Basal angles about rectangular. Surface with very fine and sparse punctures, with some very superficial transverse striae, without or with finest traces of very fine, transverse microreticulation, glossy. Punctures and microreticulation only visible at very high magnification.

**Elytra** (Fig. 76). Moderately elongate. dorsally convex, usually slightly widened apicad. Disk with extremely shallow, barely perceptible transverse depression in basal half. Lateral margin in basal third slightly incurved. Elytra fully striate, four median striae coarsely punctate. Lateral striae even more coarsely punctate. Four median intervals slightly but distinctly convex, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, the 5<sup>th</sup> interval slightly narrower than the other intervals and very slightly more convex. Four median intervals irregularly uni- to biserially punctate, punctures fine, with very fine though distinct microreticulation which is composed of very transverse meshes, fairly glossy.

**Male genitalia** (Fig. 25). Genital ring and parameres much as in *C. e. elegans*, but aedeagus stouter, less sinuate, and on lower surface evenly concave. Apex longer, slightly asymmetric, and at tip obtuse.

**Female gonocoxites.** As in *C. elegans amoenus* Chaudoir.

**Variation.** Little variation noted except for more or less distinct cupreous colouration of the 8<sup>th</sup> interval.

**Distribution**

North India, Nepal, Sikkim, Assam

**Collecting circumstances**

Not recorded.



**Additional records** (9 ex.)

**India:** Tanakpur, Kumaon, U.P. India, H.G.C. / *Catascopus elegans* var. Weber H. E. Andrewes det. / H. E. Champion Coll. B.M. 1953-156 (NHM); NE INDIA, Meghalaya, 2002 3 km E TURA, 1150m. 25°30'N, 90°14'E, 6.-12.v. M. Tryzna & P. Benda lgt. (SMNS). – **Nepal:** 23.5.1988 Chitwan Nat. P. Caura, S. Bilý leg. / Ex Coll. K. Hurka (NMPC); Ghodaghodi Lake 01.11.1995 leg. Dr. K. Handke (CBM); 548 NEPAL: Chitwan Distr. Chitwan N.P.: Sauraha 150 m, 31.V.-4.VI.1997 leg. M. HAUSER (SMNS). – Sikkim: Sikkim / Collection E. Dupuis / *Catascopus cyaneus* Chaud. Compared with type H.E.A. / H. E. Andrewes Coll. B.M.1945-97. (NHM). – **Assam:** 60647 / Doherty / Assam Potkai M.<sup>ts</sup> / *C. elegans* Weber var. very near *cyaneus* Chd. H. E. Andrewes det. (NHM); W.Bhanugach Res. Dt. Sylhet, Assam S.N.Chatterjee. 20.II. 1929. / For. Res. Inst. Dehra Dun (NHM).

*Catascopus elegans andamanicus* subsp. n.

Figs 26, 77

*Catascopus elegans*, Andrewes 1937: 189 (part).**Examined types****Holotype:** ♂, Andamans (Roepstorff) (NHM).

**Paratypes:** 1 ♂, 2 ♀♀, same data (CBM, NHM); 1 ♂, Andaman Islands / Sharp Coll. 1905-313. (NHM); 1 ♂, Capt<sup>n</sup> Wimberley / Andaman Islands (NHM); 2 ♂♂, 1 ♀, Andaman Is. 81-61. / *Catascopus elegans*, F. (NHM); 1 ♀, Roepstorff / Andaman Islands / Fry Coll. 1905-100. / *Catascopus elegans* Weber H. E. Andrewes det. (NHM); 1 ♀, Andaman isl<sup>ds</sup> / Sharp Coll. 1905-313. / Ex coll. Brit. Mus. / *Catascopus elegans* Weber H. E. Andrewes det. / H. E. Andrewes Coll. B.M. 1945-97. (NHM); 10 ♂♂, 10 ♀♀, ANDAMAN Is: Havelock I. env. of village No. 7. 11°59'N. 92°58'E. 2.iv.-14.v.1998, Karel & Simon Majer leg. (CBM, NHMB).

**Etymology**

The name refers to the range of this subspecies on Andaman Islands.

**Diagnosis**Distinguished from other subspecies by combination of bronze-green elytra, inconspicuously cupreous 8<sup>th</sup> interval, and convex but rather finely punctate median intervals.**Description**

**Measurements.** Length: 8.4-9.1 mm; width: 2.9-3.35 mm. Ratios. Width/length of prothorax: 1.25-1.31; width of base/apex of prothorax: 0.97-1.0; width of prothorax/width of head: 0.95-0.96; length/width of elytra: 1.58-1.60; width of elytra/width of prothorax: 1.56-1.61.

**Colour** (Fig. 77). Surface greenish to bronze-green, sometimes with some golden reflections, labrum and mandibles black. The 8<sup>th</sup> interval, sometimes also the 7<sup>th</sup> interval, inconspicuously golden-cupreous, little contrasting from the colour of the disk.

**Head** (Fig. 77). Of average size. Frontal sulci short, very shallow, somewhat irregular. Frons in middle usually with a shallow impression. Surface with moderately dense, usually rather coarse punctures. without or with very fine traces of about isodiametric microreticulation, glossy.

**Pronotum** (Fig. 77). Rather wide, cordiform, dorsally convex. Basal angles about rectangular. Surface with fine and sparse punctures, with more or less distinct traces of very fine, transverse microreticulation, glossy. Punctures rather easily visible, microreticulation only visible at very high magnification.

**Elytra** (Fig. 77). Moderately elongate. dorsally convex, parallel-sided to slightly widened apicad. Lateral margin in basal third distinctly incurved. Elytra fully striate, four median striae finely punctate, at least in basal half. Lateral striae more coarsely punctate. Four median intervals distinctly convex, the 7<sup>th</sup> interval narrower and but faintly carinate on median side, the 5<sup>th</sup> interval barely narrower than the other intervals and but very slightly more convex. Four median intervals irregularly uni- to biserially punctate, punctures fine, with very fine though distinct microreticulation which is composed of very transverse meshes, fairly glossy.

**Male genitalia** (Fig. 77). Genital ring and parameres much as in *C. e. elegans*, but aedeagus stouter, less sinuate, slightly widened towards apex, and lower surface evenly concave. Apex rather elongate, triangular, symmetric, with slightly obtuse tip.

**Female gonocoxites.** As in *C. elegans amoenus* Chaudoir.

**Variation.** Some variation noted in colouration and in development of the carinate 7<sup>th</sup> interval.

## Distribution

Andaman Islands.

## Collecting circumstances

Not recorded.

### *Catascopus elegans philippinus* subsp. n.

Figs 27, 78

*Catascopus elegans amoenus*, Chaudoir 1872: 243 (part).

## Examined types

**Holotype:** ♂, Philippine Is. Coll. Bottcher B.M.1929-201. (NHM).

**Paratypes:** 25 ♂♂, 21 ♀♀, Philippine Is. Coll. Bottcher B.M.1929-201. (CBM, NHM); 3 ♂♂, Philippine Is. Coll. Bottcher B.M.1929-201. / Philippine Islands Basilan Is. 10:XII:1914 Coll. Bottcher 146 (NHM); 2 ♀♀, Philippine Is. Coll. Bottcher B.M.1929-201. / Philippine Islands Basilan Is. 9:XII:1914 Coll. Bottcher 145 (NHM); 1 ♂, Philippine Is. Coll. Bottcher B.M.1929-201. / Philippine Islands Basilan Is. 10:XII:1914 Coll. Bottcher 146 / *Catascopus elegans* Web. det. Ing. Jedlicka (NHM); 1 ♂, 1 ♀, Philippine Is. Coll. Bottcher B.M.1929-201. / Philippine Islands Basilan Is. 7:XII:1914 Coll. Bottcher 144 / *Catascopus elegans* Web. det. Ing. Jedlicka (NHM); 2 ♀♀, Philippine Is. Coll. Bottcher B.M.1929-201. / Philippine Islands Basilan Is. 12:XII:1914 Coll. Bottcher 145 / *Catascopus elegans* Web. det. Ing. Jedlicka (NHM, NMPC); 1 ♀, Philippine Is. Coll. Bottcher B.M.1929-201. / Philippine Islands Basilan Is. 18:XII:1914 Coll. Bottcher / *Catascopus elegans* Web. det. Ing. Jedlicka (NHM); 1 ♂, Philippine Is. Coll. Bottcher B.M.1929-201. / Philippine Islands Bayonbong Luzon 15:V:1916 Coll. Bottcher 149 / *Catascopus elegans* Web. det. Ing. Jedlicka (NHM); 4 ♂♂, 13 ♀♀, Philippine Is. Coll. Bottcher B.M.1929-201. / *Catascopus elegans* Web. det. Ing. Jedlicka (NHM); 1 ♂, 1 ♀, Philippine Is. E. M. Ledyard B.M.1925-491 (NHM); 1 ♀, Philippine Is. E. M. Ledyard B.M.1925-491 / 1099 / *Catascopus elegans* Weber H. E. Andrewes det. (NHM); 1 ♂, 1 ♀, N.E.Luzon 95-151 Whitehead. (NHM); 1 ♀, Whitehead / N. Luzon / Philip Islands / Fry Coll. 1900-100. (NHM); 1 ♀, Philippines: Mindanao, Davao. C. F. Baker / Brit.Mus. 1924-486. / 6657 / *Catascopus elegans* Weber H. E. Andrewes det. (NHM); 1 ♀, Pt Bango Mindanao / *Catascopus elegans* Weber H. E. Andrewes det. / *Catascopus elegans* Weber DET. H. ANDREWES (NHM); 1 ♂, MINDANAO, 30km E of MALAYBALAY, BUSDI 5.-9. MAY 1996 BOLM lgt, 1000 m (SMNS); 1 ♂, PHILIPPINES: LEYTE VISCA N Baybay, 1991 sec. forest, 100-200 m leg. SCHAWALLER & al. (SMNS); 1 ♂, Ripong / *elegans* Web. det. Ing. Jedlicka (NMPC); 2 ♂♂, Ripong NLuzon / *elegans* Web. det. Ing. Jedlicka (NMPC); 1 ♂, Coll. Nickerl / *Catascopus elegans* var. Weber H. E. Andrewes det. (NMPC); 1 ♂, 1 ♀, Imugan Luzon / *elegans* Web. det. Ing. Jedlicka (CBM, NMPC); 1 ♂, Kolambugan Mindanao / *elegans* Web. det. Ing. Jedlicka (NMPC); 1 ♀, Luzon, P. I. Montalban / *Catascopus elegans* Web. det. Ing. Jedlicka (NMPC); 2 ♂♂, Philippines: Camarines Sur Lupi, Sooc, village, at night etc. 12.-16.3.2008 leg. H. Zettel (445) (CZW); 1 ♂, 1 ♀, Philippines: N. Samar, San Joaquin, Lologayan Falls 20-120m, 4.2.2007, leg. Zettel & Panganthon (461) (CZW); 1 ♂, PHILIPPINES, LUZON Mt. ISAROG, 1200 m SW slope 1.3.V.1996 (CBM); 1 ♂, Museum Leiden PHILIPPINES: Mindanao Is South Cotabato, Koronadal Barroo 8, 200 m 12-14-VII-1986, lighttrap Roland A. Müller legit / Museum Leiden ex collection Roland A. Müller rec. 1999 (RMNH); 1 ♀, C. Dohrn Ind. Phil. / *Confusus* Dohrn Coll. (RMNH); 1 ♂, Luzon, P. I. Rizal / Coll. W. Schultze Ankauf 1942 (SMTD); 1 ♂, 1 ♀, N. Palawan Binaluan N.-Dez.1913 leg. G. Boettcher / Sammlung O. Langen- han Kauf 1931. 18 (SMTD); 2 ♀♀, Mindanao, Surig. Surigao coll. W. Schultze / Coll. W. Schultze Ankauf 1942 (SMTD).

## Etymology

The name refers to the occurrence of this subspecies on the Philippine Islands.

## Diagnosis

Distinguished from other subspecies by combination of largely cupreous colour of the elytra, rather short elytra, and distinctly convex median intervals. From the similarly coloured and structured *C. elegans lateralis* mainly distinguished by shorter elytra, less distinct microreticulation of pronotum and elytra, and longer apex of the aedeagus.

## Description

**Measurements.** Length: 8.1-8.9 mm; width: 3.05-3.4 mm. Ratios. Width/length of prothorax: 1.22-1.25; width

of base/apex of prothorax: 0.97-1.02; width of prothorax/width of head: 0.92-0.94; length/width of elytra: 1.51-1.57; width of elytra/width of prothorax: 1.67-1.74.

**Colour** (Fig. 78). Head and pronotum green, sometimes blue-green, elytra contrastingly, laterally widely golden-cupreous, usually with only the three to four median intervals more or less completely green; labrum and mandibles black.

**Head** (Fig. 78). Of average size. Frontal sulci short, very shallow, somewhat irregular. Surface with more or less sparse, moderately fine punctures, sometimes posterior part of frons with several shallow, irregular, longitudinal striae, surface with or without finest traces of about isodiametric microreticulation, glossy.

**Pronotum** (Fig. 78). Comparatively narrow, cordiform, dorsally convex. Lateral margin in basal third straight, parallel. Basal angles rectangular. Surface with very fine and sparse punctures, with fine but usually rather distinct transverse striae, and with very fine, superficial traces of transverse microreticulation, glossy. Punctures and microreticulation only visible at high magnification.

**Elytra** (Fig. 78). Comparatively short and wide, dorsally convex, slightly widened apicad. Disk not perceptibly impressed in basal half. Lateral margin in basal third faintly incurved. Elytra fully striate, four median striae with moderately fine to fairly coarse punctures. Lateral striae coarsely punctate. Four median intervals distinctly convex, the 7<sup>th</sup> interval narrower and distinctly carinate on median side; the 5<sup>th</sup> interval barely narrower than the other intervals and little more convex. Four median intervals irregularly uni- to biserially punctate, punctures very fine, with very fine, rather superficial microreticulation which is composed of moderately transverse meshes, glossy.

**Male genitalia** (Fig. 27). Genital ring and parameres much as in *C. e. elegans*, but aedeagus stouter, less sinuate, slightly widened towards apex, and lower surface evenly concave. Apex moderately elongate, triangular, symmetric, with slightly obtuse tip.

**Female gonocoxites**. As in *C. elegans amoenus* Chaudoir.

**Variation**. Some variation noted in colouration, particularly in degree of the cupreous colour, relative width, or length, of pronotum and elytra, and in the punctation of the elytra striae.

## Distribution

Philippine Islands.

## Collecting circumstances

Little recorded, a few specimens collected "in lighttrap".

## *Catascopus elegans lateralis* Brullé

Figs 28, 79

*Catascopus lateralis* Brullé, 1837: 233. – Chaudoir 1972: 250; Csiki 1932: 1363; Jedlicka 1963: 385; Straneo 1994: 167; Lorenz 1998: 430; 2005: 454.

*Catascopus celebensis* Thomson, 1857: 282.

## Examined types

**Holotype** of *celebensis*: ♂, Type / Celebes 77.15 N. / *C. celebensis* Type Thoms Celebes (NHM).

## Diagnosis

Distinguished from other subspecies by combination of largely cupreous colour of the elytra, rather elongate elytra, and rather convex median intervals. From the similarly coloured and structured *C. elegans philippinus* mainly distinguished by longer elytra, more distinct microreticulation of pronotum and elytra, and shorter apex of the aedeagus. From the uniformly green *C. elegans viridans*, likewise from Sulawesi, also distinguished by the decidedly longer elytra.

## Partial redescription

**Measurements**. Length: 7.4-9.9 mm; width: 2.7-3.6 mm. Ratios. Width/length of prothorax: 1.24-1.32; width of base/apex of prothorax: 0.99-1.02; width of prothorax/width of head: 0.95-0.98; length/width of elytra: 1.58-1.64; width of elytra/width of prothorax: 1.59-1.66.

**Colour** (Fig. 79). Head and pronotum green, sometimes blue-green, elytra contrastingly, largely golden-cupreous, usually with only the two to four median intervals in their apical part green; labrum and mandibles black.

**Head** (Fig. 79). Of average size. Frontal sulci short, very shallow, somewhat irregular. Surface with more or less sparse, moderately fine punctures, sometimes posterior part of frons with several fine, irregular, longitudinal striae, surface usually without traces of microreticulation, glossy.

**Pronotum** (Fig. 79). Moderately wide, cordiform, dorsally convex. Lateral margin in basal third straight, parallel. Basal angles rectangular. Surface with very fine and sparse punctures, with fine and usually rather superficial transverse striae, and with very fine but distinct, transverse microreticulation, glossy. Punctures and microreticulation only visible at high magnification.

**Elytra** (Fig. 79). Comparatively elongate, dorsally convex, slightly widened apicad. Disk not perceptibly impressed in basal third. Lateral margin in basal third faintly incurved. Elytra fully striate, four median striae with moderately fine to fairly coarse punctures. Lateral striae coarsely punctate. Four median intervals distinctly convex, the 7<sup>th</sup> interval narrower and distinctly carinate on median side; the 5<sup>th</sup> interval barely narrower than the other intervals and little more convex. Four median intervals irregularly uni- to biserially punctate, punctures very fine, with very fine though distinct microreticulation which is composed of moderately transverse meshes, fairly glossy.

**Male genitalia** (Fig. 28). Genital ring and parameres much as in *C. e. elegans*, but aedeagus slightly stouter, less sinuate, slightly widened towards apex, and lower surface evenly concave. Apex moderately elongate, triangular, symmetric, with obtusely rounded tip.

**Female gonocoxites.** As in *C. elegans amoenus* Chaudoir.

**Variation.** Some variation noted in colouration, particularly in degree of the cupreous colour, relative width, or length, of pronotum and elytra, and in the punctation of the elytra striae.

## Distribution

Sulawesi, Moluccas.

## Collecting circumstances

Some specimens were collected at light, many probably on logs, or by sifting litter, most in rain forest. According to the labels single specimens were collected in “canopy trap” in “rain forest”, in “multistrate evergreen forest”, in “cult, area dead trees”, in “shrub and short grass”, in “clearing in disturbed primary forest”, in “UWP + clearing”, “UWP + plantage”, and in “secondary forest”.

## Additional records (115 ex.)

**Sulawesi:** C-Sulawesi, 17km E Pendolo, 800 m 120.45.49 E, 2.06.33 S 4-9 Jul 1999, Bolm lgt. (SMNS); N-Sulawesi, 1 km W Toraut, Dumoga Bone NP, 200-300m 0°34'17"N, 123°54'19"E 02.II.2006, leg. A. Weigel (CBM, CWP); N-Sulawesi, 1 km W Toraut, Dumoga Bone NP, 200-300m 0°34'17"N, 123°54'19"E 1.-2.II.2006, leg. A. Skale (CBM); Puncak (?Punchak) V 2000 Secky (CWB); Ujung Pandang S. Sulawesi 4-I-2000 K. Ando (CAT); Banting Munung, Ujung Pandang S. Sulawesi 27-XII-1999 K. Ando (CAT); Poso-Bez. Tentena, Poso-See 19.4.-3.5.1994 leg. Hiermeier (CBM); N-Sulawesi, 5 km SE Batu-Puith, 250m 1°32.43'N, 125°07.29'E 18.2.1009, R. Gerstmeier (CBM); C. J. LOUWERENS W-Celebes, 4000' Loda-Paloe VIII.1937 / Museum Leiden ex collection C. J. Louwerens rec. 1979 / *Catascopus elegans* Weber H. E. Andrewes det. (RMNH); N-Sulawesi vic. Boroko, Solo-Sokoputo village, 50m, N 0°56'17", E 123°12'74" 24.II.2009 leg. A. Skale (011) (CBM); N-Sulawesi 6km NE Tabulo, Manangga village, 50-200m, N 0°32'75", E 122°10'10" 26.II.2009 leg. A. Skale (013) (CBM, CSB); N-Sulawesi 6km NE Tabulo, Bendungan vill. 15m N 0°31'57", E 122°09'32" 27.II.2009 leg. A. Weigel (014) (CBM); C-Sulawesi 20km NE Palu, 5km W Tawaeli 250m, S 0°43'45", E 119°55'95" 02.III.2009 leg. A. Skale (019) (CBM); C-Sulawesi Tonusu nr. Tentena, Poso-Lake R. GERSTMEIER, 21.4.1994 (CLT); Utara, Dumoga-Bone N.P. 28 Aug.1985 Coll. Chen Young / Hogs Back 492m PROJECT WALLACE / *Catascopus elegans* Web. *lateralis* Brullé det. S. L. Straneo 1993 (CMP); RMNH/HH 315 N SULAWESI: DUMOGA BONE NP Base Camp alt.m 210, 09.v.1985 J. Huibregts (RMNH); RMNH/HH 347 N SULAWESI: DUMOGA BONE NP Edwards Subcamp alt.m 664, 02-05.vi.1985 J. Huibregts (RMNH); RMNH/pw21 N SULAWESI: MT AMBANG NR Kotamobagu, 20km E of/alt.m 1210, 08.xii.1985 J. Krikken (RMNH); RMNH/pw32 N SULAWESI: DUMOGA BONE NP Barney's Tree alt.m 300, 13-22.xi.1985 J. Krikken (RMNH); N. Sulawesi Dumoga-Bone NP. N. slope of Gn. Ali, in mining base camp Sungai Mak 11-XI-1981, alt. 520 m W. F. Rodenburg (RMNH); S-Celebes Bonthain. C. Ribbe 1982. / *Catascopus elegans* Weber H. E. Andrewes det. / *elegans* s. *lateralis* Brull. ? det. Ing Jedlička (NMPC); SULAWESI TENGAH: Nr. Morowali, Ranu River Area, 27.i.-20.iv.1980 / M.J.D. Brendell B.M.1980-280 (NHM); Toraut Forest / Dumoga-Bone N.P. January 1985 / R.Ent.Soc. Lond, PROJECT WALLACE B.M.1985-10 (NHM); Toraut Forest / Dumoga-Bone N.P. February 1985 / R.Ent.Soc.Lond, PROJECT WALLACE B.M.1985-10 (NHM); Site 11, 1040m. Tumpah Transect J.D.Holloway 23-

25.ii.1985 / R.Ent.Soc.Lond, PROJECT WALLACE B.M.1985-10 / *Catascopus elegans lateralis* Br. det. S. L. Straneo 1993 (NHM); Site 9, 540m. Tumpah Transect J. D. Holloway / SULAWESI UTARA, Dumoga Bone N.P. February 1985 / R.Ent.Soc.Lond, PROJECT WALLACE B.M.1985-10 / *Catascopus elegans lateralis* Br. det. S. L. Straneo 1993 (NHM); Site 5, 300m. Tumpah Transect J. D. Holloway / SULAWESI UTARA, Dumoga Bone N.P. February 1985 / R.Ent.Soc.Lond, PROJECT WALLACE B.M.1985-10 / *Catascopus elegans lateralis* Br. det. S. L. Straneo 1993 (NHM); Site 3, 200m. Toraut alluv. for. J. D. Holloway 1-2.ii.1985 / SULAWESI UTARA, Dumoga Bone N.P. February 1985 / R.Ent.Soc.Lond, PROJECT WALLACE B.M.1985-10 / *Catascopus elegans lateralis* Br. det. S. L. Straneo 1993 (NHM); 'Edwards' Camp Lowland forest 664 m. / SULAWESI UTARA, Dumoga-Bone N.P. October 1985 / R.Ent.Soc.Lond, PROJECT WALLACE B.M.1985-10 (NHM); Celebes / Coll. C. Felsche Gesch. 1907 (SMTD); 15866 / Wallace / Celebes / Fry Coll. 1905-100 (NHM); Wallace / Celebes / Fry Coll. 1905-100 / *Catascopus nitidulus* Cast. Moluccas (NHM); Celebes / *Celebensis* Thoms. Arch. Ent. 858. p 282 (NHM); Macassar / Bowring 63-47\* (NHM); S.Celebes Pangie C. Ribbe 1882 / *Catascopus lateralis* Br. Compared with type H.E.A. / H. E. Andrewes Coll. B.M.1945-97. (NHM); Celebes 7745 R. / *Catascopus Celebensis* Thoms. Compared with type H.E.A. / H. E. Andrewes Coll. B.M.1945-97. (NHM). – **Halmahera:** Halmahera NW 7km S Jailolo, 200m 1°1'18"N, 127°31'39"E 27.I.2006, leg. A. Weigel (CBM); Halmahera NW 7km S Jailolo, 200m 1°1'18"N, 127°31'39"E 26/27.I.2006, leg. A. Skale (CBM); Wallace / Moluccas Jilolo (NHM). – Buru: Balu Balu, P. Buru 13-VI-59 leg. A.M.R. Wegner (RMNH); Wambana, P. Buru 9-VI-59 leg. A.M.R. Wegner (RMNH); Wamlang P. Buru 10.VI.1959 A.M.R. Wegner (RMNH); ca 25 km S Waeputih 1400-1650 m GERSTMEIER 8.4.1996 (CBM); Utara, Galela, along road betweenPaca to Soasio, XI.2009-III.2010, leg. S. S. Negara (NME). – **Ambon:** Amboina Isl. Waai, 6.6.1964 A.M.R. Wegner. (RMNH); Ambon (Indon.) Bam. 23.II.1961 A.M.R. Wegner. / Museum Leiden ex collection C. J. Louwerens / *Catascopus elegans* Weber det. C. J. Louwerens (RMNH); Laithatu, Soya 500m 8.xi.1998 O. Mehl leg. (CBM); Amboyna / Bowring 63-47\* (NHM); 11947 Amboina (SMTD). – **Bacan:** 10 km e. Labuha 5.4.-7.4.1998 leg. Gerstmeier (CBM); Labuha, Flußtal ca. 3km S. 40m, UWS0°40'28"N, 127°29'44"E 13.I.2006, leg. A. Weigel (CBM); Wayamiga, 10 km ö. Labuha, 5.-7.4.1998 leg. R. Gerstmeier (CBM); 10 km E Labuha, 120m, 0°38'07"N, 127°34'46"E, 14.I.2006 leg. A. Skale (CBM); S-Batjan vi-vii Wajana A.M.R. Wegner 1 53 // Museum Leiden ex collection C. J. Louwerens / *Catascopus elegans* Weber det. C. J. Louwerens (RMNH); Batjan C. Ribbe 1885. / H. E. Andrewes Coll. B.M.1945-97. (NHM). – **Seram:** 12 km SE Wahai, Solea 16.-21.10.1998 J. Horák leg. (CBM); Solea 12 km S. of Wahai, 16/x-4/xi-1998 Ole Mehl leg. (CBM); unit O 35 km E. of Pasahari 24-30.x.1998 O Mehl leg. (CBM); N-Ceram is. 12km SE Wahai: Solea XI-1998 lgt. J. Horák (CHP); Ceram Jllo C. Ribbe 1884 / H. E. Andrewes Coll. B.M.1945-97. (NHM). – ??? : Ilat Boerpe O.K. Doherty / H. E. Andrewes Coll. B.M.1945-97. (NHM).

*Catascopus elegans viridans* subsp. n.

Fig. 80

**Examined types**

**Holotype:** ♀, Indonesia, SE Sulawesi Sulawesi-Tenggara Abuki reg. Sambeani env. 10.X.1999, native collector (CBM)

**Paratypes:** 2 ♀♀, same data (CBM).

**Etymology**

The name refers to the almost completely greenish colouration of the subspecies, in contrast to the vivid cupreous colour of the common Sulawesi subspecies *C. elegans lateralis*.

**Diagnosis**

Distinguished from other subspecies by combination of green colour with only the 8<sup>th</sup> interval being cupreous, rather short and wide elytra, and rather convex median intervals. From *C. elegans lateralis*, likewise from Sulawesi, also distinguished by the decidedly shorter elytra.

**Description**

**Measurements.** Length: 9.1-9.4 mm; width: 3.5-3.65 mm. Ratios. Width/length of prothorax: 1.25-1.28; width of base/apex of prothorax: 0.95-0.98; width of prothorax/width of head: 0.95; length/width of elytra: 1.50-1.56; width of elytra/width of prothorax: 1.68-1.72.

**Colour** (Fig. 80). Head and pronotum green, elytra bright green with more or less distinct golden lustre, 8<sup>th</sup> interval more or less distinctly cupreous, though labrum and mandibles black.

**Head** (Fig. 80). Of average size. Frontal sulci short, very shallow, somewhat irregular. Surface with more or

less sparse, moderately fine punctures, sometimes posterior part of frons with several fine, irregular, longitudinal striae, surface without or with very fine traces of about isodiametric microreticulation, glossy.

**Pronotum** (Fig. 80). Moderately wide, cordiform, dorsally convex. Lateral margin in basal third straight, parallel. Basal angles rectangular. Surface with very fine and sparse punctures, with fine and usually rather superficial transverse striae, and with more or less distinct traces of very fine, transverse microreticulation, glossy. Punctures and microreticulation only visible at high magnification.

**Elytra** (Fig. 80). Comparatively short and wide, dorsally convex, slightly widened apicad. Disk in basal third at most with a very shallow, indistinct transverse impression. Lateral margin in basal third distinctly incurved. Elytra fully striate, four median striae with fine, more or less distinct punctures. Lateral striae more coarsely punctate. Four median intervals fairly convex, the 7<sup>th</sup> interval narrower and distinctly carinate on median side; the 5<sup>th</sup> interval considerably narrower than the other intervals and rather convex though not carinate. Four median intervals irregularly uni- to biserially punctate, punctures very fine, with very fine though distinct microreticulation which is composed of moderately transverse meshes, fairly glossy.

**Male genitalia.** Unknown.

**Female gonocoxites.** As in *C. elegans amoenus* Chaudoir.

**Variation.** Minor variation noted in relative length of the elytra.

### Distribution

South-eastern Sulawesi. Known only from type locality.

### Collecting circumstances

Not recorded.

### *Catascopus elegans amoenus* Chaudoir

Figs 29, 48, 81

*Catascopus amoenus* Chaudoir, 1861: 120. – Chaudoir 1872: 243; Csiki 1932: 1363; Darlington 1968: 103; Lorenz 1998: 430; 2005: 454.

*Catascopus obliquatus* Fairmaire, 1881: 381. – Csiki 1932: 1363; Darlington 1968: 103; Moore et al. 1987: 285; Straneo 1994: 167; Lorenz 1998: 430; 2005: 454; Kabak 2003: 435.

### Examined Types

**Lectotype** (by present designation): ♀, var *amoenus* Ch. / Dorey Wallace / Ex coll. Chaudoir (MNHP).

### Type locality

“Dorey”, New Guinea.

### Diagnosis

Distinguished from other subspecies by combination of cupreous lateral parts of the elytra, rather elongate elytra, and depressed median intervals. From the similarly coloured *C. elegans philippinus* and *C. elegans lateralis* further distinguished by the more finely punctate median striae and depressed median intervals.

### Partial redescription

**Measurements.** Length: 8.2-9.8 mm; width: 2.95-3.6 mm. Ratios. Width/length of prothorax: 1.21-1.29; width of base/apex of prothorax: 0.96-1.02; width of prothorax/width of head: 0.94-0.97; length/width of elytra: 1.61-1.66; width of elytra/width of prothorax: 1.60-1.67.

**Colour** (Fig. 81). Head and pronotum green, elytra with more or less extended golden-cupreous margins, but usually the median four or five intervals largely green, commonly with slight golden lustre; labrum and mandibles black.

**Head** (Fig. 81). Of average size. Frontal sulci short, very shallow, somewhat irregular. Surface with more or less sparse, moderately fine punctures, sometimes posterior part of frons with some fine, irregular, longitudinal striae, surface without or with finest traces of about isodiametric microreticulation, glossy.

**Pronotum** (Fig. 81). Moderately wide, cordiform, dorsally convex. Lateral margin in basal third straight, parallel. Basal angles rectangular. Surface with very fine and sparse punctures, with fine and usually rather superficial transverse striae, and with very fine and superficial, commonly barely recognizable, traces of transverse microreticulation, glossy. Punctures and microreticulation only visible at very high magnification.

**Elytra** (Fig. 81). Comparatively narrow and elongate, dorsally convex, usually but very slightly widened apicad. Disk not perceptibly impressed in basal third. Lateral margin in basal third faintly incurved. Elytra fully striate, four median striae with very fine punctures or almost impunctate. Lateral striae more coarsely punctate. Four median intervals depressed or almost so, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, but rather indistinct in apical fourth; the 5<sup>th</sup> interval barely narrower than the other intervals and little more convex. Four median intervals irregularly uni- to biserially punctate, punctures very fine, with very fine and rather superficial microreticulation which is composed of moderately transverse meshes, glossy.

**Male genitalia** (Fig. 29). Genital ring and parameres much as in *C. e. elegans*, but aedeagus stouter, less sinuate, slightly widened towards apex, and lower surface in middle almost straight. Apex fairly elongate, triangular, symmetric, with slightly obtuse tip.

**Female gonocoxites** (Fig. 48). Gonocoxite 1 large, asetose at apical margin. Gonocoxite 2 small and short, curved, with rather obtuse apex. Two or three rather short but stout ventro-lateral ensiform setae situated below middle, one elongate dorso-median ensiform seta located at middle.

**Variation.** Some variation noted in body size, less so in coloration and in the structure of the elytral striae and intervals.

### Distribution

New Guinea, including Japen and Salawati Islands, New Britain, New Ireland, Goudenough Islands, and Aru and Kei Islands.

### Collecting circumstances

Some specimens were collected in “garden in secondary forest”, “under dry bark, near stream”, in “logging area”, “facing lowland rainforest”, and at light, but most specimens probably were collected by sifting bark and litter from logs in rain forest.

### Additional records (227 ex.)

**Papua New Guinea:** Fr. Wilhelms Hafen / Collection E. Dupuis / *Catascopus elegans* Weber det. H. E. Andrewes / H. E. Andrewes Coll. B.M.1945-97. (NHM); Madang Prov. Baiteta 31.V.1993, leg. O. Missa (IRSNB); Madang Prov. Baiteta Light AR 42, 24-VI-1996, leg. O. Missa (CBM, IRSNB); Madang Prov. Baiteta Light AR 7, 1-VII-1996, leg. O. Missa (IRSNB); Madang Prov. Baiteta Light T 2, 24-VI-1996, leg. O. Missa (IRSNB); Madang Prov. Baiteta Light T 2, 9-IV-1993, 6-V-1993, leg. O. Missa (CBM, IRSNB); Madang Prov. Baiteta Light M1, 21-III-1993, 31-III-1993, 2-VI-1993, leg. O. Missa (CBM, IRSNB); Madang Prov. Baiteta Light AR 66, 24-VI-1996, leg. O. Missa (CBM, IRSNB); Madang Prov. Baiteta Light AR 41, 25-VI-1996, leg. O. Missa (IRSNB); Madang Prov. Baiteta Light AR 8, 15-VII-1996, 17-VII-1996, leg. O. Missa (IRSNB); Madang Prov. Baiteta Light M 2, 30-IV-1996, leg. O. Missa (IRSNB); Madang Prov. Baiteta Light K 0, 29-IV-1996, leg. O. Missa (IRSNB); Madang Prov. Baiteta Light AR 60, 03-VII-1996, 04-VII-1996, leg. O. Missa (IRSNB); 06°40.30S 146°48.00E Oomsis, Morobe, Light Trap Canopy 2, 3, 1-3 August 2000, R. L. Kitching (CBM, QM); K. Wilhelmsland Finschhafen / Lehr. W. Müller Vermächt. 1909 (SMTD); Central District, Subitana, 1888 ft 1949 W. W. Brandt (ANIC); Amboin 16.10.1974 / H. Ohlmus Collector (ANIC); Mt. Gyifrie N. New Guinea Sea Level, 1000' April 39 L. E. Cheesman / *Catascopus elegans* W. det. Darl. '69 (SAMA); Kokoda. 1.200 ft. vi.1933. L. E. Cheesman. B.M.1933-456. (NHM); Wau 26.XII.61 G. Monteith / UQIC Reg. #92975 (QM); Mt. Lamington, N.E. Papua 1300 to 1500 feet C. T. McNamara / *Catascopus elegans* W. det. Darl. '69 (SAMA); Dobodura Mar-July, 1944 Darlington / *Catascopus elegans* W. det. Darl. '66 (ANIC); Lae 16-11.69 / H. Ohlmus Collector (ANIC); Bolan Gbg. (NMPC). – **Papua Indonesia:** Panai Dist. Sirivo Riv., 1.000 ft. Pusppensaat c.1995, leg. Irja (ZSM); 9.7.1996 10 Schüle/Stüben West Papua 10 km nördl. Fakfak, Rankondak II (CBM); 11.7.1996 15 Schüle/Stüben West Papua Fakfak, Mambunu-Buni (CBM); 31.7.1996 31 Schüle/Stüben West Papua Nabire nach Mapia km 117 Unipo (CBM); 26.7.1996 33 Schüle/Stüben West Papua v. Nabire nach Mapia km 145 Eipomani (CBM); Nabire-Dist. Mt. Botak nr. Kwatisore, 150m, 8.1998, leg. Wendesi (CBM); Fakfak-Pr. 20 km w. Timika, 30m, 8.-11.1.1996 leg. A. Riedel (CBM); Jayawijaya-Pr. Lereh, 300-550m, 25.1.1995 leg. A. Riedel (CBM); vic. Kaimana, road 18 km NE, S3°31'11", E133°40'15", 50-80m 21.-25.II.2011, leg. A. Skale (014) (CBM, CSB); vic. Kaimana, road 17 km NE, 50m, S3°31'41" E133°40'51", 3.I.2011 leg. A. Weigel (003) (NHME); vic. Kaimana, road 10 km NE, S3°34'43", E133°42'43", 40m 01.II.2011, leg. A. Skale (002) (CBM); Manokwari, Ransiki Mayuby, 26.-30.10.1990, leg. A. Riedel (CBM); Panai Pr. Nabire, Pemukiman 200m, 17.8.1991, leg. A. Riedel (CBM); Manokwari, Gn. Meja 200m, 21.-24.8.1991, leg. A. Riedel (CBM); Nabire S road km 31, Januar 1987 leg. Frank Wolf (CBM); 100 km S Nabire N Onipo-Ebore, 500m 02.I.1996, leg. A. Weigel KL (CSA); Waropen Pr. Wapoga Riv. Kwadewa, km 62, 28.2.1999, A. Riedel (CBM); Manokwari Pr. ca. 20km W Manokwari, Prafi, 160m, 00°53'57"S, 133°55'06"E, 08.III.2007 leg. A. Skale (CBM); FO15 Prafi, 160m, 00.53.57.24S

133.55.13.8E, 8.3.2007, Gerstmeier (CBM); 18km NE Kaimana (14) S3°31'11" E133°40'15" 21-25.ii.2011. O. Mehl leg. (CBM); Wandammen Bay, Wasior, Km 27. Wombu, 10.I.2001, leg. A. RIEDEL (SMNS); Wandammen Bay, Wasior, Biok, 200 m, 8.I.2001, leg. A. RIEDEL (SMNS); Sorong, Makbon, near Warsamson-bridge. 100 m, 30.I.2001, leg. A. RIEDEL (SMNS); Sorong, dusun Maibo, 100-150 m, 19.I.2001, leg. A. RIEDEL (SMNS); Jayawijaya-Pr. Samboca, Upper Kolff R, 200m, 10.-14.X.1996, leg. A. Riedel (CBM); 59.58 Dory / *Catascopus amoenus* Chaud. (NHM); Dorey / Bowring 63-47\* (NHM); Cyclops Mts. Sabron 930 ft. v.1936. L. E. Cheesman. B.M.1936-271. (NHM); Arfak vraz / *amoenus* Chaud New Guinea / Coll. Nickerl Mus. Pragense (NMPC); Neth. Ind.-American New Guinea Exped. Bernhard Camp 50 m vii-xi.1938 J. Olthof / *Catascopus elegans* (Web.) det. Darl. '65 (RMNH); Jayapura District KWANSU (nr. Genyem) 2°46'S - 140°12'E / 8.ii.2009 A. J. de Boer, M. Schouten & R. Mambrasar (RMNH); Roon C. Fruhstorfer 1898 (CBM); Roon C. Fruhstorfer / *elegans* Andr. det. 35 / F. van Emden Bequest B.M. 1960-129. (NHM). – **Japen Is.:** 9.8.1996 44 Schüle/Stüben West Papua, 1000m Japen, Mambo (CBM); W. Serui, Panduamin 50m, 18.XII.2000. leg. A. RIEDEL (CBM). – **Salawati Is.:** Salawatty / Bowring 63-47\* (NHM); Salawati Isl. bor. 8 km S Kallam 01°01'26"S, 130°40'53"E 23.I.2004, A. Skale (CBM). – **New Britain:** Gazelle Pen. Upper Warangoi, 250-600 m, 28-30.XI.1962 / J. Sedlacek Collector BISHOP / Museum Leiden ex collection C. J. Louwerens rec.1979 (RMNH); Gazelle Pen. Upper Warangoi, Illugi 230 m, 12-15.XII. '62 / J. Sedlacek Collector BISHOP / Museum Leiden ex collection C. J. Louwerens rec.1979 (RMNH); C. Gloucester Jan-Feb 1944 Darlington / BKB 1511 / *Catascopus elegans* Weber det. C. J. Louwerens (RMNH). – **New Ireland:** Hans Meyer Range, 60km SE Namatanai, Hirudan River, 50m 04°00'41"S, 152°50'79"E 09.III.2000, leg. A. Weigel (CBM). – **Goodenough Is.:** Bolu Bolu April 29, 1982 Coll. J. Strazanac (CBM, CMP). – **Aru Is.:** Aru Inseln Ursiuning C. Ribbe 1884 / *Catascopus amoenus* Chaud. Compared with type H.E.A. / H. E. Andrewes Coll. B.M.1945-97. (NHM); Wamar Island, vic. Dobo S5°47'57"/ E134°13'0", 20m 14.-17.II.2011 leg. A. Skale (011) (CBM); N.Guin Aru Is / Fry Coll. 1905-100 / *Catascopus elegans* F. Compared with type H.E.A. / H. E. Andrewes Coll. B.M.1945-97. (NHM); Aru Is Eigner 1911 / W. W. Froggatt Collection (ANIC); Aru Is H. Eigner / W. W. Froggatt Collection (ANIC); Aru Is H. Eigner / *Catascopus elegans* Weber Id. by T. G. Sloane (SAMA); Aru / No. 565 examined by Prof. Thaxter for Laboulbeniaceae. (NHM). – **Kei Is.:** Kei I. Kuhn / 16081, 18091 (CBM, SMTD). – **New Guinea:** 108 / New Guinea / *Catascopus* / Sharp Coll. 1905-313. (NHM); Beccari / N.Guin. / Fry Coll. 1905-100. (NHM).

*Catascopus elegans biakensis* subsp. n.

Figs 30, 82

### Examined types

**Holotype:** ♂, Irian Jaya, Biak Is. 3 km s. Korim, Wouna 100m, 21.-24.4.1993 leg. A. Riedel (CBM).

**Paratypes:** 1 ♂, same data (CBM); 1 ♂, 2 ♀♀, INDONESIA Irian Jaya Biak NE . 10 km N Bosnik 10.II.1998 prom.Urwald leg. A. Weigel KL (CBM, CSA, CWB); 1 ♀, INDONESIAIEN Or: Biak Is. Mniber vic., Dec 2006, O. Mehl leg. / Biak Mniber 00. 43. 288 S 135. 46. 018 E (CBM).

### Etymology

The name refers to the occurrence of this subspecies on Biak Island.

### Diagnosis

Distinguished from other subspecies by combination of completely dark green colour without any distinct cupreous parts, rather elongate elytra, and depressed median intervals.

### Description

**Measurements.** Length: 8.4-9.5 mm; width: 3.1-3.5 mm. Ratios. Width/length of prothorax: 1.24-1.28; width of base/apex of prothorax: 0.96-1.0; width of prothorax/width of head: 0.91-0.95; length/width of elytra: 1.59-1.65; width of elytra/width of prothorax: 1.60-1.67.

**Colour** (Fig. 82). Surface uniformly dark green, elytra without distinct cupreous margins, but usually along suture even darker, blackish-green; labrum and mandibles black.

**Head** (Fig. 82). Of average size. Frontal sulci short, very shallow, somewhat irregular. Surface with more or less sparse, moderately fine punctures, sometimes posterior part of frons with some fine, irregular, longitudinal striae, surface without or with finest traces of about isodiametric microreticulation, glossy.

**Pronotum** (Fig. 82). Moderately wide, cordiform, dorsally convex. Lateral margin in basal third straight, parallel. Basal angles rectangular. Surface with very fine and sparse punctures, with fine and usually rather superficial transverse striae, and with very fine and superficial, commonly barely recognizable, traces of transverse



microreticulation, glossy. Punctures and microreticulation only visible at very high magnification.

**Elytra** (Fig. 82). Comparatively narrow and elongate, dorsally convex, usually but very slightly widened apicad. Disk not perceptibly impressed in basal third. Lateral margin in basal third faintly incurved. Elytra fully striate, four median striae with fine punctures. Lateral striae more coarsely punctate. Four median intervals depressed or almost so, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, but carina low and rather indistinct in apical fourth; the 5<sup>th</sup> interval barely narrower than the other intervals and little more convex. Four median intervals irregularly uni- to biserially punctate, punctures very fine, with very fine and slightly superficial microreticulation which is composed of very transverse meshes, glossy.

**Male genitalia** (Fig. 30). Genital ring and parameres much as in *C. e. elegans*, but aedeagus stouter, less sinuate, rather widened towards apex, and lower surface evenly concave. Apex elongate, triangular, slightly asymmetric, with rather acute tip.

**Female gonocoxites.** As in *C. elegans amoenus* Chaudoir.

**Variation.** Some variation noted in body size and in relative length of the elytra.

### Collecting circumstances

Little recorded. One specimen collected in primary rain forest.

### Distribution

Biak Island, Papua Indonesia, off the north-west coast of New Guinea.

### *Catascopus elegans australasiae* Hope

Figs 31, 83

*Catascopus australasiae* Hope, 1842: 426. – Chaudoir 1872: 247; Sloane 1910: 400; Csiki 1932: 1363; Darlington 1968: 103; Moore et al. 1987: 284; Straneo 1994: 167; Lorenz 1998: 430; 2005: 454.

### Examined types

None.

### Type locality (from description)

“Port Essington”, Northern Territory of Australia.

### Diagnosis

Distinguished from other subspecies by combination of uniformly green colour without any trace of green, red, or golden tints, rather wide pronotum, and rather short and wide elytra that bear at most a very shallow transverse impression in basal third. It further differs from most subspecies of *C. elegans*, except the Australian *C. elegans cyaneus* and *C. elegans salomonicus* from Solomon islands, by the less carinate 7<sup>th</sup> elytral interval.

### Partial Redescription

**Measurements.** Length: 9.2-10.8 mm; width: 3.5-4.1 mm. Ratios. Width/length of prothorax: 1.22-1.29; width of base/apex of prothorax: 0.94-1.04; width of prothorax/width of head: 0.90-0.95; length/width of elytra: 1.53-1.58; width of elytra/width of prothorax: 1.63-1.70.

**Colour** (Fig. 83). Surface uniformly bright green, sometimes elytra with a slight golden lustre, though labrum and mandibles black.

**Head** (Fig. 83). Of average size. Frontal sulci short, very shallow, somewhat irregular. Surface with more or less sparse, moderately fine punctures, sometimes posterior part of frons with several fine, irregular, longitudinal striae, surface without or with very fine traces of about isodiametric microreticulation, glossy.

**Pronotum** (Fig. 83). Moderately wide, cordiform, dorsally convex. Lateral margin in basal third straight, parallel. Basal angles rectangular. Surface with very fine and sparse punctures, with fine and usually rather superficial transverse striae, and with more or less distinct traces of very fine, transverse microreticulation, glossy. Punctures and microreticulation only visible at high magnification.

**Elytra** (Fig. 83). Moderately elongate, dorsally convex, usually slightly widened apicad. Disk in basal third at most with a very shallow, rather indistinct transverse impression. Lateral margin in basal third faintly incurved. Elytra fully striate, four median striae with fine, more or less distinct punctures. Lateral striae more coarsely punctate. Four median intervals very slightly convex, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, but the carina comparatively low; the 5<sup>th</sup> interval barely narrower than the other intervals and only very

slightly more convex. Four median intervals irregularly uni- to biserially punctate, punctures very fine, with very fine though distinct microreticulation which is composed of moderately transverse meshes, fairly glossy.

**Male genitalia** (Fig. 31). Genital ring and parameres much as in *C. e. elegans*, but aedeagus slightly stouter, less sinuate, and lower surface barely concave, only apex slightly turned downwards. Apex rather short, triangular, symmetric, with rather acute tip.

**Female gonocoxites.** As in *C. elegans amoenus* Chaudoir.

**Variation.** Some variation noted in body size, relative width of the pronotum, and relative length of the elytra.

### Distribution

North Queensland south of Cape York Peninsula, far northern part of Northern Territory.

### Collecting circumstances

Specimens were collected by "Pyreth.-Logs", at "mv lamp", in "lowland rainforest", "Ex Bark", "at light, rain forest".

### Additional records (116 ex. )

**Queensland:** Cape York / v. *australasiae* Hope det. Ing. Jedlicka (NMPC); Cape York / Sammlung O. Langenhan Kauf 1931. 18 (SMTD); Cooktown / 3455 Relton Bequest / *Catascopus laticollis* MacL. (QM); 15.47S 145.14E Shiptons Flat 16-18 May 1981 A. Calder (ANIC, CBM); 15.47S 145.14E Shiptons Flat 17-19 Oct. 1980 T. Weir (ANIC); Shiptons Flat 1981 Lewis Roberts (QM); 15.51 S 145.20E GPS Gap Creek, 19 August 1993 Balderson, Stop CY-38 (ANIC); Gap Creek, 5 mi. N. of Bloomfield River, 8-9.v.1970 G. B. Monteith Altitude 100' / UQIC (QM); 20km N of Cape Tribulation, 2 Dec1990, 200m Monteith, Sheridan & Thomson. (CBM, QM); Cape Tribulation, 12-19 Oct 1980 G. B. Monteith (CBM, QM); 3 km E. of Mossman, 17.iv.64 I.F.B.Common & M.S. Upton / *Catascopus ? elegans* Weber (ANIC); 11km N Daintree R. Ferry 11 Dec. 1982 J. T. Doyen coll. (ANIC); 13km NW Kuranda 6 Dec. 1982 J. Doyen (ANIC); Kuranda G. E. Bryant. F. P. Dodd 1911 / *Catascopus elegans* ssp. *australasiae* HOPE det. M. Baehr'97 (NHM); Kuranda Hacker (ANIC); Kuranda Hacker / K. K. Spence Collection (AMS); Kuranda April 04 F. P. Dodd / *Catascopus australasiae* Hope / G. Bryant Coll. 1919-147. / *Catascopus elegans* ssp. *australasiae* HOPE det. M. Baehr'97 (NHM); Kuranda G. E. Bryant F. P. Dodd 1911 / *Catascopus australasiae* Hope / G. Bryant Coll. 1919-147. / *Catascopus elegans* ssp. *australasiae* HOPE det. M. Baehr'97 (NHM); 16 mi N. Cairns 13.vii.75 B. P. Moore (ANIC); Cairns 1910 / S. R. E. Brock Collection donated to ANIC 1967 (ANIC); Cairns dist. J. A. Anderson (QM); E. Allen Cairns dist. / *Catascopus australicae* (unreadable) (SAMA); Queensland / W. W. Ferguson Collection / *Catascopus australasiae* Cairns (ANIC); Cairns Allen (SAMA); Bellenden K. Mt. B. G. Rye. / *Catascopus elegans* ssp. *australasiae* HOPE det. M. Baehr'97 (NHM); *Catascopus laticollis* MacL. Eubenangee Brooks (unreadable) (ANIC); Eubenangee 7/49 GB. / J. G. Brooks Bequest, 1976 / *elegans* Weber 1315. (ANIC); Eubenangee. Aug. 1949 J.G.Brooks. B.M.1950-433. (NHM); Eubenangee Aug. 1949 J. G. Brooks / *Catascopus elegans* Chaud. (AMS); Innisfail F. H. Taylor (ANIC); Innisfail J.L.Froggatt (QDPIB); Hambledon 6-11-49 A. Johnson E. Sutton / E. Sutton Collection (QM); S. Johnstone R. H. W. Brown (ANIC); Redlynch / *Catascopus elegans* ssp. *australasiae* HOPE det. M. Baehr'97 (NHM); Coorumba 11-12.75, 26-3-1977, 27-3-1977 / R. H. Mulder Collection (AMS); Lake Placid 25.I.68 A. Walford-Huggins 2208 / *Catascopus elegans* F. det. B. P. Moore'75 (CMP); Woodstock 20.12.49 A. Johnson E. Sutton / E. Sutton Collection (QM); Gordonvale 1917 / J. F. Illingworth Coll. (QM); The Boulders, Babinda 5.ii.1975 B. K. Cantrell (QDPIB); North Queensland / R. W. Ferguson Collection / *Catascopus elegans* Fab. var. *australasiae* Hope (ANIC); Queensland Blackb's Coll / *Catascopus elegans* Fab. v. *australasiae* Hope Queensland. (SAMA); Queensland / ehr W.MüllerG Vermächt.1909 (SMTD); Queensland / *Catascopus elegans* Weber var. *australasiae* Hope Id. By T. G. Sloane (WADA). – **Northern Territory:** NT nr Darwin, Howards Springs NP 29 N. 1995 Brown & Dally (NTD); N. Territory J. P. Tepper (SAMA); N. Territory / *australasiae* Hope (SAMA). – ? : S. R. E. Brock Collection donated to ANIC 1967 (ANIC); *Catascopus elegans* Web. (ANIC); N. Holl. occid. / Fry Coll. 1905-100. / *Catascopus australasiae* ? Hope H. E. Andrewes det. v. of *elegans* Weber (NHM); Australien / v. *australiae* Hope det. Ing. Jedlicka (NMPC).

### *Catascopus elegans cyaneus* Chaudoir

Figs 32, 84

*Catascopus elegans* var. *cyaneus* Chaudoir, 1872: 247. – Csiki 1932: 1364.

*Catascopus elegans cyaneus*, Moore et al. 1987: 285 (synonymous of *C. elegans* Weber).

*Catascopus cyaneus*, Straneo 1994: 165; Lorenz 1998: 430; 2005: 454.

**Examined types**

**Lectotype** (by present designation): ♂, var *cyaneus* Ch / Australia Cap York / Ex coll. Chaudoir (MNHP).

**Type locality**

“Cape York”, North Queensland, Australia.

**Note**

*C. cyaneus* was described from Cape York in North Queensland and as a variety of *C. elegans* (Weber), but Straneo (1994) regarded it a separate species. Moore et al. (1987) mentioned it as *C. elegans cyaneus* which denotes a subspecies, but included it simply as a synonym in *C. elegans*. I did not find clear differences in the external morphology and in the male genitalia between *C. elegans cyaneus* and *C. elegans australasiae*, apart from colour which in *cyaneus* always is blue or dark blue-green, whereas in *australasiae* it is always plain green, and in the common presence of a fairly distinct transverse imoression in the basal third of the elytra. However, at the average *cyaneus* tends to possess a wider pronotum and longer elytra. In view of the apparently constant difference in colouration and because both populations are separated by a distance of almost 400 km (between Coen in the north and Atherton and Windsor Tablelands in the south) for the present I prefer to regard them as two different subspecies of *C. elegans*.

**Diagnosis**

Distinguished from other subspecies by combination of uniformly blue or blue-violaceous colour without any trace of green, red, or golden tints, wide pronotum with accentuate lateral angles, and modetately elongate elytra that bear a quite distinct transverse impression in basal third. It further differs from most subspecies of *C. elegans*, except the Australian *C. elegans australasiae* and *C. elegans salomonicus* from Solomon islands, by the less carinate 7<sup>th</sup> elytral interval.

**Partial redescription**

**Measurements.** Length: 8.6-10.3 mm; width: 3.25-3.8 mm. Ratios. Width/length of prothorax: 1.26-1.33; width of base/apex of prothorax: 0.97-0.99; width of prothorax/width of head: 0.92-0.94; length/width of elytra: 1.57-1.62; width of elytra/width of prothorax: 1.59-1.66.

**Colour** (Fig. 84). Surface uniformly blue or dark blue-green, sometimes elytra with a violaceous lustre, though labrum and mandibles black.

**Head** (Fig. 84). Of average size. Frontal sulci short, very shallow, somewhat irregular. Clypeus and frons in middle usually either with a shallow impression. Surface with more or less sparse, rather fine punctures, sometimes posterior part of frons with several fine, about longitudinal striae, surface without or with very fine traces of about isodiametric microreticulation, glossy.

**Pronotum** (Fig. 84). Rather wide, cordiform, dorsally convex. Lateral angles commonly rather accentuate. Lateral margin in basal third straight, parallel. Basal angles rectangular. Surface with very fine and sparse punctures, with fine and usually rather superficial transverse striae, and with more or less distinct traces of very fine, transverse microreticulation, glossy. Punctures and microreticulation only visible at high magnification.

**Elytra** (Fig. 84). Moderately elongate, dorsally convex, usually slightly widened apicad. Disk in basal third with a wide, rather distinct transverse impression. Lateral margin in basal third faintly incurved. Elytra fully striate, four median striae with fine, more or less distinct punctures. Lateral striae more coarsely punctate. Four median intervals very slightly convex, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, but the carina comparatively low; the 5<sup>th</sup> interval barely narrower than the other intervals and only very slightly more convex. Four median intervals irregularly uni- to biserially punctate, punctures very fine, with very fine though distinct microreticulation which is composed of moderately transverse meshes, fairly glossy.

**Male genitalia** (Fig. 32). Genital ring and parameres much as in *C. e. elegans*, but aedeagus stouter, less sinuate, slightly widened towards apex, and lower surface evenly concave. Apex moderately elongate, depressed, irregularly triangular and slightly asymmetric, with rather acute tip.

**Female gonocoxites.** As in *C. elegans amoenus* Chaudoir.

**Variation.** Major variation noted in body size, minor variation in relative width of the pronotum, and length of the elytra.

**Distribution**

This species seems to be restricted to the northern half of Cape York Peninsula including the Torres Strait Islands. The record from “Cairns dist.” probably is wrong, because a similar label is attached to another specimen which also is labelled “Cape York”.

### Collecting circumstances

More recently sampled specimens were collected at “surfaces at night closed forest”, in “rainforest”, and in “Rainforest pitfall traps”.

### Additional records (89) ex.)

**Queensland:** Murray Is. 78-41 (NHM, CBM); Torres Straits 7-13 (NHM); St Pauls, Moa (Banks) Is., Torres Str. July 16-17 1977 G. Monteith & D. Cook (CBM, QM); Bamaga, 19.-20.5.1993, M. Baehr (CBM); Bamaga 30.iii.64 I. F. B. Common & M. S. Upton (ANIC); Bamaga Dec. 1983 J. Sedlacek (QM); Cape York (CBM); Cape York H. Eigner (QM, SAMA); Cape York *Catascopus prio rufipes* (SMTD); 3 km E. Lockerbie Cape York, 19-23 Mar 1987 G. B. Monteith (QM); Lockerbie Area, Cape York, 13-17 Apr., 1973 G. B. Monteith (QM); Cape York / *Catascopus australasiae* H. Cape York (QM); Cape York / *elegans* s. *australasiae* det. Ing. Jedlicka (NMPC); Iron Range iv.75 M. S. Moulds (ANIC); 12.43S 143.18E GPS “Cooks Hut” 1 km N Lamond Hill Iron Range Nat. Pk. 7-14 Jul. 1998 T. Weir (ANIC); Iron Range, Cape York Pen. 11-17 Mar. 1968 G. Monteith (ANIC, QM); Iron Range, Cape York Pen. 5-10 Mar. 1968 G. Monteith (QM); Iron Range, Cape York Pen. 1-9 June, 1971 G. B. Monteith (QM); Iron Range, Cape York Pen. June 30 - July 4, 1977 G. B. Monteith (QM); Cape York Pen. Iron Range 17-22 Apr. 1975 / Collr. A & M. Walford- Huggins (CMP); Iron Ra. Cape York 19-4.1975 (ANIC); 12.44 S 143.16 E 6km ENE of Mt. Tozer 30 June 1986 T. Weir & A. Calder (ANIC); West Claudie R., Iron Range 3-10 Dec.1985 G. Monteith & D. Cook 50m (CBM, QM); Archer R. 20 mi. N. of Coen ix.74 J. & M. Walford- Huggins (ANIC); Archer R. C. York 11/74 R.W.H. (ANIC); Archer River 28. N. 1974 / Collr. A&M Walford Huggins 8402 (CMP); Holroyd R. S. of Coen 24.xi.74 M. S. Moulds (ANIC); Holroyd Riv. 12m Sth. Coen 29.xi.1974 A & M. Walford- Huggins (CMP); Coen Cape York H. Hacker / K. K. Spence Collection / *Catascopus elegans* Chaud. N.Q. (AMS); Coen R. W. D. Dodd (ANIC, SAMA); Cairns dist. A. Anderson (QM); New Holl. (CBM); 243 (NHM); Australien / *Catascopus elegans* Weber v. *australasiae* Hope H. E. Andrewes det. (NMPC); Australien / v. *australasiae* Hope det. Ing. Jedlicka (NMPC).

### *Catascopus elegans salomonicus* subsp. n.

Figs 33, 85

### Examined types

**Holotype:** ♂, Bougainville Solomon I's. Rev. A. H. Voyee (SAMA No. 25-033361).

**Paratypes:** 1 ♀, Bougainville I., Solomon Is. J. B. Poncelet. B.M.1927-230. / *Catascopus elegans* Weber var. H. E. Andrewes det. (NHM); 1 ♀, SOLOMON IS. New Georgia 2.IX. 1965 Lamberte-Munda / Roy.Soc.Exped. Brit.Mus.1966-1 / *Catascopus elegans* Weber det. C. J. Louwerens / Tilley lamp (NHM); 1 ♀, SOLOMON IS-LANDS Bougainville Island. Kukugai Village (Buin), 17.10.1960-2.2.1961 W. W. Brandt (ANIC).

### Etymology

The name refers to the occurrence of this subspecies on Solomon Islands.

### Diagnosis

Comparatively large subspecies, distinguished from other subspecies by combination of dark green colour without any golden or cupreous parts, fine punctation of the head, narrow pronotum with wide base, and shallow and finely punctate or even impunctate median elytral striae.

### Description

**Measurements.** Length: 9.5-10.7 mm; width: 3.45-3.9 mm. Ratios. Width/length of prothorax: 1.18-1.24; width of base/apex of prothorax: 1.04-1.07; width of prothorax/width of head: 0.90-0.93; length/width of elytra: 1.59-1.64; width of elytra/width of prothorax: 1.69-1.76.

**Colour** (Fig. 85). Surface uniformly dark green, elytra without any cupreous colour, though labrum and mandibles black.

**Head** (Fig. 85). Of average size. Frontal sulci short, very shallow, somewhat irregular. Anterior part of frons in middle with a shallow impression. Surface with more or less sparse, rather fine punctures, sometimes posterior part of frons with several very fine, about longitudinal striae, surface without or with very fine traces of about isodiametric microreticulation, glossy.

**Pronotum** (Fig. 85). Comparatively narrow, but with wide base, cordiform, dorsally convex. Lateral angles commonly rather accentuate. Lateral margin in basal third straight, parallel. Basal angles rectangular. Surface with very fine and sparse punctures, with fine and usually rather superficial transverse striae, and with more or

less distinct traces of very fine, transverse microreticulation, glossy. Punctures and microreticulation only visible at high magnification.

**Elytra** (Fig. 85). Moderately elongate, dorsally convex, usually slightly widened apicad. Disk in basal third without or with a very shallow, indistinct transverse impression. Lateral margin in basal third faintly incurved. Elytra fully striate, four median striae shallow, with very fine, more or less distinct punctures, or even almost impunctate. Lateral striae more coarsely punctate. Four median intervals almost completely depressed, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, but the carina comparatively low; the 5<sup>th</sup> interval barely narrower than the other intervals and only very slightly more convex. Four median intervals irregularly uni- to biserially punctate, punctures very fine, with very fine and rather superficial microreticulation which is composed of moderately transverse meshes, fairly glossy.

**Male genitalia** (Fig. 33). Genital ring and parameres much as in *C. e. elegans*, but aedeagus stouter, less sinuate, slightly widened in middle, and lower surface evenly concave. Apex moderately elongate, triangular, symmetric, with slightly obtuse tip.

**Female gonocoxites.** As in *C. elegans amoenus* Chaudoir.

**Variation.** Minor variation noted in body size and relative width, or length, of prothorax and elytra.

### Distribution

Solomon Islands: recorded from Bougainville and New Georgia islands.

### Collecting circumstances

Not recorded.

**Tab. 2. Measurements and ratios of the species related to *C. elegans***

N = number of specimens measured; body length in mm; w/l pron = ratio width/length of pronotum; b/a pron = ratio width of base/width of apex of pronotum; w pr/h = ratio width of pronotum/width of head; l/w elytra = ratio length/width of elytra; w el/pr = ratio width of elytra/width of pronotum.

	N	body length	w/l pron	b/a pron	w pr/h	l/w elytra	w el/pr
<i>balthasari</i>	1	7.2	1.18	1.04	0.89	1.55	1.73
<i>e. amoenus</i>	8	8.2-9.8	1.21-1.29	0.96-1.02	0.94-0.97	1.61-1.66	1.60-1.67
<i>e. andamanicus</i>	6	8.4-9.1	1.25-1.31	0.97-1.0	0.95-0.96	1.58-1.60	1.56-1.61
<i>e. australasiae</i>	6	9.2-10.8	1.22-1.29	0.94-1.04	0.90-0.95	1.53-1.58	1.63-1.70
<i>e. biakensis</i>	5	8.4-9.5	1.24-1.28	0.96-1.0	0.91-0.95	1.59-1.65	1.60-1.67
<i>e. cyaneus</i>	6	8.6-10.3	1.26-1.33	0.97-0.99	0.92-0.94	1.57-1.62	1.59-1.66
<i>e. elegans</i>	8	8.0-9.6	1.28-1.34	0.96-1.0	0.93-1.0	1.56-1.61	1.61-1.71
<i>e. lateralis</i>	6	7.4-9.9	1.24-1.32	0.99-1.03	0.93-0.98	1.58-1.65	1.59-1.66
<i>e. philippinus</i>	6	8.1-8.9	1.22-1.25	0.97-1.02	0.92-0.94	1.51-1.57	1.67-1.74
<i>e. salomonicus</i>	4	9.5-10.7	1.18-1.24	1.04-1.07	0.90-0.93	1.59-1.64	1.69-1.76
<i>e. scintillans</i>	6	8.5-9.5	1.35-1.38	1.03-1.05	0.98-0.99	1.60-1.63	1.60-1.61
<i>e. viridans</i>	3	9.1-9.4	1.25-1.28	0.95-0.98	0.95	1.50-1.56	1.68-1.72
<i>elegantulus</i>	1	9.7	1.29	0.94	0.96	1.47	1.62
<i>elevatus</i>	6	7.6-8.9	1.24-1.29	0.98-1.0	0.96-0.98	1.51-1.55	1.62-1.66
<i>femoratus</i>	2	10.3-10.4	1.21-1.22	0.97	0.93-0.94	1.69-1.70	1.60-1.65
<i>fraterculus</i>	3	7.25-7.7	1.23-1.25	0.96-1.0	0.92-0.97	1.61-1.66	1.65-1.67
<i>hardwickei</i>	6	8.9-9.1	1.28-1.31	0.97-1.0	0.91-0.93	1.51-1.54	1.65-1.70
<i>hinei</i>	2	8.8-9.1	1.23-1.28	0.93-0.96	0.88-0.95	1.60-1.62	1.57-1.67
<i>ignicinctus</i>	6	10.5-12.2	1.30-1.34	0.90-0.93	0.92-0.98	1.57-1.64	1.64-1.70
<i>simillimus</i>	4	9.3-11.4	1.29-1.36	0.92-0.94	0.95-0.97	1.51-1.52	1.53-1.57
<i>strigifrons</i>	3	9.1-10.4	1.26-1.29	0.92-0.97	0.97-0.99	1.49-1.53	1.55-1.58
<i>virens</i>	6	9.3-11.2	1.19-1.27	0.94-0.97	0.97-0.99	1.54-1.58	1.48-1.59
<i>viridis</i>	2	9.8-9.9	1.29-1.30	1.0-1.02	0.98-0.99	1.49	1.55-1.56

The *facialis*-subgroup (“gruppo 3” in Straneo 1994, in part)

The species of the *facialis*-subgroup, i.e. species closely related to the widespread and well known *C. facialis* (Wiedemann, 1818), are moderately large, rather narrow and elongate species characterized by angulate but not spinose median and lateral apices of the elytra, cordate pronotum with a single anterior lateral seta, narrow and more or less carinate 5<sup>th</sup> and 7<sup>th</sup> intervals of the elytra, shallow neck sulcus, and presence of at least one paraorbital sulcus and ridge.

The species described in the present paper all are closely related to *C. facialis* (Wiedemann), *C. angulatus* Chaudoir and *C. agnathus* Chaudoir, which are green or blue species with a more or less distinct cupreous 8<sup>th</sup> elytral interval. The species are very similar in size and body shape, but are distinguished by colouration, degree of punctuation of the head, shape of pronotum, shape of the elytra, and punctuation of the elytral striae. The aedeagi, however, are very similarly shaped and structured and exhibit only minor differences in shape and length of the apex, whereas the structure of the internal sac is very similar. Even the differences of size and shape of the aedeagus to some degree may be due to individual variation. It seems, therefore, that no evolution of the aedeagi took place, whereas some morphological divergence is noted in certain external features.

Key to the species of the *facialis*-subgroup, related to *C. facialis* (Wiedemann), *C. angulatus* Chaudoir and *C. agnathus* Chaudoir

This key includes those species of the “gruppo 3” sensu Straneo (1994) which possess narrowed and more or less carinate 5<sup>th</sup> and 7<sup>th</sup> intervals, are medium sized (c. 12-15 mm), and are mostly green or blue.

- 1. Colour of elytra largely blue or dark green **and** head with dense and coarse punctures; aedeagus with very elongate and narrow, slightly curved apex (Figs 34, 35)..... (2)
- Either colour of elytra plain green and at most laterally cupreous, **or** elytra completely cupreous-violaceous, or head with sparse and fine punctures; aedeagus with less elongate and narrow apex (Figs 36-43), or unknown ..... (4)
  
- 2. 5<sup>th</sup> interval narrow throughout and distinctly carinate; external apical angle of elytra distinct; basal angle of pronotum rectangular or even slightly produced laterad; head more densely punctate; generally larger species, length rarely < 12 mm; elytra largely blue; aedeagus with longer apex (Fig. 34). Northern India, Nepal, Burma, Thailand, Laos, Vietnam, south-eastern China, Malaysia, Sumatra. *facialis* (Wiedemann, 1818) 3.
- 5<sup>th</sup> interval wider and less carinate; external apical angle of elytra indistinct; basal angle of pronotum less than rectangular and slightly obtuse; head less densely punctate; smaller species, length c. 12 mm; colour bluish-green or blue; aedeagus with shorter apex (Fig. 35). Andaman Islands *andamanensis* Chaudoir, 1877
  
- 3. The whole body completely blue-violaceous. Northern India, Nepal, Assam  
..... *facialis facialis* (Wiedemann, 1818)
- Head and pronotum blue or blue-green, elytra blue-violaceous but with rather contrasting greenish-blue basis. Assam, Burma, Thailand, Laos, Vietnam, south-eastern China, Malaysia, Sumatra  
..... *facialis basalis* Chaudoir, 1872
  
- 4. Elytra completely cupreous-violaceous (Fig. 88); head almost impunctate; aedeagus with rather elongate, straight apex (Fig. 36). Sumatra, Borneo..... *cuprascens* sp. n. (*poultoni* auct.)
- Elytra green, at most with cupreous margins or with a faint cupreous hue in basal part (Figs 89-98); punctuation of head various ..... (5)
  
- 5. Head and pronotum blue, elytra rather contrastingly green with some golden lustre; head with fairly coarse punctures (Figs 94, 95). Moluccas: Seram, Ambon, Buru ..... (6)
- Body completely green or blue; when blue, head with sparse and fine punctures. Thailand, Vietnam, Malaysia, Greater Sunda Islands, Bali, Sulawesi, Moluccas: Halmahera, Morotai, Batjan, Philippine Islands . (7)
  
- 6. Four median intervals depressed and perceptibly punctate; elytra along suture not markedly raised, without distinct impression in apical half (Fig. 94); aedeagus with fairly elongate, very slightly curved apex (Fig. 42). Seram, Ambon, Buru ..... *cyanoviridis* sp. n.

- All intervals conspicuously raised and almost carinate, four median intervals impunctate; elytra along suture markedly raised, on either side with a distinct impression in apical half (Fig. 95); aedeagus unknown. Seram ..... *carinipennis* sp. n.
- 7. Plain blue or bluish green with barely cupreous 8<sup>th</sup> interval and head with fine punctures or almost impunctate; **either** pronotum cordiform with rather narrow base (Fig. 96) **or** pronotum with produced apical angles (Fig. 97); aedeagus very short and stout, with straight, rather elongate apex (Fig. 43), or unknown. Philippine Islands, Moluccas, New Guinea ..... (8)
- Plain green, usually with more or less distinctly cupreous 8<sup>th</sup> interval (Figs 89-94, 98); punctures of head various; pronotum variously shaped; aedeagus usually less short and stout, apex different (Figs 37-41), or unknown ..... (9)
- 8. Pronotum cordiform with little produced apical angles; lateral apical angles of the elytra short, apical excision shallow (Fig. 96); aedeagus see fig. 43. Moluccas: Halmahera, Bacan, Ternate, New Guinea ..... *weigeli* sp. n.
- Pronotum cordiform with markedly produced apical angles; lateral apical angles of the elytra elongate, apical excision deep (Fig. 97); aedeagus not recorded. Philippine Islands ..... *alesi* Jedlicka, 1935
- 9. Pronotum narrow, base distinctly wider than apex (see tab. 3); elytra elongate, ratio length/width 1.68; ratio width of elytra/width of pronotum 1.52 (Fig. 98); aedeagus unknown. Northern Vietnam ..... *punctatostratus* sp. n.
- Pronotum wider, base distinctly narrower than apex (see tab. 3); elytra shorter, ratio length/width <1.66, commonly less; ratio width of elytra/width of pronotum <1.50 (Figs 89-94); aedeagus see figs 37-41. Thailand, Malaysia, Greater Sunda Islands, Bali, Sulawesi, Moluccas ..... (10)
- 10. Head coarsely punctate; elytra shorter, ratio length/width < 1.62, lateral margin in basal third distinctly sinuate, apex at suture distinctly denticulate; punctures of striae very coarse; 7<sup>th</sup> and 8<sup>th</sup> intervals, and apex of elytra markedly cupreous (Fig. 92); aedeagus with sinuate, very elongate apex (Fig. 40). Java, Bali, Sumbawa ..... *grimmi* sp. n.
- Head finely punctate; elytra longer, ratio length/width >1.64, lateral margin in basal third barely sinuate, apex at suture almost rounded; punctures of striae fine, or median striae impunctate (Figs 89-91, 93); cupreous colour varied; aedeagus varied, but apex not very elongate and sinuate (Figs 37-39, 41). Thailand, Malaysia, Sumatra, Java, Borneo, Sulawesi, Moluccas ..... (11)
- 11. Pronotum distinctly cordiform with rather narrow base, laterad produced basal angles, and well produced, acute apical angles (Figs 89-91); elytra with conspicuously cupreous 8<sup>th</sup> interval; aedeagus with less irregularly shaped apex (Figs 37-39). Thailand, Malaysia, Greater Sunda Islands, Sulawesi ..... (12)
- Pronotum less cordiform with rather wide base, not produced basal angles, and less produced, rounded apical angles (Fig. 93); elytra with less conspicuously cupreous 8<sup>th</sup> interval; aedeagus with markedly irregularly shaped apex (Fig. 41). Moluccas: Morotai, Batjan, Buru ..... *magnicollis* sp. n.
- 12. Punctures of elytral striae coarser, punctures at base of four median striae distinct; 7<sup>th</sup> and 8<sup>th</sup> intervals and apex of elytra markedly cupreous (Fig. 91); aedeagus with regularly triangular apex (Fig. 39). Sulawesi ..... *agnathus* Chaudoir, 1872
- Punctures of elytral striae fine, punctures at base of four median striae barely recognizable; cupreous colour varied (Figs 89, 90); aedeagus with less regularly triangular apex (Figs 37, 38). Thailand, Malaysia, Sumatra, Java, Borneo ..... (13)
- 13. Elytra plain green, only the 8<sup>th</sup> interval cupreous, apex of elytra barely cupreous (Fig. 89); body size commonly larger (see tab. 3); aedeagus with markedly curved apex (Fig. 37). Thailand, Malaysia, Sumatra, Java ..... *angulatus* Chaudoir, 1861
- Elytra green but the basal part with distinct cupreous hue, 7<sup>th</sup> and 8<sup>th</sup> intervals vividly cupreous, also apex with distinct cupreous tinge (Fig. 90); body size commonly smaller (see tab. 3); aedeagus with almost straight apex (Fig. 38). Malaysia, Borneo ..... *borneensis* sp. n.

*Catascopus facialis* (Wiedemann)

Figs 34, 49, 86

*Carabus facialis* (Wiedemann, 1818): 165.*Catascopus facialis*, Chaudoir 1861: 116; Csiki, 1932: 1364; Andrewes 1930: 335; 1937: 188; Jedlicka 1963: 395; Hansen 1967: 180; Darlington 1968: 103; Stork 1986: 15; Straneo 1994: 159; Lorenz 1998: 430; 2005: 454; Kabak 2003: 435.*Catascopus oxygonus* Chaudoir, 1861: 117.*Catascopus excisus* Motschoulsky, 1864: 303.*Catascopus goebeli* Gemminger & Harold, 1868: 153.*Catascopus diffinis* Chaudoir, 1872: 244. – Andrewes 1930: 385.*Catascopus facialis basalis* Chaudoir, 1872: 245.*Catascopus malaccanus* Csiki, 1932: 1365 (nom. n. for *Catascopus goebeli* Chaudoir, 1872: 245).*Catascopus claireae* Hansen, 1967: 177.**Notes**

This is a well known, widespread, and common species in southern and south-eastern mainland Asia. Many populations on the Greater Sunda Islands and the Moluccas deviate in colouration and certain other respects of external and genitalic morphology. Therefore some authors already regarded these or some of these as subspecies or even species. But even in the restricted sense as used in the present paper the species still includes specimens with quite different colouration, which in general are restricted to different ranges, and thus, herein are regarded subspecies. This refers to the subspecies *C. facialis basalis* Chaudoir, 1872, and perhaps also to *C. f. diffinis* Chaudoir, 1872, but not for *C. f. angulatus* Chaudoir, 1861 and *C. f. poultoni* Andrewes, 1921, which are separate, well distinguished species (see below).

*C. goebeli* and *C. malaccanus* simply are synonymes of *C. facialis*, *C. claireae* probably is synonymous to *C. facialis basalis*, whereas the identity of *C. facialis diffinis* Chaudoir is uncertain.

The records enumerated by Darlington (1968) from western New Guinea and Morotai Island in the Moluccas refer to one of the species newly described in the present paper.

**Diagnosis**

Large species; elytra usually at least partly blue or violaceous; head coarsely and rather densely punctate; aedeagus with elongate, very narrow, acute apex.

**Partial redescription**

**Measurements.** Length: 11.3–15.8 mm; width: 3.7–5.0 mm. Ratios. Width/length of prothorax: 1.25–1.30; width of base/apex of prothorax: 0.84–0.91; width of prothorax/width of head: 1.0–1.07; length/width of elytra: 1.60–1.67; width of elytra/width of prothorax: 1.44–1.51.

**Colour** (Fig. 86). Either completely blue; or head and pronotum green, elytra largely blue or blue-violaceous with green base; 8<sup>th</sup> interval usually not or but indistinctly cupreous.

**Head** (Fig. 86). Of average size and shape. Surface with rather dense, coarse punctures. Microreticulation usually completely absent.

**Pronotum** (Fig. 86). Rather wide, cordiform. Anterior angles moderately projected. Basal angles rectangular. Base considerably narrower than apex. Surface finely and sparsely punctate, usually with indistinct or superficial transverse striae, without or with very fine traces of transverse microreticulation, glossy. Punctures and microreticulation usually only visible at high magnification.

**Elytra** (Fig. 86). Moderately elongate, convex but on disk depressed. Lateral margin in basal third usually quite distinctly incurved. Apex oblique, deeply sinuate. Sutural angle with a tiny denticle, apex slightly produced at level of 2<sup>nd</sup> interval, lateral apical angle dentate, not spinose. Elytra fully striate, striae well impressed and rather coarsely to coarsely punctate. Four median intervals slightly convex, the 3<sup>rd</sup> interval slightly more than the others, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, the 5<sup>th</sup> interval considerably narrower than the other intervals and very convex and almost carinate. Four median intervals irregularly uni- to biserially punctate, punctures fine, with very fine and more or less superficial microreticulation which is composed of very transverse meshes, glossy.

**Lower surface.** Prosternum, mesosternum, and metasternum in middle rather densely setose with erect pilosity. Intercoxal process with several short setae. Also the abdominal sterna with sparse and very short, declined pilosity. Metepisternum very elongate, c. 2.5 x as long as wide. Terminal sternum of male bisetose, of female quadrisetose.



**Male genitalia** (Fig. 34). Genital ring rather narrow and elongate, triangular, almost symmetric, with short, oblique apex and moderately elongate base. Aedeagus elongate, lower surface slightly concave, apex elongate, very narrow, acute, slightly curved right, orificium slightly shifted to the left side, short. Internal sac with several not sclerotized folds. Left paramere rather large and elongate, with triangular-convex apex, right paramere comparatively short.

**Female gonocoxites** (Fig. 49). Gonocoxite 1 large, asetose at apical margin. Gonocoxite 2 moderately large and elongate, curved, with acute apex. Two elongate ventro-lateral ensiform setae situated slightly below middle, one elongate dorso-median ensiform seta located at middle.

**Variation.** Much variation noted in body size and in colouration. With respect to colour of the elytra some subspecies were described which, however, are disputable.

### Distribution

A common species in mainland South Asia from North India to south-western China, also on Sumatra. The nominate subspecies which usually is completely blue occurs in northern India, Nepal, and Assam; the subspecies *C. facialis basalis* which has blue-green head and prothorax and blue-violaceous elytra with blue-greenish basis, ranges widely in south-eastern mainland Asia from eastern India through Burma, Thailand, Laos, Vietnam, south-eastern China, Malaysia to Sumatra, and *C. facialis diffinis* is said to occur on Sulawesi and Buru.

### Collecting circumstances

Largely unrecorded. The specimens most probably were collected from the bark of logs in rain forest.

### Additional records

Many specimens from Northern India, Nepal, Assam, Burma, Thailand, Laos, Vietnam, south-western China, Malaysia, and Sumatra.

## *Catascopus andamanensis* Chaudoir Figs 35, 87

*Catascopus andamanensis* Chaudoir, 1877: 200. – Csiki, 1932: 1362; Andrewes 1937: 188; Straneo 1994: 159; Lorenz 1998: 429; 2005: 454.

### Examined types

**Lectotype** (by present designation): ♀, Ex coll. Chaudoir (MNHP).

### Type locality (from description)

Andaman Islands.

### Diagnosis

Dark green or blue species with coarse punctures on the head; distinguished from *C. facialis* by wider, less carinate 5<sup>th</sup> elytral interval and usually lesser body size.

### Partial redescription

**Measurements.** Length: 10.9-12.2 mm; width: 3.9-4.4 mm. Ratios. Width/length of prothorax: 1.27-1.34; width of base/apex of prothorax: 0.84-0.88 width of prothorax/width of head: 1.01-1.04; length/width of elytra: 1.59-1.64; width of elytra/width of prothorax: 1.40-1.48.

**Colour** (Fig. 87). Dark green, bluish-green, blue, or even slightly violaceous, though labrum and mandibles black. Elytra without any cupreous tinge. Lower surface piceous-black with slight greenish lustre. Palpi piceous with light reddish apex. Antenna piceous, basal antennomere blackish with slight metallic lustre. Legs dark piceous, tarsi slightly lighter.

**Head** (Fig. 87). Of average size and shape. Surface with moderately dense, rather coarse punctures. Without or with fine traces of about isodimateric to slightly transverse microreticulation.

**Pronotum** (Fig. 87). Rather wide, cordiform. Anterior angles slightly projected. Basal angles rectangular or slightly more open, slightly obtuse at tip. Base considerably narrower than apex. Surface very finely and sparsely punctate, with rather distinct transverse striae, with very fine but distinct, very transverse microreticulation, rather glossy. Punctures usually only visible at high magnification.

**Elytra** (Fig. 87). Moderately elongate, convex, on disk somewhat depressed. Lateral margin in basal third

very slightly incurved. Apex oblique, deeply sinuate. Sutural angle with a tiny denticle, apex slightly produced at level of 2<sup>nd</sup> interval, lateral apical angle dentate, not spinose. Elytra fully striate, striae well impressed, but four median striae barely or very finely punctate, even near base. Four median intervals slightly convex, the 3<sup>rd</sup> interval slightly more than the others, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, the 5<sup>th</sup> interval but slightly narrower than the other intervals and more convex, but not at all carinate. Four median intervals irregularly uni- to biserially punctate, punctures fine, with very fine but distinct microreticulation which is composed of very transverse meshes, glossy.

**Lower surface.** Much as in *C. facialis*.

**Male genitalia** (Fig. 35). Genital ring moderately wide, laterally somewhat convex, rather symmetric, with short, rounded apex and moderately elongate base. Aedeagus rather elongate, lower surface very slightly concave, apex moderately elongate, very narrow, acute, slightly curved right, orificium slightly shifted to the left side, short. Internal sac with several not sclerotized folds. Left paramere rather large and elongate, with triangular, at the upper surface concave apex, right paramere comparatively elongate.

**Female gonocoxites.** Much as in *C. facialis*.

**Variation.** Little variation noted except for colouration.

### Distribution

Andaman Islands.

### Collecting circumstances

Not recorded. The specimens most probably were collected from the bark of logs in rain forest.

### Additional records (13 ex.)

**Andaman Islands:** 1 ♀, Capt<sup>n</sup>. Wimberley / Andaman Islands (SAMA), 1 ♂, 24046 / Roepstorff / Andaman Islands (SAMA); 1 ♂, Ind. Mus. Andamans, 1915. M. C. Bonig / *C. andamanensis* Chaud. (NHM); 1 ♂, Andaman Isl<sup>ds</sup> / Sharp Coll. 1905-313. (NHM); 2 ♂♂, Capt<sup>n</sup> Wimberley / Andaman Islands / Fry Coll. 1905-100. (NHM); 1 ♂, 2 ♀♀, Andamans (Roepstorff) (CBM, NHM); 2 ♀♀, Andaman Is. 1915.-38. / Andaman / *Catascopus andamanensis* Chaud. H. E. Andrewes det. (NHM); 1 ♀, Andaman Isl<sup>ds</sup> / Sharp Coll. 1905-313. / *Catascopus andamanensis* Chaud. Compared with type H. E. A. (NHM); 1 ♀, Andaman / G. Lewis. 1915-38. (NHM).

### *Catascopus cuprascens* nom. n., stat. n.

Figs 36, 88

*Catascopus facialis* var. *poultoni* Andrewes, 1921: 203 (unav.). – Csiki, 1932: 1362; Jedlicka 1963: 395; Stork 1986: 15; Straneo 1994: 159; Lorenz 1998: 430; 2005: 454; Kabak 2003: 435.

### Examined types

**Holotype:** ♀, SARAWAK: Mt. Dulit. R. Koyan. 2,500 ft. 19.xi.1932. / Oxford Univ. Exp. B. M. Hobby & A. W. Moore. B.M.1933-254 / *Catascopus facialis* Wied. v. *poultoni* Andr. H. E. Andrewes det. (NHM).

**Paratypes:** 1 ♂, Sumatra, Jambi Pr. Transmigrasi, 40 km n. Bangko, 4.10.1991, leg. A. Riedel (CBM); 1 ♀, Borneo, Sabah, Tambunan, 16.-19.1.2010, R. Grimm (CBM); 1 ♀, Kalimantan, Alas/Barabai, 9.-17.1.2003, leg. Yokoi (CBM).

### Type locality (from Andrewes' description)

"Sarawak", northern Borneo.

### Note

This species was described as a variation of *C. facialis* by Andrewes (1921) on specimens mentioned by Dupuis ("in litt."). However, according to Lorenz (1998, 2005) the name is not available, because it was used as an infrasubspecific name and not validated as subspecies or species before 1985. Therefore, to avoid confusion, the name is replaced by the new name *C. cuprascens*. Moreover, according to the absolutely impunctate, glossy head surface and to the elytral colour, a specimen identified by Andrewes as "*poultoni*" is quite different from those of *C. facialis*. Therefore, this "variation", herein it is raised to species rank. Because Andrewes apparently did not designate any type specimens, a type series is designated for the species with the holotype taken from a specimen that Andrewes identified.

"*Poultoni*" was mentioned by Jedlicka (1963) and Straneo (1994) as a variation, but by Stork (1986) as a

subspecies of *C. facialis*, while in the catalogues of Lorenz (1998, 2005) and Kabak (2003) it is regarded simply as synonymous.

### Diagnosis

Easily distinguished from all species of the group by the completely cupreous colour of the elytra; further characterized by almost lacking head punctation and the markedly protruded lateral apical angles of the elytra.

### Partial redescription

**Measurements.** Length: 12.3-14.7 mm; width: 4.2-5.1 mm. Ratios. Width/length of prothorax: 1.17-1.18; width of base/apex of prothorax: 0.85-0.88; width of prothorax/width of head: 1.06-1.08; length/width of elytra: 1.57-1.65; width of elytra/width of prothorax: 1.42-1.47.

**Colour** (Fig. 88). Head and pronotum green with some golden reflections, though labrum and mandibles black. Elytra completely cupreous. Lower surface piceous-black with slight greenish lustre. Palpi piceous with light reddish apex. Antenna piceous, basal antennomere blackish with slight metallic lustre. Legs dark piceous, tarsi slightly lighter.

**Head** (Fig. 88). Of average size and shape. Surface with very sparse, fine punctures. Surface almost devoid of microreticulation, very glossy.

**Pronotum** (Fig. 88). Rather narrow, markedly cordiform, dorsal surface very convex. Anterior angles slightly projected. Basal angles rectangular. Base considerably narrower than apex. Surface very finely and sparsely punctate, with very superficial transverse striae, without or with extremely fine and superficial traces of transverse microreticulation, glossy. Punctures and microreticulation only visible at high magnification.

**Elytra** (Fig. 88). Moderately elongate, convex, disk in basal half depressed, in posterior half slightly raised. Lateral margin in basal third slightly incurved. Apex oblique, deeply sinuate. Sutural angle with a tiny denticle, apex slightly produced at level of 2<sup>nd</sup> interval, lateral apical angle very sharply dentate and even slightly spinose. Elytra fully striate, striae well impressed, four median striae with moderately fine to moderately coarse punctures which are coarser near the base. Four median intervals slightly convex, the 3<sup>rd</sup> interval slightly more than the others, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, the 5<sup>th</sup> interval considerably narrower than the other intervals and very convex. Four median intervals irregularly uni- to biserially punctate, punctures very fine, with very fine but distinct microreticulation which is composed of very transverse meshes, glossy.

**Lower surface.** Much as in *C. facialis*.

**Male genitalia** (Fig. 36). Genital ring moderately wide, laterally somewhat convex, rather symmetric, with short, narrow apex and moderately elongate base. Aedeagus rather elongate, lower surface very slightly concave, apex moderately elongate, very narrow, acute, straight, orificium slightly shifted to the left side, short. Internal sac with several not sclerotized folds. Left paramere rather large and elongate, with triangular-convex apex, right paramere comparatively elongate.

**Female gonocoxites.** Much as in *C. facialis*.

**Variation.** Very little variation noted.

### Distribution

Sumatra, Borneo.

### Collecting circumstances

Largely unknown. One specimen was collected in "Primary forest" at median altitude.

### *Catascopus angulatus* Chaudoir

Figs 37, 89

*Catascopus angulatus* Chaudoir, 1861: 117. – Csiki, 1932: 1362; Andrewes 1931: 61; Jedlicka 1963: 395; Straneo 1994: 160; Lorenz 1998: 429; 2005: 454.

*Catascopus facialis* var. *angulatus*, Jedlicka 1963: 395.

*Catascopus facialis angulatus*, Stork 1986: 15.

*Catascopus oxygonus* Chaudoir, 1861: 117.

*Catascopus excisus* Motschoulsky, 1864: 303.

*Catascopus elegans* W. S. Macleay, 1825: 15.

### Examined types

**Lectotype** (by present designation): ♂, Ex coll. Chaudoir (MNHP).

**Paralectotypes**: 3 ♂♂, 1 ♀, same data (MNHP).

### Type locality (from description)

“Java”.

### Note

This species was described as a variation of *C. facialis* (Wiedemann), but in several respects (colour, punctation of the head, structure of the median elytral striae, aedeagus) it differs markedly from *C. facialis* and therefore was regarded a separate species by Straneo (1994).

One specimen of the type series from Sulawesi belongs to *C. agnathus* Chaudoir.

### Diagnosis

Characterized by plain green colour with cupreous 8<sup>th</sup> interval, faintly punctate head, and finely crenulate internal elytral intervals. Distinguished from the most similar *C. agnathus* and *C. borneensis* by finer punctation of the median elytral intervals and cupreous colour of only the 8<sup>th</sup> interval.

### Partial redescription

**Measurements**. Length: 12.0-14.4 mm; width: 4.1-5.1 mm. Ratios. Width/length of prothorax: 1.17-1.32; width of base/apex of prothorax: 0.90-0.95; width of prothorax/width of head: 1.02-1.09; length/width of elytra: 1.59-1.67; width of elytra/width of prothorax: 1.46-1.55.

**Colour** (Fig. 89). Whole surface plain green, though labrum and mandibles black. Only the 8<sup>th</sup> interval more or less distinctly cuprous.

**Head** (Fig. 89). Of average size and shape. Surface with sparse, fine punctures. Usually fine, isodimateric to slightly transverse microreticulation present.

**Pronotum** (Fig. 89). Usually wide, cordiform. Anterior angles moderately projected. Basal angles rectangular. Base considerably narrower than apex. Surface very finely and sparsely punctate, usually with more or less distinct transverse striae, with very fine but distinct, very transverse microreticulation, rather glossy. Punctures usually only visible at high magnification.

**Elytra** (Fig. 89). Moderately elongate, convex, disk in basal half depressed, in posterior half slightly raised. Lateral margin in basal third slightly incurved. Apex oblique, deeply sinuate. Sutural angles with a tiny denticle, apex slightly produced at level of 2<sup>nd</sup> interval, lateral apical angle dentate, not spinose. Elytra fully striate, striae well impressed, but four median striae barely punctate, even near base. Four median intervals slightly convex, the 3<sup>rd</sup> interval slightly more than the others, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, the 5<sup>th</sup> interval considerably narrower than the other intervals and very convex and almost carinate. Four median intervals irregularly uni- to biserially punctate, punctures moderately fine, with very fine but distinct microreticulation which is composed of very transverse meshes, glossy.

**Lower surface**. Much as in *C. facialis*.

**Male genitalia** (Fig. 37). Genital ring wide, triangular-convex, rather asymmetric, with short, narrow, oblique apex and moderately elongate base. Aedeagus short and stout, lower surface in apical two thirds almost straight, apex elongate, narrow, acute, curved right, orificium short, slightly shifted to the left side. Internal sac with several not sclerotized folds. Parameres much as in *C. facialis*.

**Female gonocoxites**. Much as in *C. facialis*.

**Variation**. Apart from some variation of body size, rather little variation noted.

### Distribution

Thailand, Sumatra, Java; ? India. The occurrence in India is doubtful, because the single record is an old, unspecific one.

### Additional records (31 ex.)

**India**: 1 ♂, India / 1222 / Ex Coll. Brit. Mus. / H. E. Andrewes Coll. B.M. 1945-97. (NHM). – **Thailand**: 1 ♂, 2 ♀, 1.-20.iii.1996 Chumphon prov. Pha To env. 9°48' 98°47' K. Majer leg. (CBM, NHMB); 1 ♂, Perak / Sharp Coll. 1905-313. (NHM); 1 ♂, Doherty / Siam Openong / Fry Coll. 1905. 100. (NHM); 1 ♀, Penong Siam Doherty / H. E. Andrewes Coll. B.M. 1945-97. (NHM). – **Sumatra**: 1 ♂, 1 ♀, Spiok (ZSM); 1 ♂, NORD-SUMATRA: Umg. Prapat 1-15.IV.1983, Diehl / *Catascopus facialis* Wied. ERBER det. 1984 (SMNS); 1 ♀, NORD-SUMATRA: Umg. P.-Siandar I.-VII.91, DIEHL / *Catascopus angulatus* CHD. det. M. Baehr '03 (SMNS). – **Java**: 1 ♀,

Wijnkoops b Kemner / Rijksmuseum Stockholm / punctipennis Saund. det. Ing. Jedlicka (NMPC); 1 ♂, 1 ♀, Java / *Catascopus illustris* Java 30 (SMNS); 1 ♂, Type H.T. / 22 / Java Horsfield 60-15. / 60-15 E.I.C. / *Elegans* MacL. (NHM); 1 ♂, *C. angulatus* Chaud. *illustris* Mnh./Chevr./ Java Steinheil 74. (SMNS); 1 ♂, 1 ♀, Java / Bowring 63-47\* (NHM); 1 ♂, 74 *Catascopus facialis* Java / Sharp Coll. 1905-313. (NHM); 1 ♂, *Catascopus illustris* Mn. / H. E. Andrewes Coll. B.M. 1945-97. (NHM); 1 ♀, Java / Pascoe Coll. 93-60. (NHM); 1 ♀, Bonvoloir collection / *elegans* Java / *illustris* Mont. / H. E. Andrewes Coll. B.M. 1945-97. (NHM); 1 ♀, Co-type (yellow) / Java Horsfield 60-15. / 2 / 60-15. E.I.C. (NHM); 1 ♀, Java / *Catascopus excisus* Motch. Compared with type H.E.A. / H. E. Andrewes Coll. B.M. 1945-97. (NHM); 1 ♀, Java, Bowring 63-47\* / Ex coll. Brit. Mus. / H. E. Andrewes Coll. B.M. 1945-97. (NHM); 1 ♀, Java Kediri / V. Hugel / Fry Coll. 1905-100. / *Catascopus facialis* Wied. v. *angulatus* Chaud. H. E. Andrewes det. (NHM); 1 ♀, Java / *Catascopus illustris* Mn. / *Catascopus elegans* McLeay Compared with type H.E.A. / H. E. Andrewes Coll. B.M. 1945-97. (NHM); 2 ♂♂, O.-Java: Tengger Nongkodjadar 1300m, Wegener / 6.2.1934 / Gesch. 7 1935 von Overbeck / F. van Emden Bequest. B.M.1960-129. (NHM); 1 ♀, Java ? (ZSM). – ? : 1 ♀ (ZSM).

*Catascopus borneensis* sp. n.

Figs 38, 90

**Examined types**

**Holotype:** ♂, BORNEO: SABAH; 20 km S Tenom, 600 m, 19.III.2007 LEG. R. GRIMM (CBM).

**Paratypes:** 1 ♂, same data (CBM); 2 ♂♂, BORNEO: SABAH; 20 km S Tenom, 600 m, 19.III.2007 LEG. W. SCHAWALLER (SMNS). 1 ♀, MALAYSIA-W. Perak, 25 km NE of IPOH, 1200 m, Banjaran Titi Wangsa mts., KORBUT mt., 27.i.-2.ii.1999, P. Pacholátko leg. (CBM); 1 ♂, [E. Malaysia] Bundakan Area Is. Borneo, Sabah 26.vii.1994 Christopher A. leg. / *Catascopus fascialis* (sic!) Wied. det. Kirschenhofer 98 / Ex coll. Ueno / ♂ (SMNS); 1 ♂, Borneo Ludeking. 67. / Alte Sammlung Stuttgart (SMNS); 1 ♀, Borneo Ludeking 1867 / Alte Sammlung Stuttgart (SMNS); 1 ♂, SE ASIA W-INDONESIA W-Sumatra is:Harau valley 20km N of Payakumbuh 700m VII - 2004 lgt.S. Jakl (CHP); 1 ♂, W-MALAYSIA: E Taiping, 500-800m V.-VI.1978 leg. H. KNORR (SMNS); 1 ♂, Quop. W. Sarawak. G. E. Bryant. 4.4.14 / G. Bryant Coll. 1919-147 / v. *angulatus* Chaud. (NHM); 1 ♂, Quop. W. Sarawak. G. E. Bryant. 25.II.14 / G. Bryant Coll. 1919-147 / *C. facialis* Wied. v. *angulatus* Chaud. H. E. Andrewes det. (NHM); 1 ♂, Quop. W. Sarawak. G. E. Bryant. III.1914 / G. Bryant Coll. 1919-147 (NHM); 1 ♂, 1 ♀, Quop. W. Sarawak. G. E. Bryant. 14.III.14. / G. Bryant Coll. 1919-147 (NHM); 1 ♂, Quop. W. Sarawak. G. E. Bryant. 13.III.14. / G. Bryant Coll. 1919-147 / B 44 / *Catascopus facialis* Wied. / *elegans* M<sup>c</sup>L. (NHM); 1 ♂, Borneo / Bowring 63-47\* (NHM); 1 ♂, Penang / Pascoe Coll. 93-60 (NHM); 1 ♂, Borneo / SAR (NHM); 1 ♂, Doherty / Siam Penong / Fry Coll. 1905-100. (NHM); 1 ♂, Wallace / Sumatra / Fry Coll. 1905-100. (NHM); 1 ♂, Correctly named H.E.A. / Native collected. / SARAWAK: foot of Mt. Dulit, Junction of rivers Tinjar & Lejok. 23.viii.1932 / Oxford Univ. Exp. B.M. Hobby & A.W. Moore. B.M.1933-254. / *Catascopus facialis* Wied. v. *angulatus* Chd. Det. G. E. Bryant (NHM); 1 ♀, Secondary forest. / SARAWAK: foot of Mt. Dulit, Junction of rivers Tinjar & Lejok. 11.ix.1932. / Oxford Univ. Exp. B.M. Hobby & A.W. Moore. B.M.1933-254. (NHM); 1 ♂, Perak / Sharp Coll. 1905-313. (NHM); 1 ♂, Malacca / Sharp Coll. 1905-313. / Ex coll. Brit. Mus. / *Catascopus oxygonus* Chaud. Compared with type H.E.A. / H.E. Andrewes Coll. B.M.1945-97. (NHM); 1 ♂, 3125 / Singapore. Bowring 63-45\* (NHM); 1 ♂, Borneo 77.15 K. (NHM); 1 'M, Singap / Ex coll. Brit. Mus. / H.E. Andrewes Coll. B.M.1945-97. (NHM); 1 ♀, Borneo. C. J. Brooks. 1911-178. / 452 / (unreadable) / C. J. Brooks (NHM); 1 ♀, Singapore Saunders / 253 / H.E. Andrewes Coll. B.M.1945-97. (NHM); 1 ♀, Popoh Zuider Geb. W. Java / Exchange fr. Louwerens / *Catascopus facialis* Wied. v. *angulatus* Chaud. det. C. J. Louwerens / F. van Emden Bequest. B.M. 1960-129. (NHM); 1 ♀, SAR 7 / Ex coll. Brit. Mus. / H.E. Andrewes Coll. B.M.1945-97. (NHM); 1 ♀, 3224 / SAR 7 / Bowring 63-47\* (NHM); 1 ♀, Sanga Sanga, E. Borneo. H. D. Jensen. 1907-203 (NHM); 1 ♀, Borneo Laboean / Fry Coll. 1905-100. (NHM); 2 ♀♀, Singapore H. N. Kidley 97-240. / *Catascopus angulatus* Chaud. Compared with type H.E.A. (NHM); 1 ♀, Kinabalu Borneo / *angulatus* (ZSM).

**Etymology**

The name refers to the occurrence of the species in Borneo.

**Diagnosis**

Characterized by plain green colour with cupreous 7<sup>th</sup> and 8<sup>th</sup> intervals, faintly punctate head, and finely crenulate internal elytral intervals. Distinguished from the most similar *C. angulatus* by more extended cupreous colour of the elytra and from *C. agnathus* by finer punctuation of the median elytral intervals.

### Partial redescription

**Measurements.** Length: 10.7-14.4 mm; width: 3.85-5.1 mm. Ratios. Width/length of prothorax: 1.22-1.27; width of base/apex of prothorax: 0.88-0.96; width of prothorax/width of head: 0.99-1.03; length/width of elytra: 1.62-1.64; width of elytra/width of prothorax: 1.45-1.56.

**Colour** (Fig. 90). Head and pronotum bright green with more or less distinct golden reflections, though labrum and mandibles black. Elytra bright green, base with slight cupreous tinge, 7<sup>th</sup> and 8<sup>th</sup> intervals bright cupreous, also apex at least laterally more or less cupreous. Lower surface piceous-black with slight greenish lustre. Palpi piceous with light reddish apex. Antenna piceous, basal antennomere blackish with slight metallic lustre. Legs dark piceous, tarsi slightly lighter.

**Head** (Fig. 90). Of average size and shape. Eyes large, laterad well protruded, orbits short, oblique. Mental tooth triangular. Antenna moderately short, median antennomeres about 1.5 x as long as wide. A single narrow, indistinct sulcus medially of the eye attains the posterior border of the eye. Frons with wide, moderately deep, straight, but rather irregular frontal sulci which attain the middle of the eye, and with some short, straight or slightly oblique striae in the apical-lateral part. Whole surface with rather sparse, fine punctures. Surface with fine and very superficial isodiametric microreticulation, glossy.

**Pronotum** (Fig. 90). Moderately wide (in group), cordiform, dorsal surface convex. Apex straight, anterior angles moderately projected. Lateral borders convex, moderately sinuate in posterior third, almost parallel in front of the rectangular basal angles. Base considerably narrower than apex. Apex not margined, lateral margins narrow throughout and only widened immediately in front of the basal grooves, base coarsely margined. Median line deep, sulcate, almost complete, anterior sulcus rather shallow, posterior sulcus deep. Basal grooves deep, short, circular. Anterior marginal seta situated slightly behind apical third. Surface finely and sparsely punctate, usually with indistinct or superficial transverse striae, with very fine, more or less distinct microreticulation which is composed of very transverse meshes, glossy. Punctures and microreticulation in some specimens only visible at high magnification.

**Elytra** (Fig. 90). Moderately elongate, disk convex though in basal half somewhat depressed, in apical half in middle slightly raised, almost parallel. Humeri evenly rounded, lateral margin barely incurved in basal third. Apex oblique, deeply sinuate. Sutural angle with a tiny denticle, apex slightly produced at level of 2<sup>nd</sup> interval, lateral apical angle dentate, not spinose. Elytra fully striate, striae well impressed. Median striae rather finely punctate, punctures slightly coarser near base, lateral striae more coarsely punctate. Four median intervals very slightly convex, the 3<sup>rd</sup> interval slightly more than the others, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, the 5<sup>th</sup> interval considerably narrower than the other intervals and convex and almost carinate. 3<sup>rd</sup> interval tripunctate, all punctures situated in middle of interval, the anterior puncture located in basal third, the median puncture in middle, the apical puncture in apical sixth. Four median intervals irregularly uni- to biserially punctate, punctures very fine, with very fine and moderately distinct microreticulation which is composed of very transverse meshes, glossy.

**Lower surface.** Much as in *C. facialis*.

**Male genitalia** (Fig. 38). Genital ring moderately triangular, rather symmetric, with short, rather narrow, oblique apex and moderately elongate base. Aedeagus moderately short and stout, lower surface in apical two thirds almost straight, apex very elongate and narrow, triangular, acute, almost straight, orificium short, slightly shifted to the left side. Internal sac with several not sclerotized folds. Parameres much as in *C. facialis*.

**Female gonocoxites.** Much as in *C. facialis*.

**Variation.** Considerable variation noted in body size and relative width of the pronotum which in small specimens is narrower as compared with the elytra.

### Distribution

Malaysia, Borneo.

### Collecting circumstances

Little recorded. One specimen was collected in "secondary forest". The holotype was sampled in rain forest at night.

*Catascopus agnathus* Chaudoir

Figs 39, 91

*Catascopus agnathus* Chaudoir, 1872: 253. – Csiki 1932: 1362; Straneo 1994: 160; Lorenz 1998: 429; 2005: 454.**Examined types****Lectotype** (by present designation): ♀, Ex coll. Chaudoir (MNHP).**Type locality** (from description)

“Moluques”, without any more exact locality.

**Diagnosis**

Characterized by plain green colour with cupreous 7<sup>th</sup> and 8<sup>th</sup> intervals, faintly punctate head, and moderately finely crenulate internal elytral intervals. Distinguished from the most similar *C. angulatus* by more extended cupreous colour of the elytra and from *C. borneensis* by coarser punctuation of the median elytral intervals.

**Partial redescription**

**Measurements.** Length: 12.8–14.6 mm; width: 4.4–5.0 mm. Ratios. Width/length of prothorax: 1.25–1.27; width of base/apex of prothorax: 0.86–0.90; width of prothorax/width of head: 1.04–1.09; length/width of elytra: 1.64–1.67; width of elytra/width of prothorax: 1.40–1.46.

**Colour** (Fig. 91). Whole surface bright green, with or without some golden reflections, though labrum and mandibles black. 8<sup>th</sup> interval, commonly also the 7<sup>th</sup> interval, and the apex golden-cupreous.

**Head** (Fig. 91). Of average size and shape. Surface with sparse, fine punctures. Usually at least traces of very fine, isodiametric to slightly transverse microreticulation present.

**Pronotum** (Fig. 91). Usually wide, markedly cordiform. Anterior angles moderately projected. Basal angles rectangular. Base considerably narrower than apex. Surface very finely and sparsely punctate, usually with rather superficial transverse striae, with very fine but distinct, very transverse microreticulation, rather glossy. Punctures usually only visible at high magnification.

**Elytra** (Fig. 91). Moderately elongate, convex, disk in basal half depressed, in posterior half slightly raised. Lateral margin in basal third slightly incurved. Apex oblique, deeply sinuate. Sutural angle with a tiny denticle, apex slightly produced at level of 2<sup>nd</sup> interval, lateral apical angle dentate, not spinose. Elytra fully striate, striae well impressed, four median striae only in basal half distinctly punctate. Median intervals slightly convex, the 3<sup>rd</sup> interval slightly more than the others, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, the 5<sup>th</sup> interval considerably narrower than the other intervals and very convex and almost carinate. Four median intervals irregularly uni- to biserially punctate, punctures fine, with very fine but distinct microreticulation which is composed of very transverse meshes, glossy.

**Lower surface.** Much as in *C. facialis*.

**Male genitalia** (Fig. 39). Genital ring much as in *C. angulatus*. Aedeagus rather short and stout, lower surface in apical two thirds almost straight, apex elongate, narrowly triangular, straight, acute at tip, orificium short, slightly shifted to the left side. Internal sac with several not sclerotized folds. Parameres much as in *C. facialis*.

**Female gonocoxites.** Much as in *C. facialis*.

**Variation.** Little variation noted.

**Distribution**

Sulawesi; according to the description and to Straneo (1994) “Moluccas”, but this most probably refers to other species.

**Collecting circumstances**

Not recorded.

**Additional records** (8 ex)

**Sulawesi:** 1 ♂, SE Sulawesi Sulawesi-Tenggara Abuki reg., Sambeani env. 10.X.1999, native collector (CBM); 1 ♀, N-Sulawesi, vic. Boroko Solo-Sokoputa vill. 50m 0°56.17'N, 123°12.74'E 24.2.2009, R. Gerstmeier (CBM); 1 ♂, PALOLO C. SULAWESI XI.1994 (CBM); 1 ♀, Macassar Wallace / Ex coll. Chaudoir / SYNTYPE *Catascopus angulatus* Chaudoir des. M. Baehr 2011 (MNHP); 3 ♀♀, S-Celebes Bonthain C. Ribbe 1882 / *Catascopus* sp. (*angulatus*) (NHM); 1 ♀, Wallace / Moluccas Jilolo (NHM).

*Catascopus grimmi* sp. n.

Figs 40, 92

**Examined types****Holotype:** ♂, Indonesien, Bali Danau, Tamblingan, Gubug, 1000m 17.12.2007, R.Grimm (CBM).

**Paratypes:** 2 ♂♂, 2 ♀♀, same data (CBM); 2 ♂♂, 1 ♀, JAVA: Bondowoso, Idjen Plateau. 1,200m. Feb.1939. Herman R. Folkersma. B.M.1939-511. / *Catascopus facialis* Wied. v. *angulatus* E.B. Britton det. 1939 (NHM); 3 ♂♂, O.-Java: Tengger Nongkodjadjar 1300m, Wegener / Gesch. 12. 1935 von Overbeck / F. van Emden Bequest. B.M.1960-129. (NHM); 1 ♀, O.-Java: Tengger Nongkodjadjar 1300m, Wegener / Gesch. 12. 1935 von Overbeck / var. *basalis* Chd. / F. van Emden Bequest. B.M.1960-129. (NHM); 1 ♂, Kendeng-Geb., O.-Java A. Heyne, Berlin-Wilm. / Ex Mus. Buitenzorg / *excisus* / H. E. Andrewes Coll. B.M. 1945-97. (NHM); 1 ♂, Java / Bowring 63-47\* / *Catascopus angulatus* Chaud. Java (NHM); 1 ♂, Pascoe Coll. 93-60. / *Catascopus facialis* Wied Java / H. E. Andrewes Coll. B.M. 1945-97. (NHM); 1 ♂, Idjen Plateau II-III 21 / Ex Mus. Buitenzorg / H. E. Andrewes Coll. B.M. 1945-97. (NHM); 1 ♀, Java / Bowring 63-47\* / Ex Coll. Brit. Mus. / H. E. Andrewes Coll. B.M. 1945-97. (NHM); 1 ♂, 53442 / Ex Mus. Murray / Java / Fry Coll. 1905.100. / *Catascopus facialis* Wied. *hardwickei* Kirby India or (NHM); 1 ♂, Java occident. Mons Tjikorai 4000' 1892 H. Fruhstorfer / 5827. Java Kopp 95 (SMNS); 1 ♂, JAVA occ. / *Catascopus angulatus* CHD. det.M.Baehr'08 (NMPC); 1 ♀, Malay. Archip. Hauser 1894. (SMNS); 1 ♀, Sinlabintanah, Java G. E. Bryant. 2. IV. 09. / *Catascopus angulatus*, Chaud. / G. Bryant Coll. 1919-47. (NHM); 1 ♂, 1 ♀, Ost-Java leg. van Nidek / *Catascopus facialis* Wied. var. *excisus* Mots. (ZSM); 1 ♀, Ost-Java leg. van Nidek (ZSM); 1 ♀, Java 3 – 4 (ZSM); 1 ♀, B. Aroe Hassa Sambawa 2-5000' Doherty IX.X / *Catascopus diffinis* (unreadable) Chaud. Compared with type – H:E:A: (NHM); 1 ♀, Bombay *C. angulatus* Chaud. (ZSM).

**Etymology**

The name is a patronym in honour of the collector of the Balinese specimens, Roland Grimm.

**Diagnosis**

Distinguished from other species of the groups by plain green colour, rather short elytra with distinctly denticulate apex, coarse elytral punctures, and elongate, somewhat sinuate apex of the aedeagus

**Description**

**Measurements.** Length: 12.9-15.1 mm; width: 4.7-5.35 mm. Ratios. Width/length of prothorax: 1.26-1.30; width of base/apex of prothorax: 0.87-0.96; width of prothorax/width of head: 1.06-1.10; length/width of elytra: 1.53-1.62; width of elytra/width of prothorax: 1.44-1.50.

**Colour** (Fig. 92). Uniformly bright green, with more or less distinct golden lustre, though labrum and mandibles black. Elytra with 8<sup>th</sup> and 9<sup>th</sup> intervals conspicuously golden-cupreous, also the 7<sup>th</sup> and sometimes also the 6<sup>th</sup> interval at apex cupreous. Usually also the lateral margin of the pronotum more or less widely cupreous. Lower surface piceous-black with slight greenish lustre. Palpi piceous with light reddish apex. Antenna piceous, basal antennomere blackish with slight metallic lustre. Legs dark piceous, tarsi slightly lighter.

**Head** (Fig. 92). Of average size and shape. Eyes large, laterad well protruded, orbits short, oblique. Mental tooth triangular. Antenna moderately short, median antennomeres about 1.5 x as long as wide. A single narrow, indistinct sulcus medially of the eye attains the posterior border of the eye. Frons with wide, moderately deep, straight, but rather irregular frontal sulci which attain the middle of the eye, and with some short, straight or slightly oblique striae in the apical-lateral part. Whole surface with moderately dense, rather coarse to very coarse punctures. Surface without or with very fine traces of about isodiametric microreticulation, glossy.

**Pronotum** (Fig. 92). Wide (in group), cordiform, dorsal surface convex. Apex straight, anterior angles moderately projected. Lateral borders convex, moderately sinuate in posterior third, parallel in front of the rectangular basal angles. Base considerably narrower than apex. Apex not margined, lateral margins narrow throughout and only widened immediately in front of the basal grooves, base coarsely margined. Median line deep, sulcate, almost complete, anterior sulcus rather shallow, posterior sulcus deep. Basal grooves deep, short, circular. Anterior marginal seta situated slightly behind apical third. Surface finely and sparsely punctate, with more or less distinct transverse striae, with very fine, more or less distinct microreticulation which is composed of very transverse meshes, glossy. Punctures and microreticulation in some specimens only visible at high magnification.

**Elytra** (Fig. 92). Rather short and wide, dorsally convex though disk in basal half somewhat depressed, in apical half in middle slightly raised, almost parallel to slightly widened apicad. Humeri evenly rounded, lateral margin slightly incurved in basal third. Apex oblique, deeply sinuate. Sutural angle with a tiny denticle, apex slightly produced at level of 2<sup>nd</sup> interval, lateral apical angle dentate, not spinose. Elytra fully striate, striae well impressed. Median striae rather coarsely punctate throughout, but punctures even coarser in apical half, late-



ral striae very coarsely punctate. Four median intervals slightly convex, the 3<sup>rd</sup> interval slightly more than the others, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, the 5<sup>th</sup> interval narrower than the other intervals and convex, but not carinate. 3<sup>rd</sup> interval tripunctate, all punctures situated in middle of interval, the anterior puncture located in basal third, the median puncture in middle, the apical puncture in apical sixth. Four median intervals irregularly uni- to biserially punctate, punctures very fine, with very fine and moderately distinct microreticulation which is composed of very transverse meshes, glossy.

**Lower surface.** Much as in *C. facialis*.

**Male genitalia** (Fig. 40). Genital ring much as in *C. angulatus*. Aedeagus moderately short and stout, lower surface in apical two thirds almost straight, apex very elongate, narrow, slightly sinuate, acute at tip, orificium short, slightly shifted to the left side. Internal sac with several not sclerotized folds. Parameres much as in *C. facialis*.

**Female gonocoxites.** Much as in *C. facialis*.

**Variation.** Some variation noted in body size, length of the elytra, and width of the base of the pronotum, and in punctuation of the elytral striae.

### Distribution

Java, Bali, Sumbawa. The old specimen from "Bombay" certainly is wrongly labelled.

### Collecting circumstances

Largely unknown. Labelled specimens were collected at median altitude.

## *Catascopus magnicollis* sp. n.

Figs 41, 93

### Examined types

**Holotype:** ♂, MALUKU: Is. Morotai W. Daruba, Raja 16.-19.XI.1999, 50-300m leg. A. RIEDEL (SMNS).

**Paratypes:** 8 ♂♂, 5 ♀♀, same data (CBM, SMNS); 1 ♀, Batchian / Bowring. 63-47\* / Ex coll. Brit. Mus. / H. E. Andrewes Coll. B.M. 1945-97. (NHM).

### Etymology

The name refers to the wide and voluminous pronotum.

### Diagnosis

Distinguished from other species of the group by plain green colour, wide pronotum with wide base, not produced basal angle and little produced apical angle of the pronotum, indistinctly cupreous 8<sup>th</sup> interval, and slightly curved and odd-shaped apex of the aedeagus.

### Description

**Measurements.** Length: 12.2-13.3 mm; width: 4.3-4.9 mm. Ratios. Width/length of prothorax: 1.24-1.26; width of base/apex of prothorax: 0.97-1.0; width of prothorax/width of head: 1.04-1.05; length/width of elytra: 1.63-1.66; width of elytra/width of prothorax: 1.49-1.50.

**Colour** (Fig. 93). Uniformly green, though labrum and mandibles black. Elytra with 8<sup>th</sup> interval indistinctly or not cupreous. Lower surface piceous-black with slight greenish lustre. Palpi piceous with light reddish apex. Antenna piceous, basal antennomere blackish with slight metallic lustre. Legs dark piceous, tarsi slightly lighter.

**Head** (Fig. 93). Of average size and shape. Eyes large, laterad well protruded, orbits short, oblique. Mental tooth triangular. Antenna moderately short, median antennomeres about 1.5 x as long as wide. A single narrow, indistinct sulcus medially of the eye attains the posterior border of the eye. Frons with wide, moderately deep, straight frontal sulci which attain the middle of the eye, and with some short, slightly oblique striae in the apical-lateral part. Whole surface with rather sparse, fine punctures. Surface usually with very fine traces of about isodiametric microreticulation, glossy.

**Pronotum** (Fig. 93). Rather wide (in group), cordiform, dorsal surface convex. Apex straight, anterior angles but slightly projected. Lateral borders convex, moderately sinuate in posterior third, almost parallel in front of the rectangular basal angles. Base about as wide as apex. Apex not margined, lateral margins narrow throughout and only widened immediately in front of the basal grooves, base coarsely margined. Median line deep, sulcate, almost complete, anterior sulcus rather shallow, posterior sulcus deep. Basal grooves deep, short, circular. Anterior marginal seta situated slightly behind apical third. Surface extremely finely and sparsely punctate, almost

devoid of transverse striae, with very fine but fairly distinct microreticulation which is composed of very transverse meshes, glossy. Punctures and microreticulation only visible at high magnification.

**Elytra** (Fig. 93). Moderately elongate, dorsally convex though disk in basal half somewhat depressed, in apical half in middle slightly raised, almost parallel. Humeri evenly rounded, lateral margin barely incurved in basal third. Apex oblique, deeply sinuate. Sutural angle with a tiny denticle, apex slightly produced at level of 2<sup>nd</sup> interval, lateral apical angle dentate, not spinose. Elytra fully striate, striae well impressed. Median striae finely punctate throughout, but punctures very fine in apical half, lateral striae rather coarsely punctate. Four median intervals almost depressed, only the 3<sup>rd</sup> interval in basal half slightly convex, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, the 5<sup>th</sup> interval considerably narrower than the other intervals and convex to almost carinate throughout. 3<sup>rd</sup> interval tripunctate, all punctures situated in middle of interval, the anterior puncture located in basal third, the median puncture in middle, the apical puncture in apical sixth. Four median intervals irregularly uni- to biserially punctate, punctures rather fine but well perceptible, with very fine and superficial microreticulation which is composed of very transverse meshes, glossy.

**Lower surface.** Much as in *C. facialis*.

**Male genitalia** (Fig. 41). Genital ring much as in *C. angulatus*. Aedeagus rather short and stout, widened towards apex, lower surface in apical two thirds almost straight, apex moderately elongate, irregularly triangular and slightly sinuate, slightly obtuse at tip, orificium short, slightly shifted to the left side. Internal sac with several not sclerotized folds. Parameres much as in *C. facialis*.

**Female gonocoxites.** Much as in *C. facialis*.

**Variation.** Very little variation noted.

## Distribution

Morotai and Bacan Islands, Moluccas.

## Collecting circumstances

Largely unknown. Collected at median altitude, probably from bark of logs in rain forest.

## *Catascopus cyanoviridis* sp. n.

Figs 42, 94

## Examined types

**Holotype:** ♂, MALUKU, Seram, Unit O, 24-30.x.1998. 35 km E of Pasahari, S. Bilý leg. (CBM).

**Paratypes:** 1 ♂, same data (CBM); 1 ♀, same data, J. Horak leg. (CBM); 1 ♀, same locality and data, O. Mehl leg. (CBM); 4 ♀♀, MALUKU, Seram Solea 12 km. S. of Wahai 16/x – 4/xi – 1998 Ole Mehl leg. (CBM); 1 ♂, SOLEA, 12 km SE WAHAI, SERAM, MALUKU 17.I.-6.II.1997 J. HORAK leg. (CBM), 1 ♀, L.TOXOPEUS Buru Station 8 Febr.'22 (NHM); 1 ♀, L.TOXOPEUS Buru Station 9 25.IV.-1.VI'21 / 3 fr. Andr "*diffinis*" (NHM); 1 ♂, Amboy-na 80-8 / 1535 (unreadable) Wai – Ambon / *Catascopus excisus* Motch. Compared with type H:E:A: (NHM); 2 ♀♀, (unreadable) / Bowring 63-47\* / Mat. (NHM).

## Etymology

The name refers to the blue head and pronotum and contrastingly green elytra.

## Note

This species may be identical with *C. facialis diffinis* Chaudoir, 1872 which was described from northern Sulawesi, but has been reported by Andrewes (1930) as occurring on Buru. However, the identity of the specimens from Sulawesi and Buru is very doubtful and thus, the status of *C. facialis diffinis* remains doubtful.

## Diagnosis

Distinguished from all other species of the group, except *C. carinipennis*, by blue head and pronotum and contrastingly green elytra; distinguished from the latter species by depressed and punctate median intervals, not raised sutural interval, and absence of an impression on the apical half of the elytra.

## Description

**Measurements.** Length: 11.6-14.7 mm; width: 4.0-5.3 mm. Ratios. Width/length of prothorax: 1.24-1.27; width of base/apex of prothorax: 0.93-0.98; width of prothorax/width of head: 1.05-1.09; length/width of elytra: 1.61-1.68; width of elytra/width of prothorax: 1.45-1.49.

**Colour** (Fig. 94). Head and pronotum blue or dark blue-green, though labrum and mandibles black. Elytra contrastingly bright green with some golden lustre, 8<sup>th</sup> interval cupreous. Lower surface piceous-black with slight greenish lustre. Palpi piceous with light reddish apex. Antenna piceous, basal antennomere blackish with slight metallic lustre. Legs dark piceous, tarsi slightly lighter.

**Head** (Fig. 94). Of average size and shape. Eyes large, laterad well protruded, orbits short, oblique. Mental tooth triangular. Antenna moderately short, median antennomeres about 1.5 x as long as wide. A single narrow, indistinct sulcus medially of the eye attains the posterior border of the eye. Frons with wide, moderately deep, straight frontal sulci which attain the middle of the eye, and with some short, slightly oblique striae in the apical-lateral part. Whole surface with rather sparse, fine to moderately coarse punctures. Surface usually without microreticulation, or with extremely finest traces of about isodiametric meshes, glossy.

**Pronotum** (Fig. 94). Fairly wide (in group), markedly cordiform, dorsal surface convex. Apex straight, anterior angles but slightly projected. Lateral borders convex, deeply sinuate in posterior third, almost parallel in front of the rectangular basal angles, which are very slightly produced laterad. Base considerably narrower than apex. Apex not margined, lateral margins narrow throughout and only widened immediately in front of the basal grooves, base coarsely margined. Median line deep, sulcate, almost complete, anterior sulcus rather shallow, posterior sulcus deep. Basal grooves deep, short, circular. Anterior marginal seta situated slightly behind apical third. Surface extremely finely and sparsely punctate, with several fine and superficial transverse striae, with finest traces of very transverse microreticulation, glossy. Punctures and microreticulation only visible at high magnification.

**Elytra** (Fig. 94). Elongate, dorsally convex, in apical half in middle even more raised, almost parallel-sided. Humeri evenly rounded, lateral margin very slightly incurved in basal third. Apex oblique, deeply sinuate. Sutural angle with a tiny denticle, apex slightly produced at level of 2<sup>nd</sup> interval, lateral apical angle dentate, not spinose. Elytra fully striate, striae deeply impressed. Median striae finely punctate throughout, with punctures becoming even finer posterad, lateral striae coarsely punctate. Four median intervals slightly convex, the 3<sup>rd</sup> one more than the others, 7<sup>th</sup> interval narrower and distinctly carinate medially, 5<sup>th</sup> interval considerably narrower than the even ones and in basal half markedly convex and even slightly carinate. 3<sup>rd</sup> interval tripunctate, all punctures situated in middle of interval, the anterior puncture located in basal third, the median puncture in middle, the apical puncture in apical sixth. Intervals very finely and sparsely punctate, with very fine and superficial microreticulation which is composed of very transverse meshes, glossy.

**Lower surface.** Much as in *C. facialis*.

**Male genitalia** (Fig. 42). Genital ring much as in *C. angulatus*. Aedeagus rather short and stout, lower surface in apical two thirds very slightly concave, apex moderately elongate, narrowly triangular, slightly curved, acute at tip, orificium short, slightly shifted to the left side. Internal sac with several not sclerotized folds. Parameres much as in *C. facialis*.

**Female gonocoxites.** Much as in *C. facialis*.

**Variation.** Some variation noted in colour, body size, and relative width, or length, of pronotum and elytra, also in distinctness of the head punctation.

## Distribution

Seram, Ambon, and Buru Islands, southern Moluccas.

## Collecting circumstances

Not recorded.

## *Catascopus carinipennis* sp. n.

Fig. 95

## Examined types

**Holotype:** ♀, MALUKU, Seram Solea, 12 km SE. Wahai, 6.x.-4.xi. 1998, S. Bílý leg. (CBM).

## Etymology

The name refers to the almost carinate elytral intervals.

## Diagnosis

Distinguished from all other species of the group, except *C. cyanoviridis*, by blue head and pronotum and contrastingly green elytra; distinguished from the latter species by carinate and impunctate median intervals, raised sutural interval, and presence of an impression on apical half of elytra.

## Description

**Measurements.** Length: 12.6 mm; width: 4.4 mm. Ratios. Width/length of prothorax: 1.21; width of base/apex of prothorax: 1.0; width of prothorax/width of head: 1.097 length/width of elytra: 1.66; width of elytra/width of prothorax: 1.47.

**Colour** (Fig. 95). Head and pronotum dark blue-green, though labrum and mandibles black. Elytra contrastingly bright green with some golden lustre, 8<sup>th</sup> interval cupreous. Lower surface piceous-black with slight greenish lustre. Palpi piceous with light reddish apex. Antenna piceous, basal antennomere blackish with slight metallic lustre. Legs dark piceous, tarsi slightly lighter.

**Head** (Fig. 95). Of average size and shape. Eyes large, laterad rather protruded, orbits short, oblique. Mental tooth triangular. Antenna moderately short, median antennomeres about 1.5 x as long as wide. A single narrow, indistinct sulcus medially of the eye attains the posterior border of the eye. Frons with wide and deep, straight frontal sulci which attain the middle of the eye, and with some short, straight striae in the apical-lateral part. Frons also in middle with coarse, irregularly transverse striae. Whole surface with rather dense, coarse punctures. Surface with extremely fine traces of isodiametric microreticulation, glossy.

**Pronotum** (Fig. 95). Moderately wide (in group), markedly cordiform, dorsal surface very convex. Apex straight, anterior angles slightly projected. Lateral borders convex, deeply sinuate in posterior third, slightly oblique in front of the rectangular basal angles, which are distinctly produced laterad. Base as wide as apex. Apex not margined, lateral margins narrow throughout and only widened immediately in front of the basal grooves, base coarsely margined. Median line very deep, markedly sulcate, almost complete, anterior sulcus rather shallow, posterior sulcus deep. Basal grooves very deep, short, circular. Anterior marginal seta situated slightly behind apical third. Surface extremely finely and sparsely punctate, with several rather distinct transverse striae, with finest traces of very transverse microreticulation, glossy. Punctures and microreticulation only visible at high magnification.

**Elytra** (Fig. 95). Elongate, dorsally very convex, in apical half in middle even more raised and with a distinct depression on either side, slightly widened apicad. Humeri evenly rounded, lateral margin barely incurved in basal third. Apex oblique, deeply sinuate. Sutural angle without perceptible denticle, apex slightly produced at level of 2<sup>nd</sup> interval, lateral apical angle dentate, not spinose. Elytra fully striate, striae deeply impressed. Median striae barely punctate, lateral striae moderately coarsely punctate. All intervals very convex and almost carinate, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, but less so apicad, the 5<sup>th</sup> interval slightly narrower than the other intervals. 3<sup>rd</sup> interval tripunctate, all punctures situated in middle of interval, the anterior puncture located in basal third, the median puncture in middle, the apical puncture in apical sixth. Intervals barely punctate, with very fine and superficial microreticulation which is composed of very transverse meshes, glossy.

**Lower surface.** Much as in *C. facialis*. Terminal sternum of female quadrisetose.

**Male genitalia.** Unknown.

**Female gonocoxites.** Much as in *C. facialis* (Wiedemann).

**Variation.** Unknown.

## Distribution

Seram. Known only from type locality.

## Collecting circumstances

Not recorded.

## *Catascopus weigeli* sp. n.

Figs 43, 96

## Examined types

**Holotype:** ♂, IDO: Halmahera NW 7 km S Jailolo, 200m 1°1'18"N, 127°31'39"E 27.I.2006, leg. A. Weigel (CBM).

**Paratypes:** 2 ♀♀, same data (CBM); 2 ♂♂, INDONESIA Halmahera NW 7 km S Jailolo, 200m 1°1'18"N, 127°31'39"E 26/27.I.2006, leg. A. Skale, UWP + clearing (CBM); 4 ♂♂, 2 ♀♀, INDONESIA, E. N-Mollucas, Halmahera Utara, Galela, along road between Paca to Soasio, XI.2009-III-2010, secondary forest, leg. S.S. Negara (CBM, NHME); 1 ♂, Halmahera (Djilolo) / Coll. G. Felsche Kauf 20, 1918 (SMTD); 2 ♂♂, 1 ♀, MALUKU: Is. Halmahera 28 km S Tobelo, Togollua 2.XI.1999, ca. 200m leg. A. RIEDEL (SMNS); 2 ♀♀, Indonesia, Maluku- Utara/Halmahera Umg. Labi Labi 20.-30. N. 1998 leg. Horst Rudolph (CBM, CRQ); 1 ♀, INDOAUTR. E

INDONESIA N Maluku: Bacan is. 5kmSE Makan vill. Sibelamt: SEskup. 500-750m V-2008 lgt. S. Jakl (CHP); 1 ♀, N. Moluccas, 0 m, S. BATJAN vi-vii Wajana A.M.R. Wegner 1953 / Gesch. II. 1954 von Louwerens / *Catascopus facialis angulatus* Chaud. det. C. J. Louwerens / ssp. *angulatus* Chd. (NHM); 1 ♂, Ternate 60 113 (NHM); 1 ♂, Dodinga Halmahera Doherty VIII / about *diffinis* in Andr. Coll. (NHM); 1 ♂, 6119 / Ternate 92-20. (NMH); 1 ♂, Batchian / Bowring 63-47\* (NHM); 1 ♂, Moluccas Jilolo / Wallace / Ex coll. Brit. Mus. / H. E. Andrewes Coll. B.M. 1945-97. (NHM); 1 ♂, N.Guin / Fry Coll. 1905. 100. / *Catascopus facialis* (w) det. Darlington 66 (NHM).

### Etymology

The name is a patronym in honour of the collector of most specimens, Andreas Weigel.

### Note

The citation of Darlington (1968) of *C. facialis* as occurring in New Guinea most probably refers to this species. The single examined specimen from New Guinea in no way deviates from specimens from Halmahera.

### Diagnosis

Distinguished from other species of the group by blue or blue-green colour without distinctly cupreous 8<sup>th</sup> interval, markedly cordiform pronotum with narrow base, head with fine punctures, and straight and almost symmetric apex of the aedeagus.

### Description

**Measurements.** Length: 11.4-14.0 mm; width: 3.9-4.95 mm. Ratios. Width/length of prothorax: 1.23-1.30; width of base/apex of prothorax: 0.90-0.96; width of prothorax/width of head: 1.02-1.03; length/width of elytra: 1.56-1.65; width of elytra/width of prothorax: 1.48-1.51.

**Colour** (Fig. 96). Uniformly blue-green or bright green, though labrum and mandibles black. Elytra with 8<sup>th</sup> interval indistinctly or not cupreous. Lower surface piceous-black with slight greenish lustre. Palpi piceous with light reddish apex. Antenna piceous, basal antennomere blackish with slight metallic lustre. Legs dark piceous, tarsi slightly lighter.

**Head** (Fig. 96). Of average size and shape. Eyes large, laterad rather protruded, orbits short, oblique. Mental tooth triangular. Antenna moderately short, median antennomeres about 1.5 x as long as wide. A single narrow, indistinct sulcus medially of the eye attains the posterior border of the eye. Frons with wide and deep, straight frontal sulci which attain the middle of the eye, and with some short, straight striae in the apical-lateral part. Whole surface with rather sparse, fine punctures. Surface usually with extremely fine traces of isodiametric microreticulation, glossy.

**Pronotum** (Fig. 96). Rather wide (in group), markedly cordiform, dorsal surface convex. Apex straight or very slightly concave, anterior angles slightly projected. Lateral borders convex, deeply sinuate in posterior third, almost straight in front of the rectangular basal angles, which sometimes are slightly produced laterad. Base considerably narrower than apex. Apex not margined, lateral margins narrow throughout and only widened immediately in front of the basal grooves, base coarsely margined. Median line deep, sulcate, almost complete, anterior sulcus rather shallow, posterior sulcus deep. Basal grooves deep, short, circular. Anterior marginal seta situated slightly behind apical third. Surface very finely and extremely sparsely punctate, almost devoid of transverse striae, with very fine though distinct microreticulation which is composed of more or less transverse meshes, glossy. Punctures and microreticulation only visible at high magnification.

**Elytra** (Fig. 96). Rather elongate, dorsally convex though disk in basal half somewhat depressed, in apical half in middle slightly raised, almost parallel. Humeri evenly rounded, lateral margin barely incurved in basal third. Apex oblique, deeply sinuate. Sutural angle with a tiny denticle, apex slightly produced at level of 2<sup>nd</sup> interval, lateral apical angle dentate, not spinose. Elytra fully striate, striae well impressed. Median striae rather finely punctate throughout, but more coarsely in basal third, lateral striae rather coarsely punctate. Four median intervals almost depressed, only the 3<sup>rd</sup> interval in basal half slightly convex, the 7<sup>th</sup> interval narrower and distinctly carinate on median side, the 5<sup>th</sup> interval considerably narrower than the other intervals and convex throughout. 3<sup>rd</sup> interval tripunctate, all punctures situated in middle of interval, the anterior puncture located in basal third, the median puncture in middle, the apical puncture in apical sixth. Four median intervals with an irregular row of moderately coarse punctures, with very fine and superficial microreticulation which is composed of very transverse meshes, glossy.

**Lower surface.** Much as in *C. facialis*.

**Male genitalia** (Fig. 43). Genital ring much as in *C. angulatus*. Aedeagus very short and stout, lower surface in apical two thirds almost straight, apex elongate, narrowly triangular, straight, acute at tip, orificium short,

slightly shifted to the left side. Internal sac with several not sclerotized folds. Parameres much as in *C. facialis*.

**Female gonocoxites.** Much as in *C. facialis*.

**Variation.** Some variation noted in colour, body size, and relative width, or length, of pronotum and elytra.

### Distribution

Moluccas: Halmahera, Ternate, Bacan; ? New Guinea. The single record from New Guinea is an old specimen without a specified locality that likely could be mislabeled.

### Collecting circumstances

Largely unknown. Most specimens probably were collected in rain forest, one in "secondary forest".

## *Catascopus ales* Jedlicka

Fig. 97

*Catascopus ales* Jedlicka, 1935: 14. – Jedlicka 1963: 394; Straneo 1994: 160; Lorenz 1998: 429; 2005: 454.

### Examined types

None.

### Type locality (from description)

"Puerto Princesa, Palawan, Philippines"

### Note

I have seen a paratype of this species some years ago in NMPC. The species is easily identified by the produced apical angles of the pronotum and the acute, markedly produced lateral apical angles of the elytra.

### Diagnosis

Easily distinguished from all related species by combination of green colour, not distinctly cupreous 8<sup>th</sup> interval, almost impunctate head, markedly produced apical angles of the pronotum which have the marginal sulcus slightly widened, and the markedly produced and acute lateral apical angles of the elytra which form a deeply excised elytral apex.

### Partial redescription

**Measurements.** Length: 11.7 mm; width: 4.3 mm. Ratios. Width/length of prothorax: 1.26; width of base/apex of prothorax: 0.96; width of prothorax/width of head: 1.08; length/width of elytra: 1.58; width of elytra/width of prothorax: 1.47.

**Colour** (Fig. 97). Surface unicolourous dark green, though labrum and mandibles black. 8<sup>th</sup> interval of the elytra barely curpeous. Lower surface piceous-black with slight greenish lustre. Palpi piceous with light reddish apex. Antenna piceous, basal antennomere blackish with slight metallic lustre. Legs dark piceous, tarsi slightly lighter.

**Head** (Fig. 97). Much as in *C. angulatus* but frons almost impunctate. Neck sulcus slightly deeper than in related species.

**Pronotum** (Fig. 97). Much as in *C. angulatus* but apical angles far protruded and the marginal sulcus slightly widened apicad. Basal angles slightly produced laterad.

**Elytra** (Fig. 97). Much as in *C. angulatus* but the lateral apical angles remarkably produced and acute, therefore the apex deeply excised.

**Male genitalia.** Not recorded.

**Female gonocoxites.** Much as in *C. facialis*.

**Variation.** Not recorded.

### Distribution

Philippine Islands.

### Additional records (1 ex.)

**Philippines:** 1 ♀, Philippine Is. Coll. Bottcher. B.M. 1929-201. / Philippine Islands Mindanao Surigao 24 Coll. Bottcher 191 / *Catascopus facialis* Ved (NHM).

*Catascopus punctatostratus* sp. n.

Fig. 98

**Examined types****Holotype:** ♀, VIETNAM BOR. Son La prov. Moc Chau 15.11.2004, H. Mühle leg (CBM).**Etymology**

The name refers to the coarsely punctate elytral striae.

**Diagnosis**

Distinguished from other species of the group by green colour, narrow pronotum with wide base which is distinctly wider than the apex, and coarsely punctate elytral striae.

**Description****Measurements.** Length: 11.7 mm; width: 4.1 mm. Ratios. Width/length of prothorax: 1.20; width of base/apex of prothorax: 1.04; width of prothorax/width of head: 1.07; length/width of elytra: 1.68; width of elytra/width of prothorax: 1.52.**Colour** (Fig. 98). Surface bright green with some golden reflections, though labrum and mandibles black. Elytra with 8<sup>th</sup> and 9<sup>th</sup> intervals and with apex golden-cupreous. Lower surface piceous-black with slight greenish lustre. Palpi piceous with light reddish apex. Antenna piceous, basal antennomere blackish with slight metallic lustre. Legs dark piceous, tarsi slightly lighter.**Head** (Fig. 98). Of average size and shape. Eyes large, laterad well protruded, orbits short, oblique. Mental tooth triangular. Antenna moderately short, median antennomeres about 1.5 x as long as wide. A single narrow, indistinct sulcus medially of the eye attains the posterior border of the eye. Frons with deep and wide, rather straight frontal sulci which slightly surpass the middle of the eye, and with some short, slightly oblique striae in the apical-lateral part. Frons in anterior half barely punctate, in posterior half and on occiput rather coarsely punctate. Surface here and there with extremely fine and superficial traces of isodiametric microreticulation which is visible only under very high magnification, glossy.**Pronotum** (Fig. 98). Comparatively narrow (in group), cordiform, dorsal surface convex. Apex deeply excised, anterior angles well projected, at tip rounded off. Lateral borders convex, sinuate in posterior third, almost parallel in front of the rectangular basal angles, which are very slightly produced laterad and posteriad. Base slightly wider than apex. Apex not margined, lateral margins narrow throughout and only widened in basal fourth, base coarsely margined. Median line deep, sulcate, almost complete, anterior sulcus rather shallow, posterior sulcus deep. Basal grooves deep, short, circular. Anterior marginal seta situated slightly behind apical third. Surface finely and sparsely punctate, with several rather superficial transverse striae, with very fine and rather superficial microreticulation which is composed of very transverse meshes, glossy. Punctures and microreticulation only visible under high magnification.**Elytra** (Fig. 98). Elongate, dorsally convex, but disk in middle depressed, almost parallel-sided. Humeri evenly rounded, lateral margin slightly incurved in basal third. Apex oblique, deeply sinuate. Surtal angle with tiny denticle, apex slightly produced at level of 2<sup>nd</sup> interval, lateral apical angle dentate. Elytra fully striate, striae deeply impressed. Median striae coarsely punctate in basal third, punctures becoming finer posterad, lateral intervals very coarsely punctate throughout. Four median intervals rather depressed, 7<sup>th</sup> interval narrower and distinctly carinate medially, 5<sup>th</sup> interval slightly narrower than the even ones and in basal third convex, but not carinate. 3<sup>rd</sup> interval tripunctate, all punctures situated in middle of interval, the anterior puncture located in basal third, the median puncture in middle, the apical puncture in apical sixth. Intervals very finely and sparsely punctate, with very fine and superficial microreticulation which is composed of very transverse meshes, glossy.**Lower surface.** Much as in *C. facialis*. Terminal sternum of female apparently quadrisetose.**Male genitalia.** Unknown.**Female gonocoxites.** Much as in *C. facialis*.**Variation.** Unknown.**Distribution**

Northern Vietnam. Known only from type locality.

**Collecting circumstances**

Not recorded.

Tab. 3. Measurements and ratios of the species related to *C. facialis*

N = number of specimens measured; body length in mm; w/l pron = ratio width/length of pronotum; b/a pron = ratio width of base/width of apex of pronotum; w pr/h = ratio width of pronotum/width of head; l/w elytra = ratio length/width of elytra; w el/pr = ratio width of elytra/width of pronotum.

	N	body length	w/l pron	b/a pron	w pr/h	l/w elytra	w el/pr
<i>agnathus</i>	5	12.8-14.6	1.25-1.27	0.86-0.90	1.04-1.09	1.64-1.67	1.40-1.46
<i>alesi</i>	1	11.7	1.26	0.96	1.08	1.58	1.47
<i>andamanensis</i>	6	10.9-12.2	1.27-1.34	0.84-0.88	1.01-1.04	1.59-1.64	1.40-1.48
<i>angulatus</i>	8	12.0-14.4	1.17-1.32	0.90-0.95	1.02-1.09	1.59-1.67	1.46-1.55
<i>borneensis</i>	6	10.7-14.4	1.22-1.27	0.88-0.96	0.99-1.03	1.62-1.64	1.45-1.56
<i>carinipennis</i>	1	12.6	1.21	1.0	1.07	1.66	1.47
<i>cuprascens</i>	4	12.3-14.7	1.17-1.18	0.85-0.88	1.06-1.08	1.57-1.65	1.42-1.47
<i>cyanoviridis</i>	6	11.6-14.7	1.24-1.27	0.93-0.98	1.05-1.09	1.61-1.68	1.45-1.49
<i>facialis</i>	8	11.3-15.8	1.25-1.30	0.84-0.91	1.0-1.07	1.60-1.67	1.44-1.51
<i>grimmi</i>	6	12.9-15.1	1.26-1.30	0.87-0.96	1.06-1.10	1.53-1.62	1.44-1.50
<i>magnicollis</i>	6	12.2-13.3	1.24-1.26	0.97-1.0	1.04-1.05	1.63-1.66	1.49-1.50
<i>punctatostriatus</i>	1	11.7	1.20	1.04	1.07	1.68	1.52
<i>weigeli</i>	6	11.4-14.0	1.23-1.30	0.90-0.96	1.02-1.03	1.56-1.65	1.48-1.51

*Catascopus moorei* Straneo

*Catascopus moorei* Straneo, 1994: 164. – Lorenz 1998: 430; 2005: 454.  
*Catascopus smaragdulus* Dejean, 1825: 331 (part). – Andrewes 1931: 61; 1937: 189; Csiki 1932: 1366; Jedlicka 1963: 383; Louwerens 1964: 188; Darlington 1968: 105; Moore et al. 1987: 285; Lorenz 1998: 430; 2005: 455.

*Catascopus moorei* was described from the northern tip of Cape York Peninsula, North Queensland, Australia. Surprisingly enough, Straneo (1994) in his description did not compare his new species with the very similar *C. smaragdulus* Dejean that moreover apparently was overlooked by Straneo and thus was not included in his review of the Australasian *Catascopus*. This is even more surprising, because Darlington (1968) noted *C. smaragdulus* as occurring and even when not common, then at least widespread in New Guinea, and Moore et al. (1987) noted it also from North Queensland.

*C. smaragdulus* indeed is very similar to *C. moorei*, but is slightly smaller and differently coloured. It was described from Java and occurs from eastern India and Burma through the Greater and some of the Lesser Sunda Islands. Most probably, therefore, Darlington's and Moore's records from New Guinea, New Britain, and northern Australia actually refer to *C. moorei* which is the vicariant of *C. smaragdulus* in the Papuan-Australian Region. This would also mean that North Queensland was quite recently colonized by this species which is one of the striking New Guinean immigrants that are so common in the rain forests of Cape York Peninsula. However, as I have seen a specimen from Endeavour River near Cooktown which is well at the base of Cape York Peninsula, this species already more deeply immigrated into Australia than it was known so far.

Distribution

North Queensland, New Guinea, New Britain, Aru Islands.

Additional records (9 ex)

**Queensland:** Bamaga, 19.-20.5.1993, M. Baehr (CBM); 15.24S 145.03E Endeavour River, 19.Jan 1994,P. Zborowski, E. D. Edwards (ANIC); North Queensland (SMTD). – **Papua New Guinea:** Lake Murray, Western District, Papua, R. Hornabrook, 7.11.74 (MNZ); Madang Prov. L. Cizek lgt. / S 5°08', E 145°46' Baitabag vil-lage 50m a.s.l. I-III 1999 (NHMB). – **Papua Indonesia:** Jutefa Bay. Pim. sea level-100 ft.II.1936 L. E. Cheesman B.M.1936;-271. / *Catascopus smaragdulus* Dej. det. 1966 Darlington / clearly mislabelled det. R. G. Booth 2005 (NHM); Nabire Dist. Mt. Botak nr. Kwatisore, 150m, 8.1998, leg. Wendesi (CBM); West Papua, v. Nabire nach Mapia, km 145, Eipomani, 26.7.1996, Schüle/Stüben (CBM). – **Aru Is.:** Aru Is. H. Elgner / W. W. Froggatt Coll-ection (ANIC) - **Tenimber Islands:** Yamdena is. 20kmNE Saumlaki: Lorulun 150m XII-2006 lgt. S. Jakl (CWB).



## Remarks

Even with the present examination which is based on a quite large number of as well old as recently sampled specimens, neither the actual species diversity of the genus *Catascopus* in the Oriental-Papuan-Australian area, nor the ranges of the various taxa are sufficiently recorded. This is demonstrated by the fairly great number of taxa, species and subspecies, which are so far recorded only by a single specimen or from a single locality. Although some taxa apparently are very common, others seem to be very rare, on whatever reasons. And their rarity not always is due to their occurrence on a (small) island, because some of these rare taxa occur on continents or large islands like New Guinea.

Nevertheless, some general trends can be already drawn from the present paper. 1. The diversity, or number of taxa, in the southern Oriental and Papuan regions in general is much greater than it was known before. This at least refers to the *laevipennis*- and *facialis*-groups. 2. It is in particular the Moluccas including Sulawesi, and New Guinea which seem to host a particularly rich *Catascopus* fauna. 3. The *laticollis*-group and even more so, the *facialis*-group, in the mentioned area possess a large number of extremely closely related taxa, be it species or subspecies, which suggests a quite recent evolution and diversification within the mentioned groups.

The reasons for this great species diversity and for the apparent rather recent diversification in the Moluccas may be ascribed to the great number of closely neighbouring islands which, however, are different to some extent in their size, surface morphology, and habitat structures. Given the colonization of the Moluccas from the north, or north-west, it is easily comprehensible, why the evolution and the development of new taxa occurred quite rapidly.

In the great island of Sulawesi the situation is similar to some extent, because Sulawesi, although today forming a single island, was composed from different terranes which perhaps brought with them different taxa.

In the compact island of New Guinea, on the other hand, although it is composed in a similar way from different terranes, it may be rather the remarkably rugged surface of large parts of this island which gives it a sort of insular appearance, that accounts for the high species diversity in the genus *Catascopus*. A similar high diversity is known also in many other New Guinean carabid and non-carabid groups.

Although a phylogenetic survey of the genus *Catascopus* has not been done so far, and is outside of the scope of this paper, a short view to some peculiar characters of the external morphology immediately reveals some very probable evolutionary trends. Some most probable apomorphic characters are enumerated below.

1. Development of acute angles or spines on the apex of the elytra.
2. Narrowing of certain elytral intervals which eventually has led to the formation of carinate intervals.
3. Augmentation of the marginal setae of the pronotum
4. Increase of body size

When compared with mainland Asia, and even with the Greater Sunda Islands, the southern Oriental and Papuan-Australian areas are particularly rich in 1. large species, 2. species with spinose elytral apex, 3. species with additional marginal pronotal setae. Indeed, the last species-group exclusively occurs in the Moluccan-New Guinean-Australian area including Sulawesi.

In view of the general distribution of the genus *Catascopus*, which extends over the Afrotropical and Neotropical Regions, it is obvious that the colonization of the southern part of its range in the Oriental, Papuan, and Australian Regions occurred from the north and north-west. This means that the Moluccas, New Guinea, and Australia were colonized rather late, i.e. after the Australian plate came in contact with the Asian continent and after New Guinea emerged from the sea. It is understandable, thus, that these areas were mainly colonized by species or species-groups which were apomorphic in certain respects.

## Acknowledgements

I am grateful to following museum curators and private collectors for the kind loan or gift of *Catascopus* specimens and types: K. Ando (Tokyo), F. van Assen (Leiden), M. Balke (München), M. Barclay (London), S. Bílý (Prague), R. Booth (London), P. Bouchard (Ottawa), D. Britton (Sydney), R. Davidson (Pittsburgh), T. Deuve (Paris), A. Drumont (Bruxelles), B. Garner (London), M. Geiser (Basel), R. Gerstmeier (München), M. Häckel (Prague), M. Hartmann (Erfurt), A. Hetzel (Seeheim-Jugenheim), S. Hine (London), R. W. Hornabrook (Wellington), P. Hudson (Adelaide), M. Humphreys (Sydney), O. Jäger (Dresden), J. Krikken (Leiden), C. Lemmann (Canberra), W. Lorenz (Tutzing), O. Martin (Kopenhagen), G. B. Monteith (Brisbane), A. Riedel (Karlsruhe), H. Rudolph (Quedlinburg), W. Schawaller (Stuttgart), J. Schmidt (Admannshagen), H. Schönmann (Wien), P. Schüle (Denzlingen), A. Skale (Bayreuth), the late R. Storey (Mareeba), A. Szito (Perth), A. Taghavian (Paris), A. Wiegand (Pößneck), T. Weir (Canberra), S. Winterton (Brisbane), D. Wrase (Berlin), H. Zettel (Wien).

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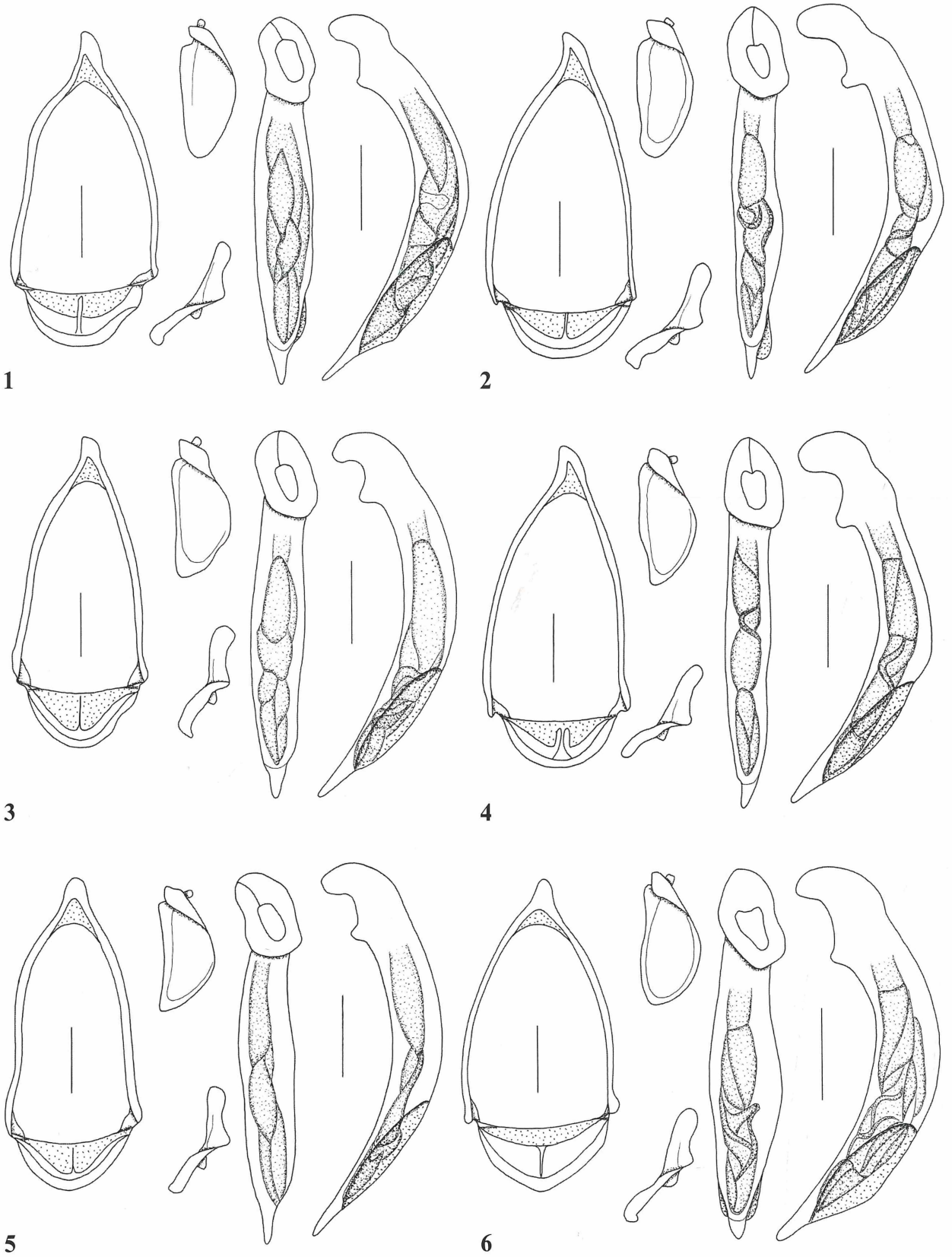
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#### Alphabetical checklist of the species mentioned in the present paper with information about their distribution

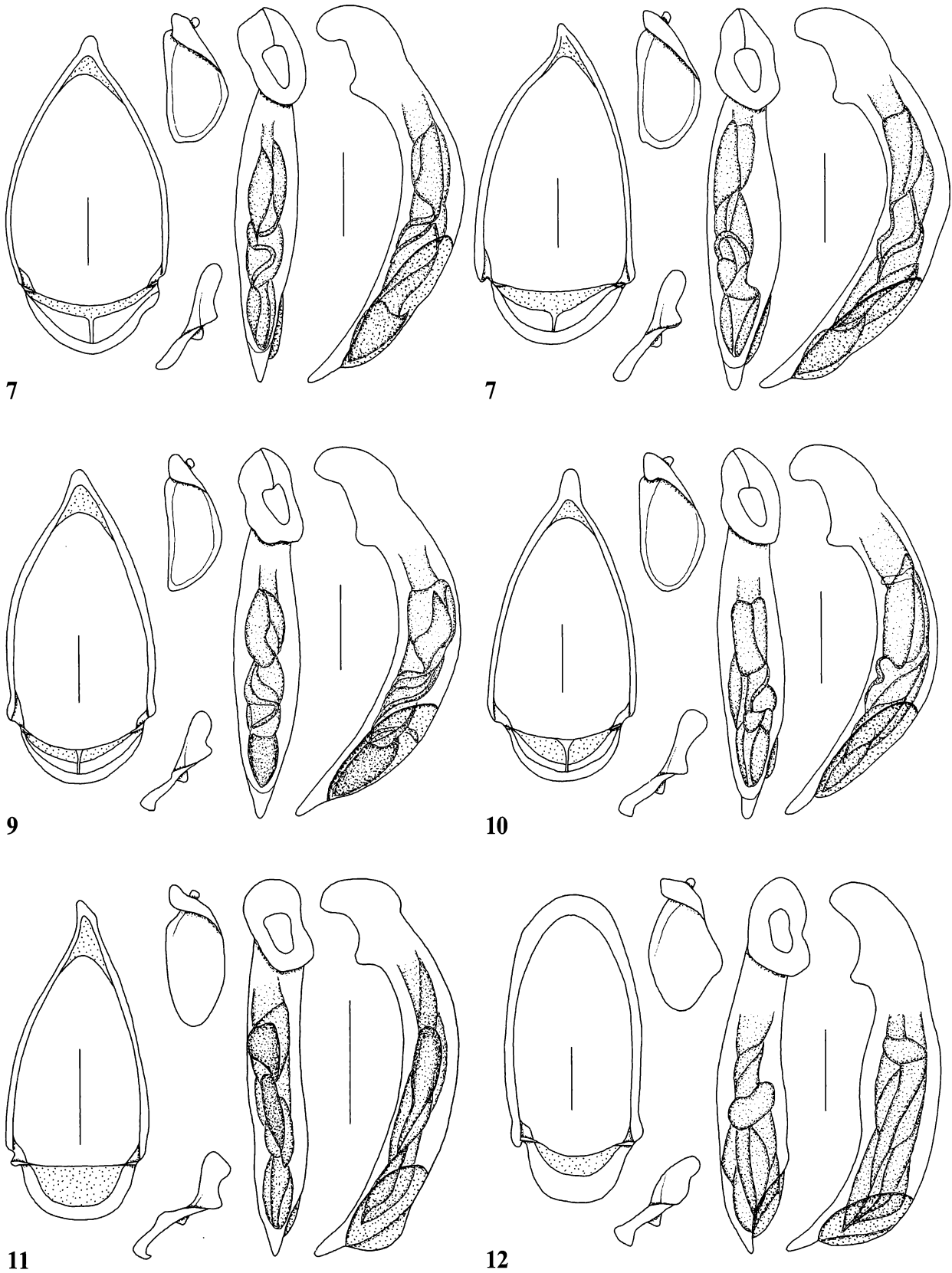
<i>agnathus</i> Chaudoir, 1872.....	Sulawesi
<i>alesi</i> Jedlicka, 1935.....	Philippine Is.
<i>andamanensis</i> Chaudoir, 1877.....	Andaman Is.
<i>angulatus</i> Chaudoir, 1861.....	Malaysia, Sumatra, Java
<i>angustatus</i> sp. n. ....	ne. Australia
<i>astrum</i> sp. n. ....	ec. Papua Indonesia
<i>balthasari</i> Jedlicka, 1935.....	Philippine Is.
<i>borneensis</i> sp. n. ....	Malaysia, Sumatra, Borneo
<i>carinipennis</i> sp. n. ....	Moluccas: Seram Is., Ambon Is., Buru Is.
<i>cuprascens</i> nom. nov. ....	Borneo, Sumatra
<i>cyanoviridis</i> sp. n. ....	Moluccas: Seram Is.
<i>elegans amoenus</i> Chaudoir, 1861.....	New Guinea, Japen Is., Salawati Is., Goodenough Is., New Britain
.....	Aru Is., Kei Is.
<i>elegans andamanicus</i> subsp. n. ....	Andaman Is.
<i>elegans australasiae</i> Hope, 1842.....	n. Australia
<i>elegans biakensis</i> subsp. n. ....	Papua Indonesia: Biak Is.
<i>elegans elegans</i> (Weber, 1801).....	ce. India, Burma, Thailand, Laos, Vietnam, sw.China, Malaysia,
.....	Sumatra, Borneo, Java, Bali, Lombok, Sumbawa, Flores, Andonare Is.
<i>elegans lateralis</i> Brullé, 1834.....	Sulawesi, Moluccas: Halmahera Is., Bacan Is., Buru Is., Seram Is.
<i>elegans philippinus</i> subsp. n. ....	Philippine Is.
<i>elegans salomonicus</i> subsp. n. ....	Solomon Is.: Guadalcanal, New Georgia
<i>elegans scintillans</i> Bates, 1892.....	n. India, Nepal, Sikkim, Assam
<i>elegans viridans</i> subsp. n. ....	se. Sulawesi
<i>elegantulus</i> Jedlicka, 1935.....	Philippine Is.
<i>elevatus</i> Schmidt-Goebel, 1846.....	Burma, Philippine Is.
<i>facialis</i> (Wiedemann, 1818).....	n. India, Nepal, Burma, Thailand, Laos, sw. China, Malaysia, Sumatra
<i>femoratus</i> sp. n. ....	Sulawesi
<i>fraterculus</i> sp. n. ....	Sulawesi
<i>grimmi</i> sp. n. ....	Bali, Java, Sumbawa
<i>hardwickei</i> Kirby, 1825.....	India

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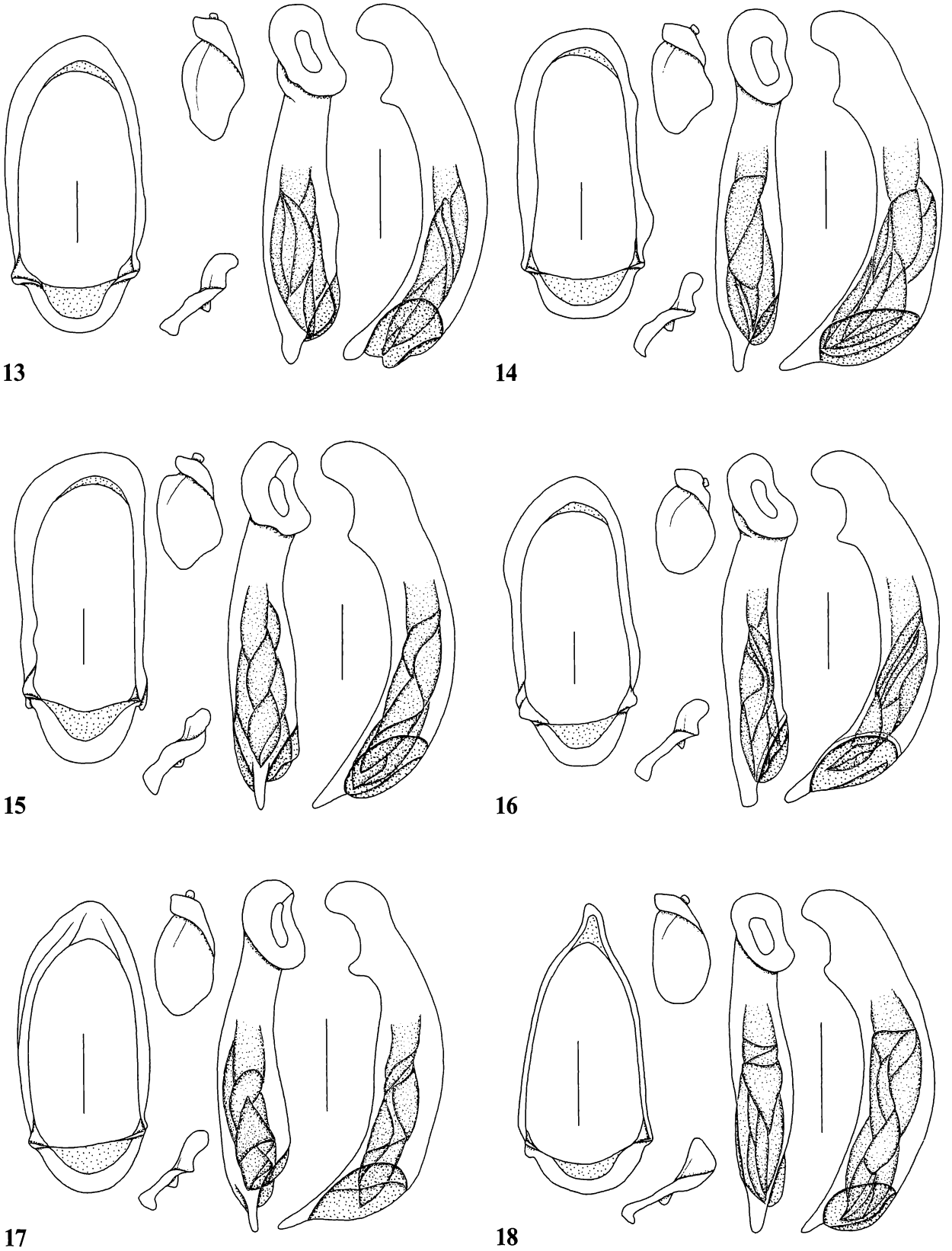
<i>hinei</i> Straneo, 1994 .....	Tenimber Is.
<i>ignicinctus</i> Bates, 1883 .....	Japan, China, Taiwan, Laos
<i>impressipennis</i> sp. n. ....	nw. Thailand, Laos, sw. China
<i>jenkinsi</i> Andrewes, 1937 .....	ne. India: Assam
<i>laevigatus laevigatus</i> Saunders, 1863 .....	Moluccas, Sulawesi
<i>laevigatus aruanus</i> subsp. n. ....	Aru Is., Buru Is.
<i>laticollis</i> Macleay, 1983 .....	ne. Australia
<i>latus</i> Darlington, 1968 .....	New Guinea
<i>magnicollis</i> sp. n. ....	Moluccas: Morotai Is., Bacan Is.
<i>moorei</i> Straneo, 1994 .....	ne. Australia, New Guinea, New Britain, Aru Is., Tenimber Is.
<i>platypennis</i> sp. n. ....	New Guinea
<i>punctatostriatus</i> sp. n. ....	n. Vietnam
<i>riedeli</i> Baehr, 1997 .....	w. Papua Indonesia
<i>sidus darlingtoni</i> subsp. n. ....	Papua Indonesia
<i>sidus japensis</i> subsp. n. ....	Papua Indonesia: Japen Is.
<i>sidus pupurascens</i> subsp. n. ....	ne. Papua New Guinea: Huon Pen.
<i>sidus sidus</i> Darlington, 1968 .....	c. Papua New Guinea
<i>simillimus</i> Straneo, 1994 .....	n. Thailand, Laos
<i>strigifrons</i> sp. n. ....	Sumatra
<i>virens</i> Chaudoir, 1872 .....	Sulawesi, Moluccas: Halmahera Is., Seram is.
<i>viridis</i> Jedlicka, 1935 .....	Philippine Is.
<i>waigeoensis</i> sp. n. ....	Papua Indonesia: Waigeo Is.
<i>weigeli</i> sp. n. ....	Moluccas: Halmahera Is., Ternate Is., Bacan Is., ? New Guinea



**Figs 1-6:** Male genitalia: aedeagus (left side), left and right parameres, genital ring. Scale bars: 0.5 mm. (1) *Catascopus laevigatus laevigatus* Saunders. (2) *C. laevigatus aruanus* subsp. n. (3) *C. laticollis* Macleay. (4) *C. platypennis* sp. n. (5) *C. waigeoensis* sp. n. (6) *C. sidus sidus* Darlington.

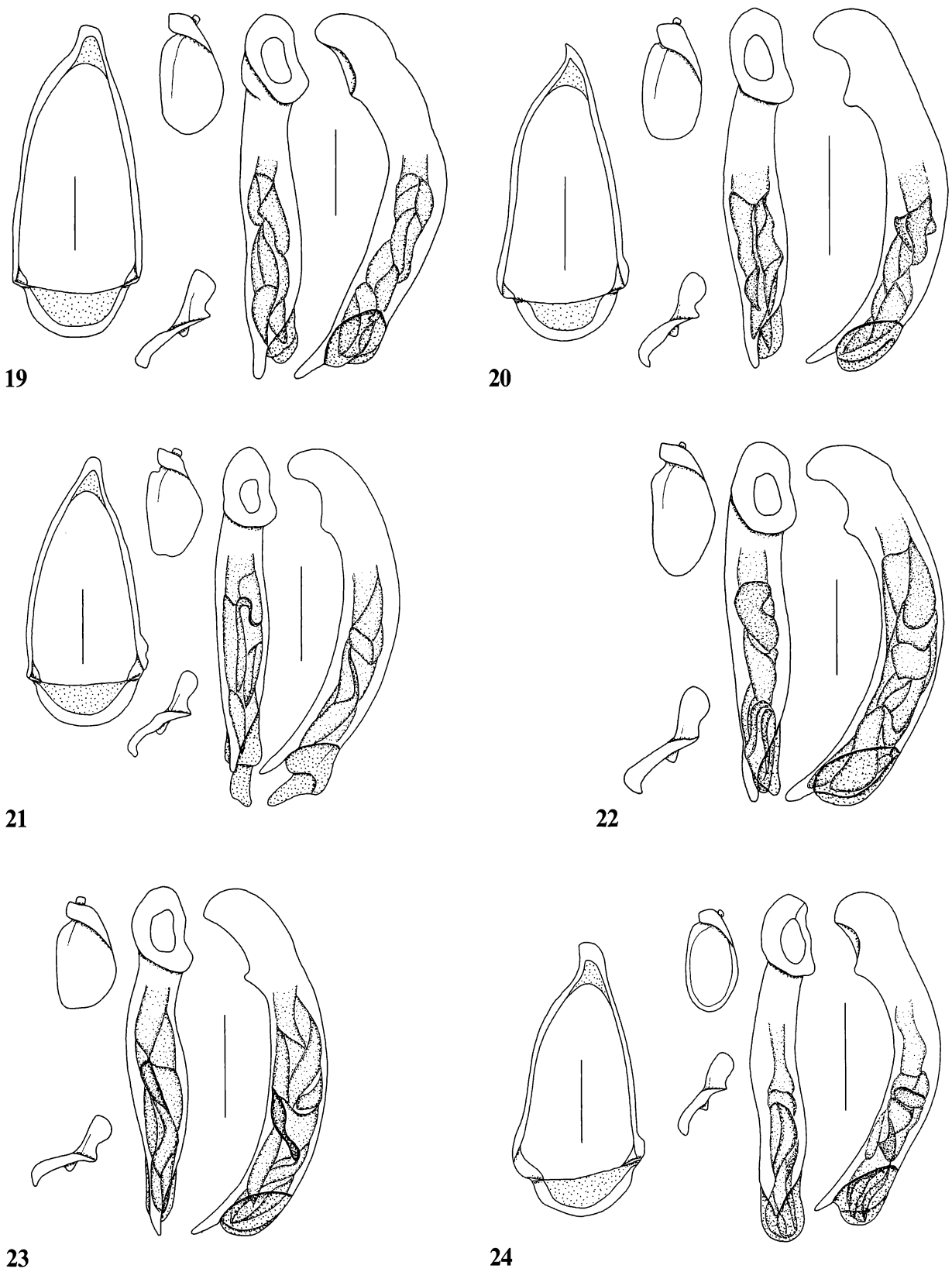


**Figs 7-12:** Male genitalia: aedeagus (left side), left and right parameres, genital ring. Scale bars: 0.5 mm. (7) *C. sidus darlingtoni* subsp. n. (8) *C. sidus japensis* subsp. n. (9) *C. astrum* sp. n. (10) *C. angustatus* sp. n. (11) *C. impressipennis* sp. n. (12) *C. ignicinctus* Bates.

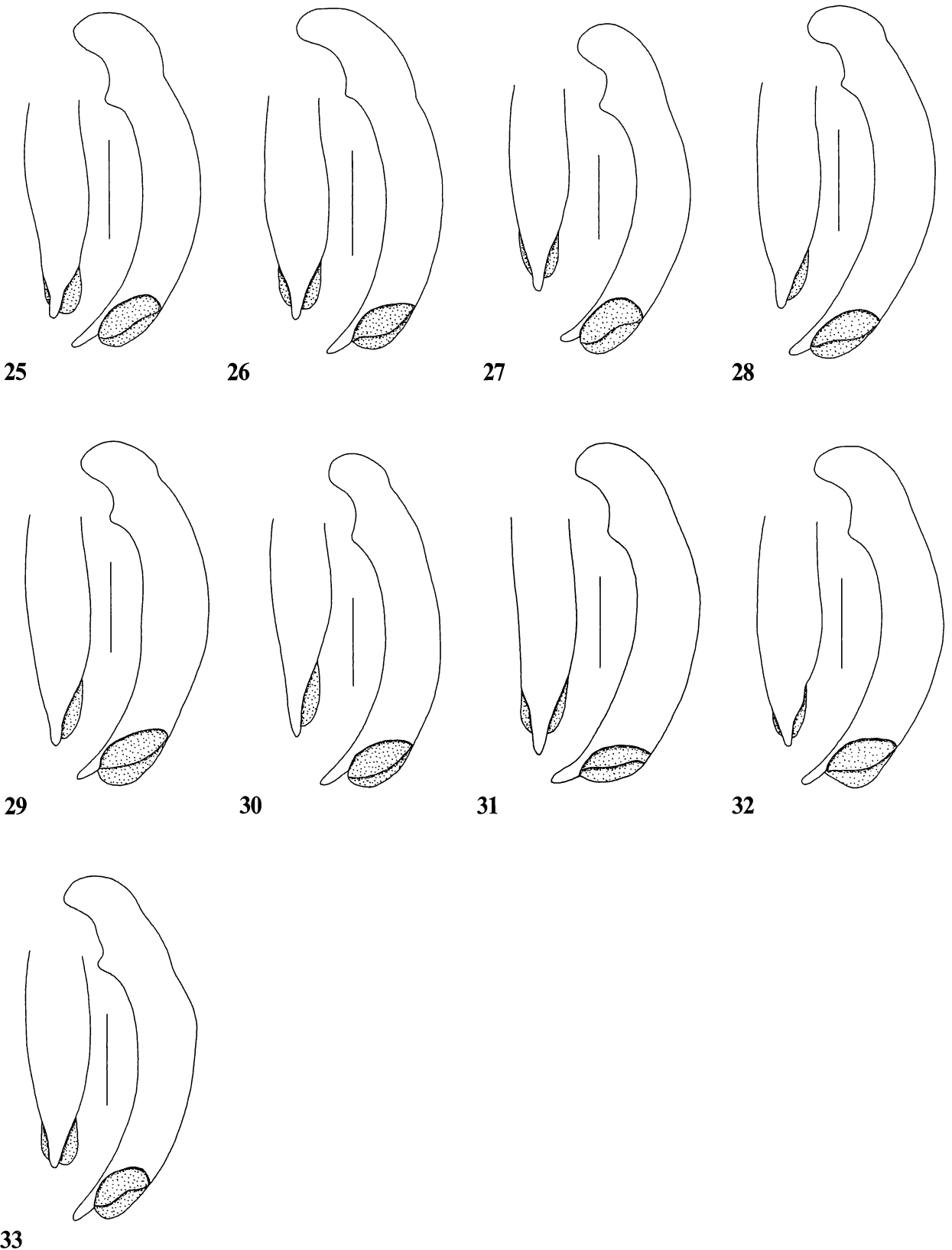


**Figs 13-18:** Male genitalia: aedeagus (left side), left and right parameres, genital ring. Scale bars: 0.5 mm. (13) *C. viridis* Jedlicka. (14) *C. elegantulus* Jedlicka. (15) *C. simillimus* Straneo. (16) *C. virens* Chaudoir. (17) *C. strigifrons* sp. n. (18) *C. hardwickei* Kirby.

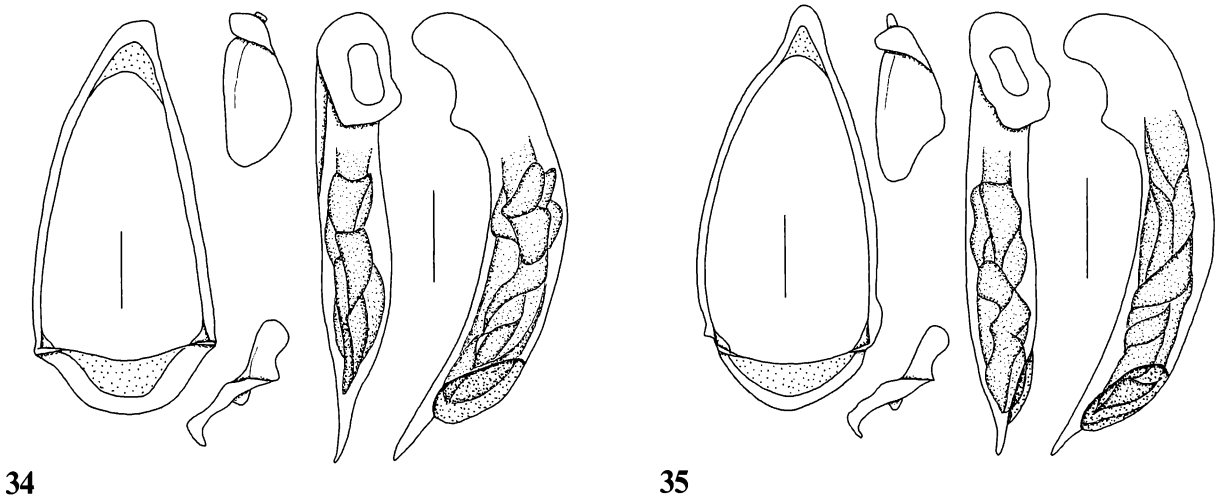




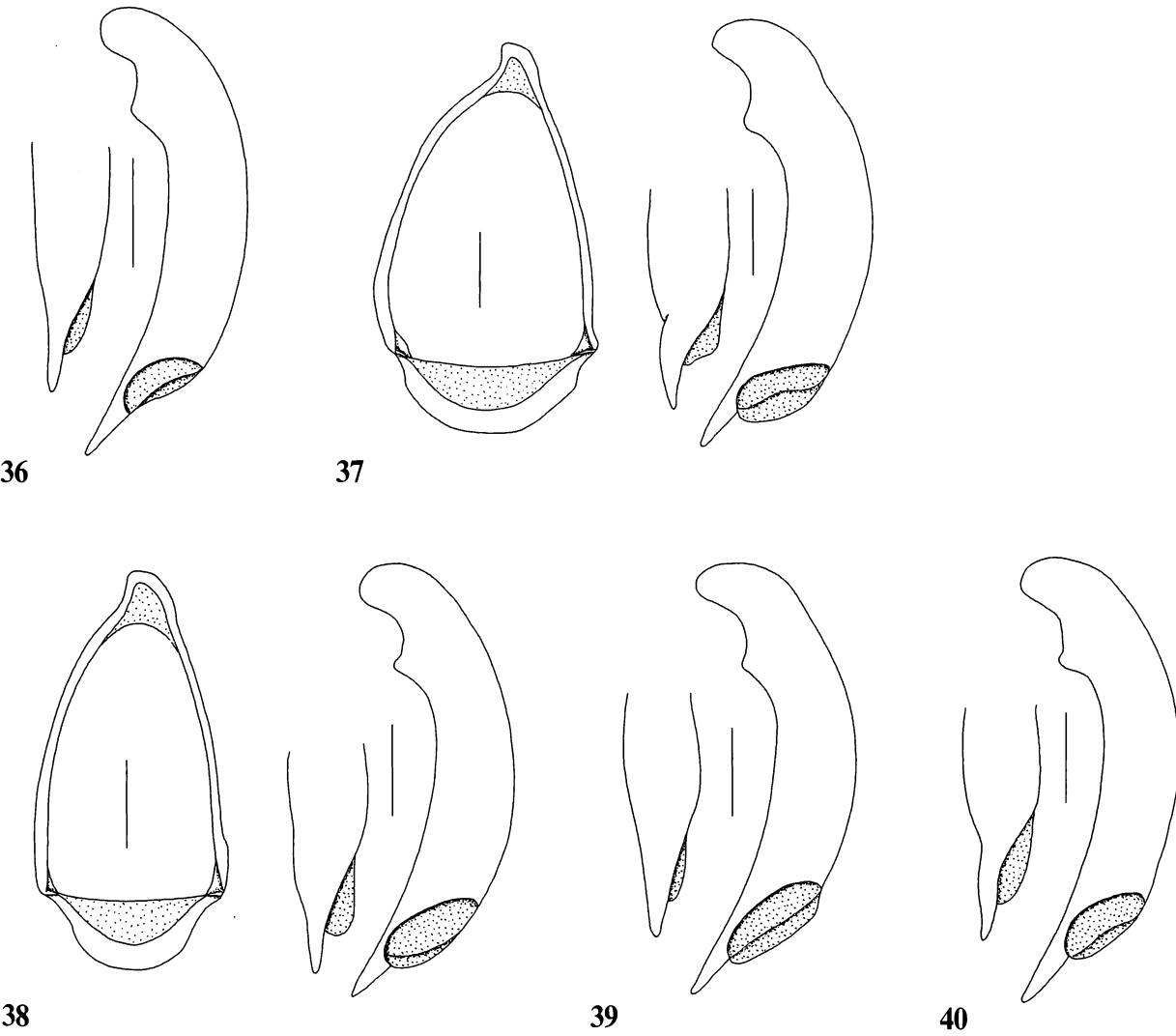
**Figs 19-24:** Male genitalia: aedeagus (left side), left and right parameres, genital ring. Scale bars: 0.5 mm. **(19)** *C. femoratus* sp. n. **(20)** *C. fraterculus* sp. n. **(21)** *C. balthasari* Jedlicka. **(22)** *C. hinei* Straneo. **(23)** *C. elevatus* Schmidt-Goebel. **(24)** *C. elegans elegans* (Weber).



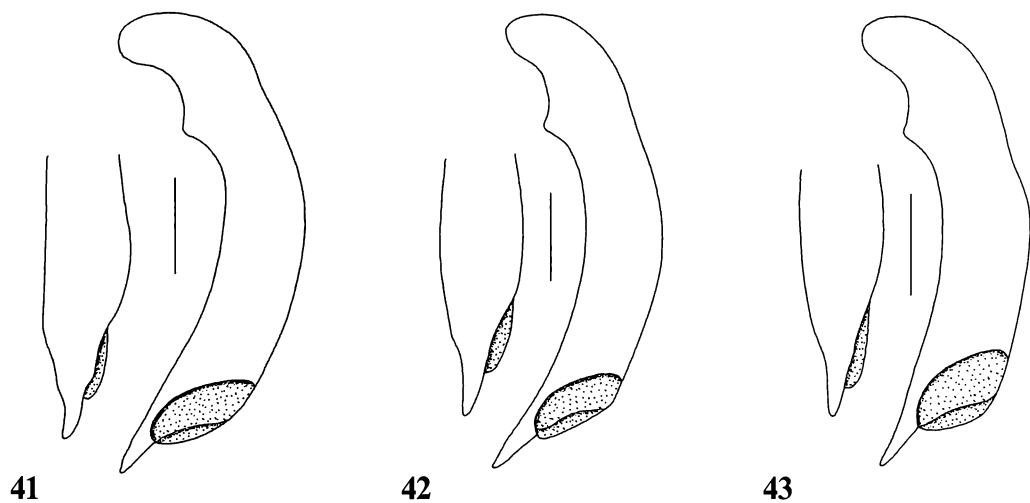
**Figs 25-33:** Male genitalia: Aedeagus left side, lower surface of apex; internal structures not figured. Scale bars: 0.5 mm. (25) *Catascopus elegans scintillans* Bates. (26) *C. elegans andamanicus* subsp. n. (27) *C. elegans philippinus* subsp. n. (28) *C. elegans lateralis* Brullé. (29) *C. elegans amoenus* Chaudoir. (30) *C. elegans biakensis* subsp. n. (31) *C. elegans australasiae* Hope. (32) *C. elegans cyaneus* Chaudoir. (33) *C. elegans salomonicus* subsp. n.



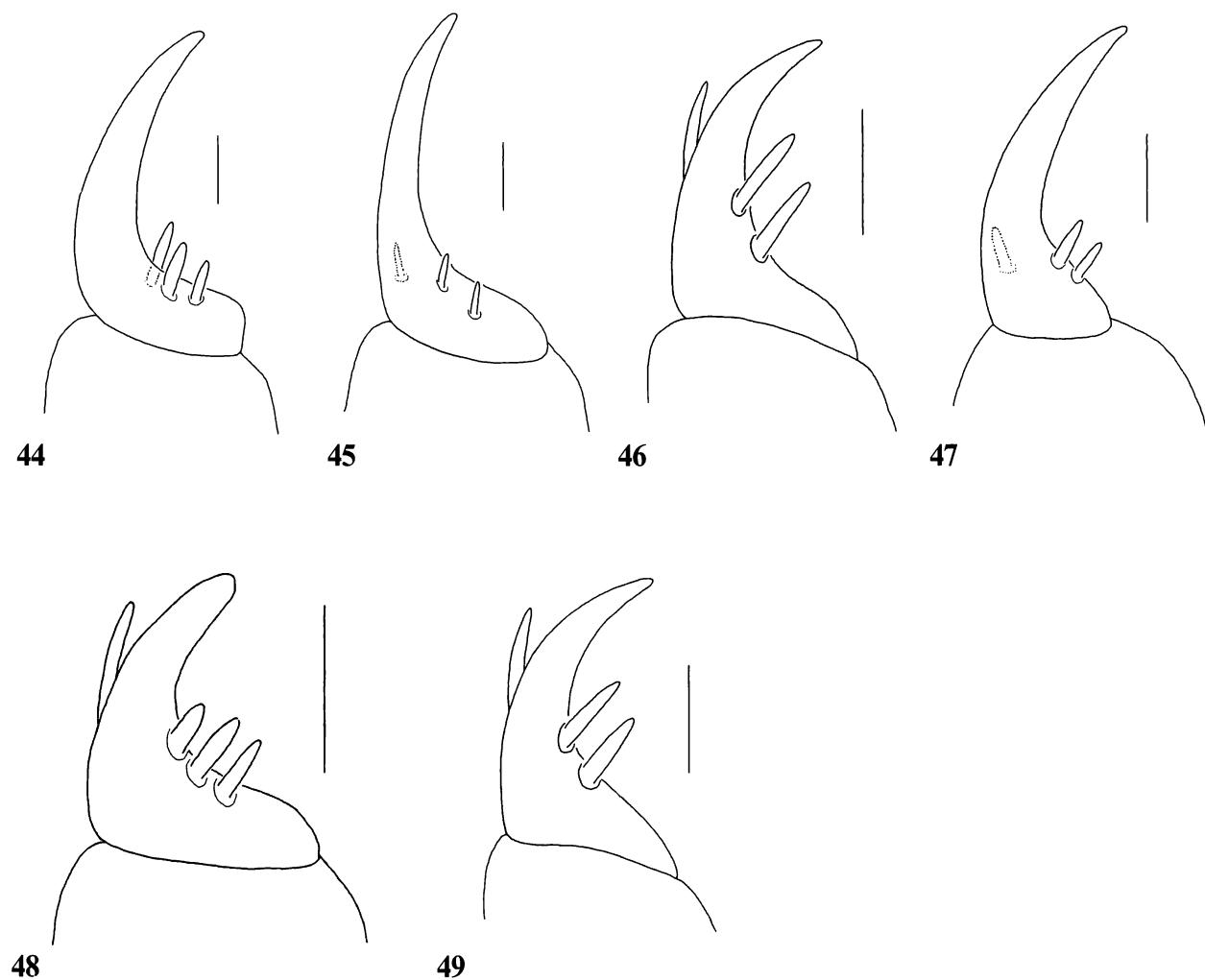
**Figs 34-35:** Male genitalia: aedeagus (left side), left and right parameres, genital ring. Scale bars: 0.5 mm. **(34)** *Catascopus facialis* (Wiedemann). **(35)** *C. andamanensis* Chaudoir.



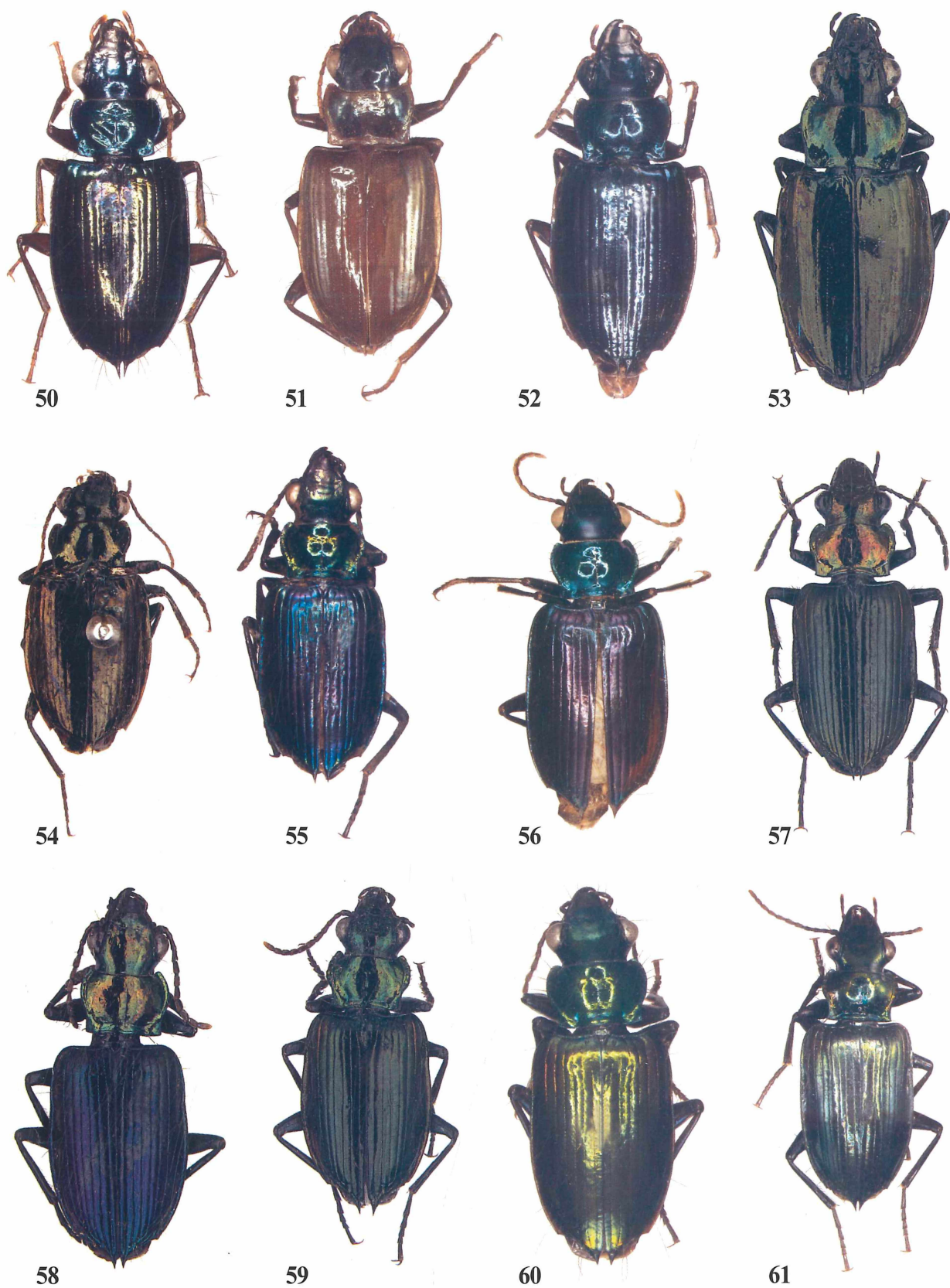
**Figs 36-40:** Male genitalia: Aedeagus left side, lower surface of apex; internal structures not figured. Scale bars: 0.5 mm. **(36)** *Catascopus cuprascens* sp. n. **(37)** *C. angulatus* Chaudoir. **(38)** *C. borneensis* sp. n. **(39)** *C. agnathus* Chaudoir. **(40)** *C. grimmi* sp. n.



**Figs 41-43:** Male genitalia: Aedeagus left side, lower surface of apex; internal structures not figured. Scale bars: 0.5 mm. (41) *C. magnicollis* sp. n. (42) *C. cyanoviridis* sp. n. (43) *C. weigeli* sp. n.



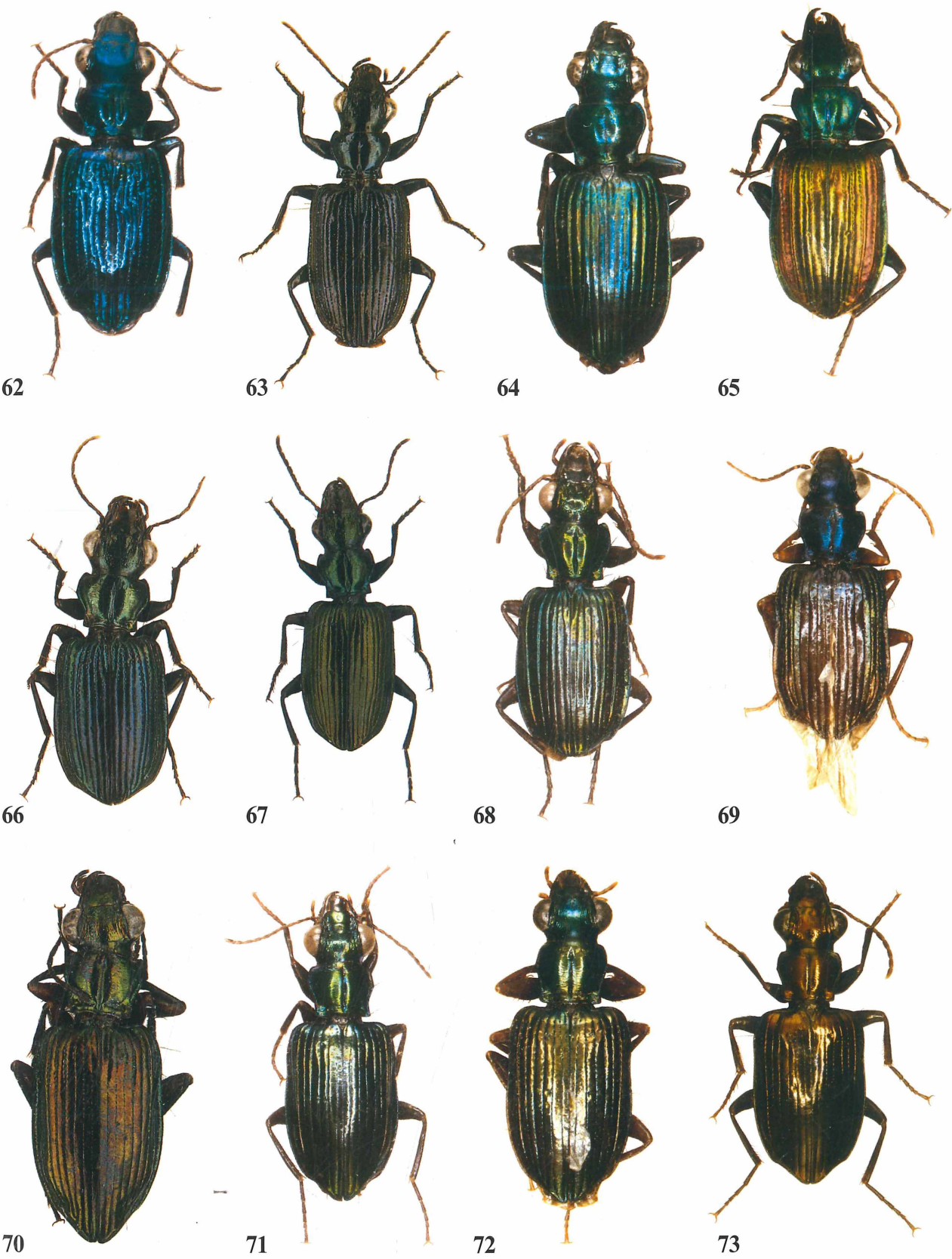
**Figs 44-49:** Female gonocoxites 1 and 2 (Scale bars: 0.1 mm). (44) *Catantopus laticollis* Macleay. (45) *C. sidus darlingtoni* subsp. n. (46) *C. impressipennis* sp. n. (47) *C. virens* Chaudoir. (48) *C. elegans amoenus* Chaudoir. (49) *C. facialis* (Wiedemann).



**Figs 50-61:** Habitus (body length in brackets). (50) *Catascopus laevigatus laevigatus* Saunders (10.2 mm). (51) *C. laevigatus aruanus* subsp. n. (10.4 mm). (52) *C. laticollis* Macleay (11.5 mm). (53) *C. platypennis* sp. n. (10.8 mm). (54) *C. waigeoensis* sp. n. (10.4 mm). (55) *C. sidus sidus* Darlington (12.2 mm). (56) *C. sidus purpurascens* subsp. n. (11.8 mm). (57) *C. sidus darlingtoni* subsp. n. (13.5 mm). (58) *C. sidus japensis* subsp. n. (12.5 mm). (59) *C. astrum* sp. n. (12.8 mm). (60) *C. riedeli* Baehr (10.2 mm). (61) *C. angustatus* sp. n. (12.0 mm).



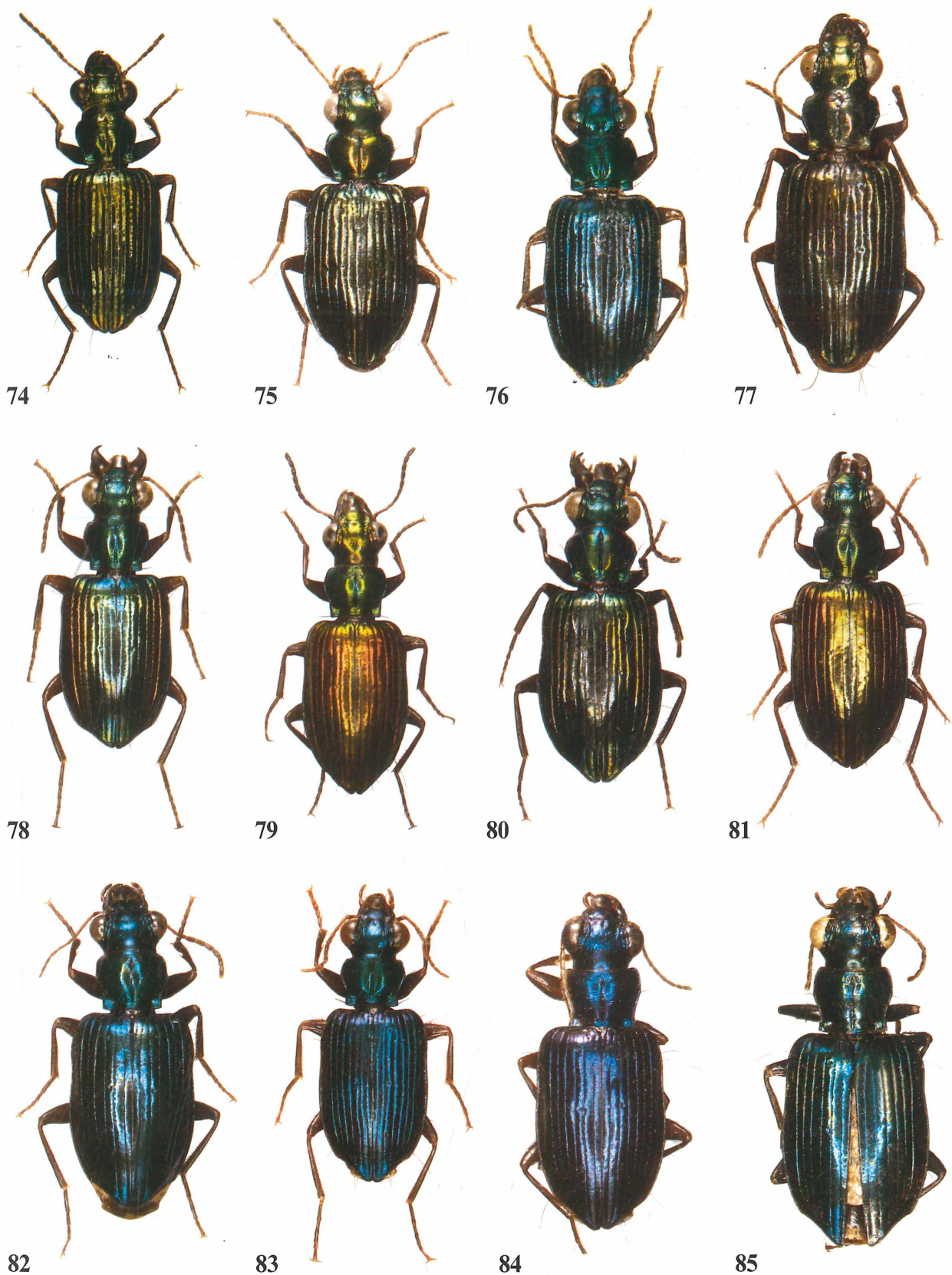




**Figs 62-73:** Habitus (body length in brackets). (62) *C. impressipennis* sp. n. (7.7 mm). (63) *C. ignicinctus* Bates (11.6 mm). (64) *C. viridis* Jedlicka (9.8 mm). (65) *C. elegantulus* Jedlicka (9.7 mm). (66) *C. simillimus* Straneo (10.4 mm). (67) *C. virens* Chaudoir (10.7 mm). (68) *C. strigifrons* sp. n. (9.1 mm). (69) *C. hardwickei* Kirby (8.9 mm). (70) *C. femoratus* sp. n. (10.3 mm). (71) *C. fraterculus* sp. n. (7.7 mm). (72) *C. balthasari* Jedlicka (7.2 mm). (73) *C. hinei* Straneo (9.1 mm).

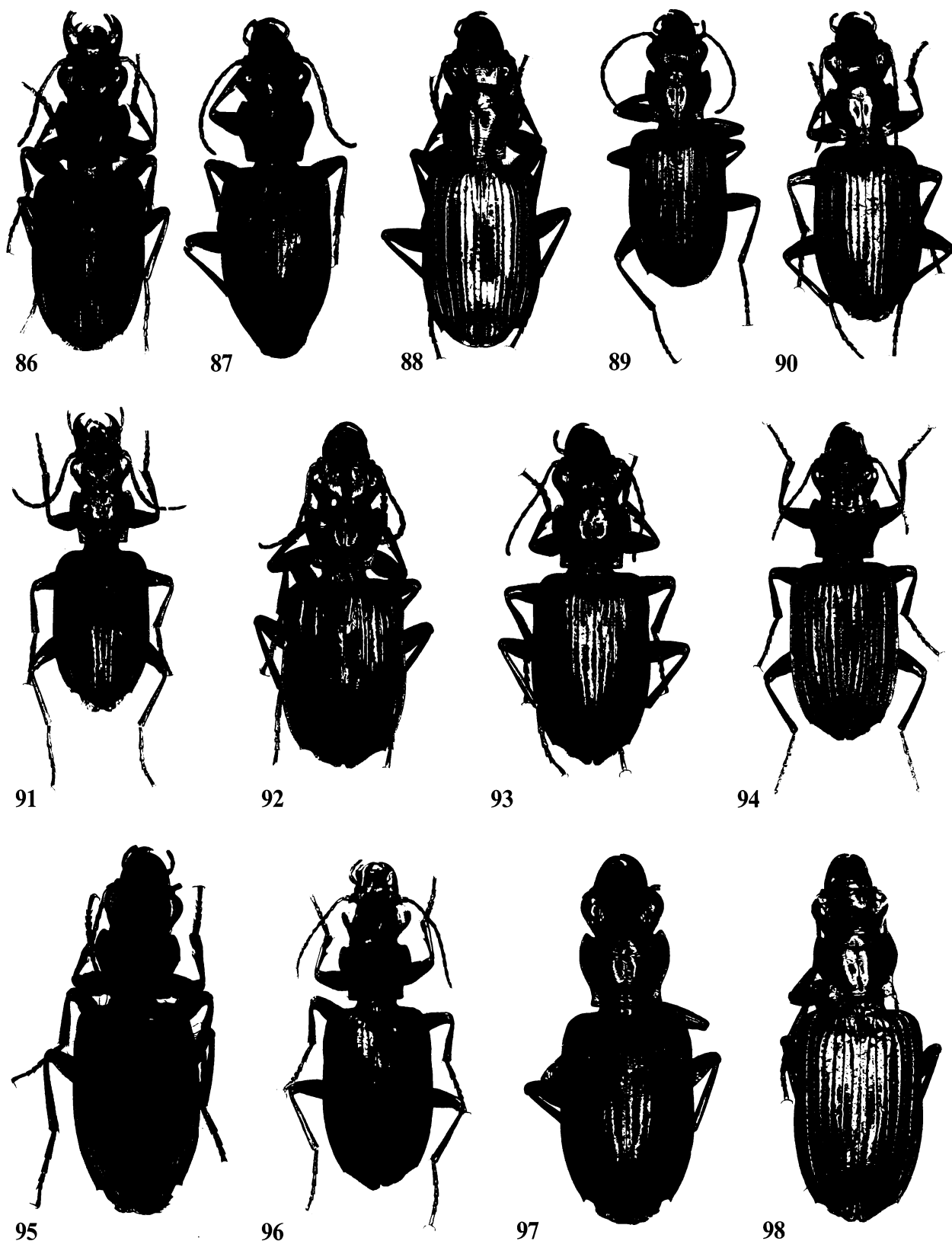






**Figs 74-85:** Habitus (body length in brackets). (74) *C. elevatus* Schmidt-Goebel (8.2 mm). (75) *C. elegans elegans* (Weber) (8.3 mm). (76) *C. elegans scintillans* Bates (8.9 mm). (77) *C. elegans andamanicus* subsp. n. (8.8 mm). (78) *C. elegans philippinus* subsp. n. (8.5 mm). (79) *C. elegans lateralis* Brullé (8.7 mm). (80) *C. elegans viridans* subsp. n. (9.1 mm). (81) *C. elegans amoenus* Chaudoir (8.8 mm). (82) *C. elegans biakensis* subsp. n. (9.0 mm). (83) *C. elegans australasiae* Hope (9.8 mm). (84) *C. elegans cyaneus* Chaudoir (9.7 mm). (85) *C. elegans salomonius* subsp. n. (10.2 mm).





**Figs 86-98:** Habitus (body length in brackets). (86) *C. facialis basalis* Chaudoir (14.1 mm). (87) *C. andamanensis* Chaudoir (12.0 mm). (88) *C. cuprascens* sp. n. (12.3 mm). (89) *C. angulatus* Chaudoir (13.7 mm). (90) *C. borneensis* sp. n. (11.5 mm). (91) *C. agnathus* Chaudoir (13.2 mm). (92) *C. grimmi* sp. n. (13.6 mm). (93) *C. magnicollis* sp. n. (13.3 mm). (94) *C. cyanoviridis* sp. n. (13.2 mm). (95) *C. carinipennis* sp. n. (12.6 mm). (96) *C. weigeli* sp. n. (12.4 mm). (97) *C. alesi* Jedlicka (11.7 mm). (98) *C. punctatostriatus* sp. n. (11.7 mm).

