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REVISION OF THE AUSTRALIAN SPECIES OF THE GENUS *STENUS* LATREILLE (COLEOPTERA; STAPHYLINIDAE)*

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Abstract

A revision of all Australian *Stenus* species hitherto described (20 species, 1 syn. nov.), including lectotypology of the Macleay species, and diagnoses of six new species are given. Phylogenetic analysis shows that there are seven species groups in Australia, four of them monophyletic and the other three not clear at present. One group (containing most of the species) is Australian, three Oriental, and three Papuan. Pleistocene land connection between New Guinea and Queensland explains the high number of species and species groups in NE. Australia, and the occurrence of three taxa common to Papua and Queensland.

Introduction

The staphylinid genus *Stenus* Latr. is one of the largest genera of the world (about 1400 described species). It is distributed over nearly all the world except (apparently) New Zealand—a striking fact already noted by Fauvel (1903). Occurrence of *Stenus* in Tasmania is not known at present but highly probable.

The first *Stenus* species from Australia were described by Macleay (1871), who gave very short diagnoses without subgeneric subdivisions. Fauvel (1877, 1878) redescribed most of those species from original material, arranged them in subgenera, and described new species. The other taxa were published by Waterhouse (1877), Blackburn (1891), Lea (1899), and Benick (1926, 1928); total number 23. My revision is based on the types and other material of most of the Australian and European museums, which provided 600 specimens for study. If there is any material in a collection not revised by me, I would be glad to get it for study.

The type of only one species (*viridiaeneus* Macleay) has not been found in any of the collections quoted below.

1. The *cupreipennis*-group in defined by characters of the last abdominal segments, aedeagus, short and cordiform prothorax, and the concave front. Species of that group are also known from New Guinea (*prismalis* Fauvel, *illiesi* Puthz), New Britain (*dahli* L. Benick), and the Solomons (*aphrodite* Puthz, *aglaia* Puthz). Because at present I do not know definite relations to Oriental species groups I assume that this group is an autochthonous-Australian group.
2. *cursorius*-group (1 species *cursorius* L. Benick 2·6%)
   The monophyletic *cursorius*-group (sister-group: the Oriental *simulans*-group) is an Indo-African group (cf. Puthz in press a). *Stenus cursorius* is euryoecous and also known from Timor and New Guinea. It might have invaded the northern parts of Australia over the land connections during the last glacial period or by active dispersal later.
3. *piliferus*-group (3 taxa 7·8%, *piliferus, obesulus, hornensis, gayndahensis*)
   This is also a monophyletic group, well defined by the last abdominal segments, aedeagus, short pronotum, and shining plaques on head and/or pronotum. Most of the taxa are distributed over the Oriental Region, some invaded Australia. *Stenus gayndahensis* should be regarded as a relatively young species because of its remarkable characters of the 9th sternite/valvifera (apomorphic).

* 72nd contribution to the knowledge of Steninae.

4. *coelestis*-group (2 species 5·2%, *pseudocoeruleus, improbus*)
   This group (monophyletic ?) has most of its species in the Papuan subregion. In Australia it is only found in Queensland and New South Wales where it must have come during the last glacial period.
5. *platythrix*-group (1 species 2·6%)
   Relatives in New Guinea, certainly also derived from the Papuan fauna.
6. *coeruleus*-group (1 species 2·6%), also phylogenetically belonging to the Papuan fauna. Sister-species *hestiocorus* Puthz living in New Britain and Manus Island.
7. *guttulifer*-group (4 species 10·5%, *guttulifer, bifenestratus, maculatus, pustulifer*)
   This group contains the 4 Australian *Parastenus*. It is well characterized by the spermatheca of the female and the aedeagus. Close relatives are found in New Guinea (*thalassinus* Puthz, *magnificus* L. Benick, *gigas* L. Benick), other relatives: the Oriental *guttalis*-group (compare internal sac Puthz 1968). This species must be regarded as species incertae sedis. Two of the total number of described taxa have been synonymized by me previously (1968e, in press), one new synonymy is given here, and six new species are described below. Thus the present number of Australian *Stenus* species and subspecies is 26.

Compared with other tropical faunas, that of Australia is very poor (Africa and Madagascar 255, South America 279, Oriental Region 340), a fact which is understandable for ecologic and phylogenetic reasons. Most of the *Stenus* species need a high degree of humidity; they are ripicolous near creeks and lakes, and also humicolous (cryptic) in forests, only a very small number living in subhumid and semiarid climates.

Regarding the distribution of the Australian species (see map), nearly all live in areas with a yearly rainfall over 20 inches, most in places where the humidity is high.

The distribution of the 26 known taxa in Australia is: 22 in Queensland (85%), 12 in New South Wales (46%), 6 in Victoria (23%), 6 in W. Australia (23%), 3 in Perth (12%), 2 (+ 1, *villosiventris* ?) in Kimberley (12%), 2 in S. Australia (8%), 1 in the N. Territory (4%), 20 taxa have been found only in E. Australia (77%), 3 only in W. Australia (12%), 3 occur in E. and W. Australia (12%), and 3 live also in New Guinea (12%).

Thus Queensland has the highest number of taxa. This fact can be explained by phylogenetic analysis (and ecological reasons), which shows that there are seven phylogenetic groups in Australia of which at least four are monophyletic:

1. *cupreipennis*-group (13 + 1 species: *cupreipennis, puncticollis, janthinipennis, olivaceus, retitogatus, atrovirens, macellus, convexiusculus, leai, caviceps, villosiventris, neboissi, australicus* + *viridiaeneus* (?))

This is the largest group (36%), although monophyletic their species belong (according to definition) to two subgenera: *Stenus* s. str. and *Tesnus* Rey, which shows that our present subgeneric divisions do not agree with phylogenetic relationship, but are only helpful for identification (Puthz 1967, 1968). Certainly this group is also phylogenetically derived from the Oriental stock. Because of its distribution over Western Australia and the high degree of differentiation connections to the Oriental stem must have been broken in the Tertiary. The two species *maculatus* and *pustulifer* seem to be ecological vicariants.

Summarizing, it is evident that most of the groups are of Oriental or Papuan, i.e. extra-Australian, origin and that most of them occur in the NE. part of Australia, where rain forest is to be found. The 'strong inter-mixing of Papuan elements' is well known from this part of Australia (Hedley 1894, Troughton

1959, Gressitt 1961), the fauna of which has been characterized as 'atypical for Australia' by Toxopeus (1950).

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Abbreviations

BM = British Museum Natural History, London.
BMH = Bishop Museum, Honolulu.
CAS = California Academy of Sciences, San Francisco.
DASP = Department of Agriculture, S. Perth.
DEI = Deutsches Entomologisches Institut, Eberswalde.
MCZH = Museum of Comparative Zoology, Harvard University.
MLM = Macleay Museum, Sydney.
NMV = National Museum of Victoria, Melbourne.
QM = Queensland Museum, Brisbane.
SAM = S. Australian Museum, Adelaide.
SMF = Senckenberg-Museum, Frankfurt am Main.
UMQ = University of Queensland Museum, Brisbane.
WAMP = W. Australian Museum, Perth.
ZMB = Zoologisches Museum, Berlin.

1. **Stenus (s. str.) cupreipennis** Macleay, 1871

Stenus cupreipennis Macleay 1871, *Trans. Ent. Soc. N.S.W.* 2(2): 148
Stenus cupreipennis, Fauvel 1877, *Ann. Mus. Civ. Stor. Nat. Genova* 10: 209.
Stenus cupreipennis, Fauvel, 1878, *l.c.* 13: 502
Stenus cupreipennis, Lea, 1899, *Proc. Linn. Soc. N.S.W.* 23: 545.
Stenus cupreipennis, Scheerpeltz, 1935, *Rev. Suisse Zool.* 42: 652.

This remarkable species was found in numerous collections confounded with *S. puncticollis* Macleay, from which it is distinguished by its nearly smooth pronotum, differently emarginated 6th and 8th sternite of male and the aedeagus, of which the median lobe is somewhat broader than in *puncticollis* and the parameres which do not extend the median lobe.

♂ 7th sternite with a broad and deep emargination in posterior 7th of which the sides are somewhat elevated showing many whitish setae. 8th sternite with a narrow,

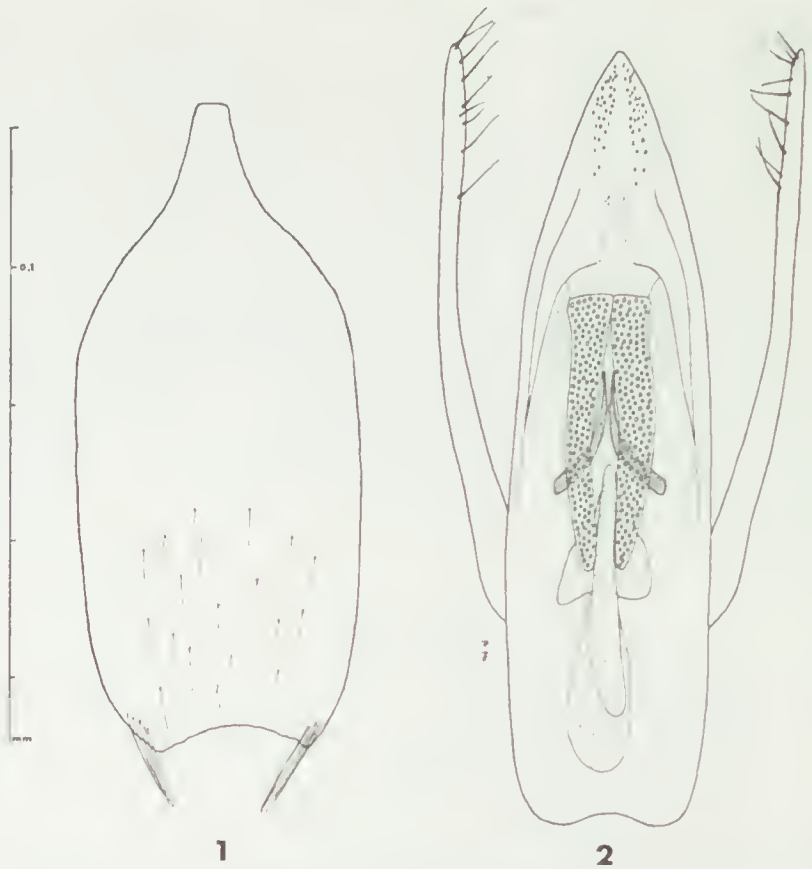

Fig. 1, 2—*Stenus cupreipennis* Macleay (Qld). 1: 9th sternite of ♂. 2: Ventral aspect of aedeagus.

moderately deep, triangular excision in posterior 12th. 9th sternite (fig. 1). Aedeagus (fig. 2).

Length of body: 4·0–4·8 mm.

Material examined: 2 ♂♂, 2 ♀♀ syntypes from Gayndah on two cards, ♂ lectotype, 1 *Stenus cupreipennis* Macl., Gayndah; 2 ♂ lectotype right/Puthz 1969; 3 ♀ paralectotype left/ Puthz 1969; 4 *Stenus cupreipennis* Macleay V. Puthz vid. 1969. Right antenna and right middle and posterior legs partly damaged. 2 ♀♀ –PLT ibid.; S.A.: 1 ♂ Adelaide (coll. Scheerpeltz); V: 1 ♂. 3 ♀♀ Mulgrave R., Hacker (DEI, coll. Benick); 2 ♂♂, 1 ♀ Goulburn R., Kerrisdale (NMV); 2 ♂♂ Kerrisdale (coll.m.); 2 ♂♂, 2 ♀♀ Eltham, Oke (NMV); 1 ♂, 5 ♀♀ Mooroopna, F. E. Wilson (NMV, SAM); 1 ♀ Warburton, Oke (NMV); 2 ♀♀ Melbourne, E. Fischer (NMV); 1 ♂, 2 ♀♀ Diamond Creek, Eltham, Dixon (NMV); Qld: 7 ♂♂, 2 ♀♀ Queensland (SMF, NMV, SAM, coll.m.); 2 ♂♂, 2 ♀♀ N. Queensland (QM); 3 ♂♂, 2 ♀♀ Gayndah (coll. Benick, coll. Fauvel); 1 ♀ Bundaberg, Moller (UMQ); 1 ♂ Gympie, Mooney (UMQ); 1 ♂, 1 ♀ Maryborough, in flood debris, E. W. Fischer (coll. Scheerpeltz); N.S.W.: 1 ♂, 5 ♀♀ Cairns, Hacker (UMQ); N.S.W.: 1 ♂ Narromine, Ferguson (CSIRO); 3 ♂♂, 2 ♀♀ Australia (NMV, coll.m.).

Distribution: S.A., V, N.S.W., Qld, ripicolous at creeks etc.

2. **Stenus (s. str.) puncticollis** Macleay, 1871

Stenus puncticollis Macleay 1871, *Trans. Ent. Soc. N.S.W.* 2(2): 149.
Stenus puncticollis, Fauvel, 1877, *Ann. Mus. Civ. Stor. Nat. Genova* 10: 209 f.
Stenus puncticollis, Fauvel, 1878, *l.c.* 13: 502 f.

♂ Ventral characters of abdomen about as in *cupreipennis*, but the 7th sternite with an apical emargination in posterior tenth, the emargination of sternite 8 less triangular, in posterior thirteenth. Aedeagus with a narrower median lobe than in *cupreipennis* and parameres which extend distinctly but moderately beyond the median lobe.

Length of body: 4·2–4·4 mm.

Material examined: 2 ♂♂ syntypes on one card from Gayndah ♂ lectotype, 1 *Stenus puncticollis*, Macl., Gayndah; 2 ♂ lectotype right/Puthz 1969; 3 ♂ Paralectotype left/Puthz 1969; 4 *Stenus puncticollis* Macleay vid. V. Puthz 1969. The lectotype is intact, the paralectotype has the abdomen, partly damaged by *Anthrenus*.

V: 1 ♀ Victoria (coll. Fauvel); 2 ♂♂, 6 ♀♀ Ringwood, Pottenger, Wilson (QM, NMV, coll.m.); 2 ♂♂, 1 ♀ Diamond Creek, Dixon (CSIRO); 1 ♂ Eltham, Oke (UMQ); 2 ♂♂ Beechworth, Oke (NMV); 3 ♂♂, 2 ♀♀ Belmore, Taylor, Carter (NMV); 1 ♂, 3 ♀♀ Caulfield, Oke (NMV); 1 ♂, 2 ♀♀ Mts. Vic., French, Blackburn (NMV, SAM); 1 ♀ Healsville (NMV); 1 ♂ Melbourne (NMV); N.S.W.: 1 ♂, 1 ♀ N.S.W. (American Museum of Natural History, New York); 1 ♂ Sydney (coll. Fauvel); 1 ♂, 1 ♀ Brisbane, Hacker, Carter (QM, NMV); 1 ♂, 1 ♀ Valleys near Blackheath, Blue Mts., 3000 ft, Darlington (MCZH); 1 ♂ Yerranderie (CSIRO); 1 ♀ Cumberland, Rye (coll. Steel); 1 ♀ Sandgate, F. Muir (BMH). Qld: 2 ♂♂, 1 ♀ Cairns (CSIRO, coll. Scheerpeltz).

Distribution: V, N.S.W., Qld together with *cupreipennis*, ripicolous at creeks etc.

3. **Stenus (s. str.) janthinipennis** Lea, 1899

Stenus janthinipennis Lea 1899, *Proc. Linn. Soc. N.S.W.* 23: 544
Stenus janthinipennis, L Benick, 1916, *Ent. Mitt.* 5: 240 f

♂ Ventral characters of abdomen about as in *puncticollis*. Aedeagus (Fig. 3) with a distinctly narrower median lobe than in *cupreipennis*, also somewhat narrower than in *puncticollis*.

This species is remarkable by its aeneous shine and the reticulated abdomen having fine granules and no punctures on the anterior tergites.

Length of body: 4·0–4·5 mm.

Material examined: ♀ holtotype and 3 ♂♂, 5 ♀♀ paratypes Upper Ord R. (SAM); 2 ♂♂, 1 ♀ Kimberley District, Mjöberg (Naturhistorisk Riksmuseet Stockholm, coll.m.); 5 ♂♂, 7 ♀♀ W. Aust. (DASP, DEI, coll.m.); ♂♂ Adelaide R., N.T. (B.M.)

Distribution: N.T., W. Australia, ripicolous like the preceding species.

4. **Stenus (s. str.) olivaceus** Macleay, 1871

Stenus olivaceus Macleay 1871, *Trans. Ent. Soc. N.S.W.* 2(2): 148 f.
Stenus olivaceus, Fauvel, 1877, *Ann. Mus. Civ. Stor. Nat. Genova* 10: 209.
Stenus olivaceus, Fauvel, 1878, *l.c.* 13: 503 f.
Stenus olivaceus, Lea, 1899, *Proc. Linn. Soc. N.S.W.* 23: 545.

♂ ventral characters of abdomen about as in *cupreipennis* but emargination of sternite 8 broader and shallower (Fig. 25). Aedeagus (Fig. 4).

Length of body: 4·0–4·3 mm.

Material examined: 1 ♂, 3 ♀♀ syntypes from Gayndah on two cards (MLM) ♂ lectotype, 1 *Stenus olivaceus*, Macl. Gayndah; 2 ♂ lectotype right/Puthz 1969; 3 ♀ paralectotype left/Puthz 1969; 4 *Stenus olivaceus* Macleay vid. V. Puthz 1969. The lectotype has somewhat damaged antennae, the paralectotype mounted on its

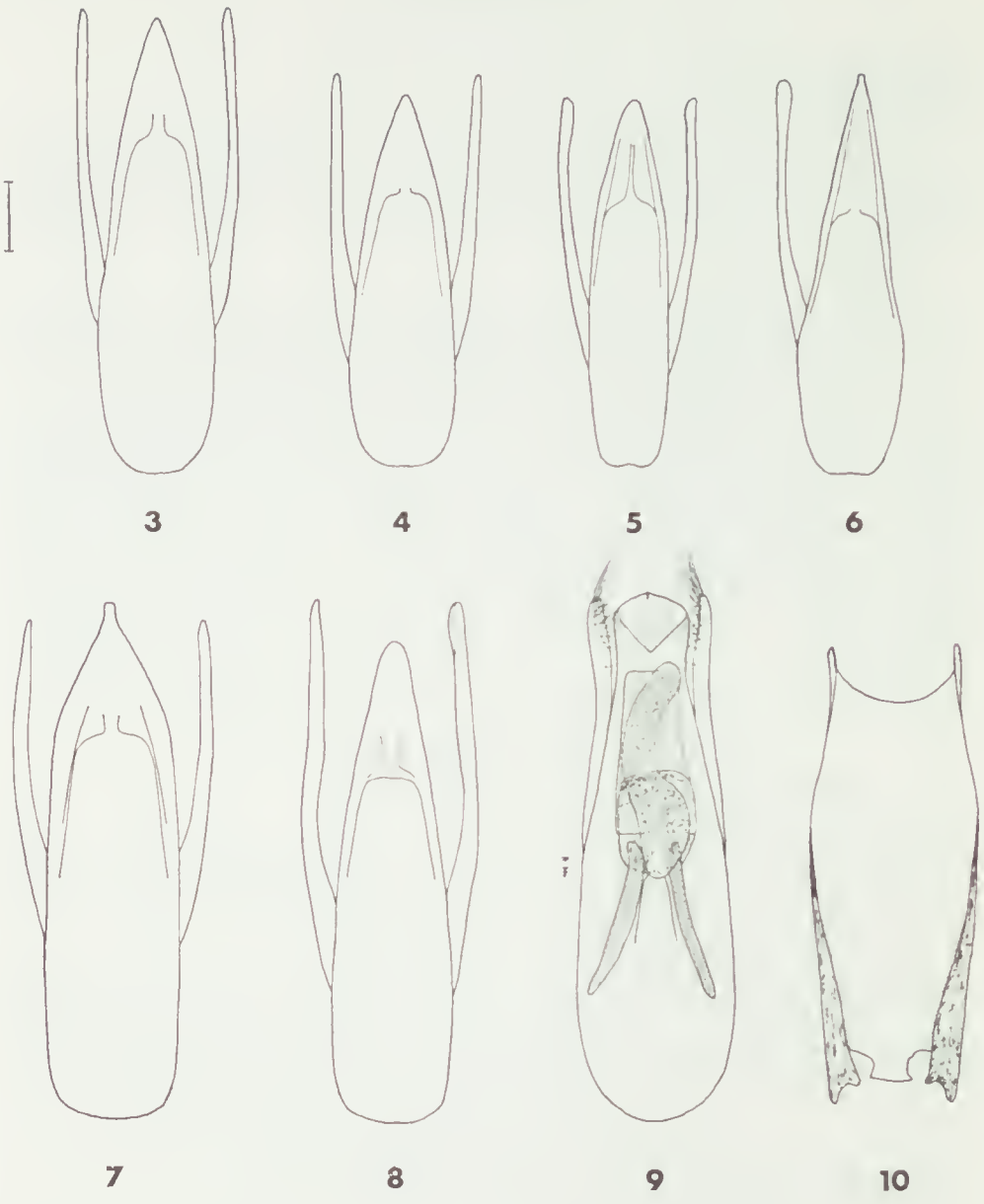

Fig. 3-8—Outline of ventral aspect of aedeagus. 3: *Stenus janthinipennis* Lea (Kimberley district). 4: *Stenus olivaceus* Macleay (Gayndah). 5: *Stenus retitogatus* n. sp. (holotype). 6: *Stenus atrovirens* Fauvel (*similis* Macleay lectotype). 7: *Stenus leai* (right paramere lacking) Bernhauer et Schubert (holotype). 8: *Stenus neboissi* n. sp. (holotype).

Fig. 9, 10—*Stenus gayndahensis* Macleay (lectotype). 9: Ventral aspect of aedeagus. 10: 9th sternite of ♂. Scale = 0·1 mm.

dorsal side. 2 ♀♀ paralectotypes ibidem. N.S.W.: 1 ♀ Windsor, Ferguson (CSIRO); 1 ♂ near Cooma, Pospisil (coll. Scheerpeltz); 5 ♂♂, 2 ♀♀ Clarence River (SAM); Qld: 1 ♂, 1 ♀ Gayndah (coll. Fauvel, coll. Benick); 3 ♂♂, 2 ♀♀ Cairns, Hacker ("*sjöstedti* Bernh. i.l.") (DEI, coll. Benick, coll.m.); 1 ♀ Brisbane, Coates (SAM); 1 ♂ Qld. (DEI); 1 ♂, 1 ♀ Maryborough, E. W. Fischer (coll. Scheerpeltz).

Distribution: N.S.W., Qld, ripicolous as the preceding species.

5. **Stenus (s. str.) retitogatus** sp. nov.

This new species resembles *S. olivaceus* in its general facies, *S. janthinipennis* in its microsculpture.

Black with an olive tint, moderately shining, coarsely and closely puncturated, not very distinctly pubescent. Antennae yellowish brown, the club infuscated. Palpi yellow. Legs with the basal portion of femora yellow, the apical portion dark brown, tibiae yellowish brown, tarsi yellowish brown with the apices of segments infuscated. Labrum dark brown.

Length: 3·6–3·9 mm.

♂ holotype, N.W. Qld. Charters Towers, W. of Hughenden, Hacker; 1 ♂ 1 ♀ paratypes, Adelaide R., N.T. (BM)

Measurements (in microns): Width of head 699; average distance of eyes 407; width of pronotum 547; length of pronotum 623; distance between shoulders about 636; width of elytra 776; length of elytra 857; length of suture 724; posterior tarsi 168–140–127–101–152.

♂ ventral surface of abdomen coriaceous. 7th sternite broadly emarginated at posterior border, with a distinct impression, the sides of which are carinated posteriorly, inside it very finely and densely granulated and pubescent. 8th sternite with a narrower but not deeper emargination than in *olivaceus*. The aedeagus (Fig. 5) is very similar to those of the related species, somewhat narrower than in *olivaceus* and *janthinipennis* with the median lobe longer in proportion to the parameres and apically somewhat broader.

From *olivaceus* the new species differs by its densely and closely reticulated abdomen, which is scarcely perceptibly puncturated, shallower puncturation of the whole surface, especially of the pronotum, and its remarkable reticulation also of the foreparts. From *janthinipennis* it is at once distinguished by longer and narrower elytra, the colouration and deeper excavated middle of front.

Distribution: Qld.

Holotype in the Deutsches Entomologisches Institut, Eberswalde, D.D.R.

6. **Stenus (s. str.) atrovirens** Fauvel, 1878

Stenus atrovirens, Fauvel 1878, *Ann. Mus. Civ. Stor. Nat. Genova* 13: 503
Stenus similis, Macleay 1871 (nec Herbst 1784), *Trans. Ent. Soc. N.S.W.* 2(2): 149.
Stenus macleayi, Scheerpeltz 1933, *Col. Cat.* 129: 1159 (n.n.) nov. syn.

From both species I examined the types; they are conspecific. ♂ 7th sternite with a broad and short impression posteriorly, finely and very densely punctated and pubescent, outside of the impression finely and very sparsely punctated, at posterior margin broadly and shallowly emarginated. 8th sternite with a somewhat narrower emargination than in *olivaceus* which is as shallow as in *olivaceus*. Aedeagus (Fig. 6).

Material examined: ♂ holotype and 1 ♂, 1 ♀ paratypes of *atrovirens* (BM, coll. Fauvel), 2 ♂♂ syntypes of (*similis* Macleay) (MLM); 1 ♂, 1 ♀ Rockhampton, Lea (SAM, coll.m.).

Distribution: Qld.

7. **Stenus (s. str.) macellus** Fauvel, 1878

Stenus macellus, Fauvel 1878, *Ann. Mus. Civ. Stor. Nat. Genova* 13: 504.
Stenus macellus, Puthz (in press), *Bull. Inst. r. Sci. nat. Belg.*

♂ 6th sternite with a triangular impression in posterior half, inside it nearly impunctate, sides with longer pubescence. 7th sternite deeper impressed than in *cupreipennis*, sides distinctly carinated, with longer pubescence, inside finely and moderately densely punctated. Emargination of 8th sternite slightly deeper than in *olivaceus*. The aedeagus has a relatively broad and short median lobe which is triangularly acuted to apex and curved dorsally having a ventro-median carina. Parameres about as long as median lobe.

Length of body: 3·4–3·7 mm.

Material examined: 1 ♂, 2 ♀♀ syntypes King George Sound, two on one card, ♂ lectotype, 1 ♂ lectotype right/Puthz 1969; 2 K. George Sound (red label); 3 Sharp Coll. 1905–313.; 4 44 *Stenus macellus* Fauvel types K. Geo. Sound (Sharp's handwriting); 5 ♀ paralectotype left/Puthz 1969; 6 *Stenus macellus* Fauvel vid. V. Puthz 1969 (BM). The aedeagus of the lectotype extracted. 1 ♀ paralectotype in coll. Fauvel.

Distribution: W. Australia.

8. **Stenus viridiaeneus** Macleay, 1871 (species incertae sedis)

Stenus viridiaeneus, Macleay 1871, *Trans. Ent. Soc. N.S.W.* 2(2): 149.
Stenus viridiaeneus, Fauvel 1877, *Ann. Mus. Civ. Stor. Nat. Genova* 10: 209.

Of this species the types could not be located in the author's or other collections. The description is completely insufficient, it is impossible to recognize the subgenus.

The diagnosis is as follows:

"Length 2 lines. Black, opaque. Head smooth between the eyes. Thorax without puncturation in the middle, but with transverse looking punctures towards the apex and base, which are both rather constricted. Elytra strongly punctured, and of a brassy green colour with a ruddy hue in the middle."

9. **Stenus (Tesnus) convexiusculus** L. Benick, 1921

Stenus convexiusculus, L. Benick 1921, *Ent. Mitt.* 10: 193 (n.n.).
Stenus indistinctus, Lea 1899 (nec Casey 1884), *Proc. Linn. Soc. N.S.W.* 23: 543.
Stenus indistinctus, L. Benick 1961, *Ent. Mitt.* 5: 241.

♂ Metasternum along the middle smooth. 6th sternite near posterior margin somewhat shallowed, denser punctated and pubescent than on the sides, with a distinct but shallow and broad emargination posteriorly. Emargination of sternite 8 about as in *cupreipennis*. Aedeagus with a narrow median lobe having a narrowly rounded apex but not button shaped as in *caviceps*, parameres well extending beyond the median lobe. Variability: Middle of pronotum distinctly to indistinctly smooth.

Material examined: 2 ♂♂, 4 ♀♀ types (all on one large card). N.S.W.: Clarence River (SAM, coll.m.); 1♂ paratype Clarence R. (BM); 1 ♀ Qld: Tambourine Mt., 17.II.1960, E. M. Exley leg. (QM).

Distribution: N.S.W., Qld.

10. **Stenus (Tesnus) leai** Bernhauer et Schubert, 1911

Stenus leai, Bernhauer et Schubert 1911, *Cat. Col.* 29: 175 (n.n.).
Stenus leai, L. Benick 1916, *Ent. Mitt.* 5: 241.
Stenus longiventris, Lea 1899 (nec Sharp 1886), *Proc. Linn. Soc. N.S.W.* 23: 542 f.

♂ 3rd–5th sternite somewhat sparser punctated posteriorly than on sides, 6th sternite in posterior half with a broad but short impression, inside finer and sparser punctated than on sides, 7th sternite with a broad-triangular and deep impression in posterior two thirds, inside finely and not densely punctated and coriaceous, sides of

impression somewhat denser pubescent, posterior margin with a broad and shallow emargination. 8th sternite in posterior eleventh broadly triangularly emarginated, somewhat narrower than in *caviceps*. Aedeagus (Fig. 7).

Material examined: ♂♀ types (on one card) W. Australia: E. Kimberley, Behn River, R. Helms (SAM); Qld: 1 ♀ Claudie River, Kershaw (NMV); 1 ♀ Cairns dist., Dodd (SAM); 2 ♀♀ without locality (QM, coll.m.).

Distribution: Qld and E. Kimberley.

11. **Stenus (Tesnus) caviceps** Fauvel, 1877

Stenus caviceps, Fauvel 1877, *Ann. Mus. Civ. Stor. Nat. Genova* 10: 207 f.
Stenus caviceps, Fauvel 1878, *l.c.* 12: 223.
Stenus caviceps, L. Benick 1928, *Ent. Mitt.* 17: 177 f.
Stenus caviceps, Puthz (in press), *Bull. Inst. r. Sci. nat. Belg.*
Stenus caviceps, Puthz (in press), *Ann. Mus. Civ. Stor. Nat. Genova.*

The description of the ♂ sexual characters with figures was given by me in the first quoted publication, the lectotypology in the second.

Material examined: ♂ lectotype and ♀ paralectotype. Qld: Somerset, Cape York (Museo Civico di Storia Naturale di Genova, coll. Fauvel); 2 ♂♂, 4 ♀♀ Coen, Hacker, Oke (NMV, DEI, coll.m.); 5 ♂♂, 7 ♀♀ Cairns, Oke, Hacker (DEI, NMV, coll. Benick, coll.m.); 1 ♂ Mulgrave R., Hacker (SAM); 1 ♀ Qld Hacker (SAM); 1 ♀ New Guinea, Katau near Fly River (Museo Civico di Storia Naturale di Genova).

Distribution: N.E. Australia, S.E. New Guinea.

12. **Stenus (Tesnus) villosiventris** Lea, 1899

Stenus villosiventris, Lea 1899, *Proc. Linn. Soc. N.S.W.* 23: 543 f.
Stenus villosiventris, L. Benick 1916, *Ent. Mitt.* 5: 241.

♂ ventral characters of abdomen about as in *cupreipennis*, aedeagus with a very narrow and apically narrowly button-shape-rounded median lobe, parameres distinctly shorter than median lobe. Internal structures as in *cupreipennis*.

Length of body: 5·0–5·5 mm.

This species is easy to identify by its long erect pubescence of the abdomen.

Material examined: ♂ holotype and ♂♀ paratypes Windsor (SAM); V: 1 ♂ Clarkefield, Wilson (NMV); 1 ♂ Warburton, Oke (NMV); 2 ♀♀ Carrum, Oke (NMV, coll.m.); 1 ♀ Belgrave, Wilson (NMV); 1 ♀ Bendigo, Oke (NMV); 1 ♀ Beaconsfield, Oke (NMV); N.S.W.: 2 ♂♂, 2 ♀♀ Windsor (coll. Fauvel, coll.m.); 6 ♂♂, 1 ♀ N.S.W. (CSIRO, DEI, NMV, Tschechisches Nationalmuseum Prag); Qld: 1 ♂ Cairns, Oke (NMV); 1 ♂, 1 ♀ "W. Australia" (DASP) (false patria?).

Distribution: V, N.S.W., Qld, and W. Australia (?).

13. **Stenus (Tesnus) neboissi** sp. nov.

This new species resembles *S. australicus* and (much less) *S. caviceps*.

Brilliant black, slightly aeneous, head and pronotum finely, clytra very coarsely, abdomen extremely finely puncturated, shortly pubescent. Antennae reddish-brown. Palpi pale. Legs reddish yellow, apical portion of femora and apices of tarsal segments infuscated. Labrum dark brown.

Length: 4·0–4·7 mm.

♂ holotype and ♀ paratype Qld: Cairns, Jan. 1950, C. Oke leg.; 2 ♀♀ paratypes Halifax, 9.6.1919, F. X. Williams leg.

Head about as broad as elytra (♂) (measurements in microns) (839: 832), in the ♀ slightly narrower, with a narrow front (average distance of eyes 467) separated into 3 portions nearly equal in width; two side portions distinctly but not very much declining from inner eye margins towards middle, and middle of front, which is deeply excavated from the side portions and even. Punctation moderately fine and sparse,

Antennae reddish brown, club infuscated. Palpi yellowish brown, apex of 3rd segment and 4th segment brown. Base of femora (about two thirds) bright-red, rest of legs dark brown. Labrum blackish brown.

Length: 4·1 mm.

♀ holotype "Mountains of Victoria," near Wandiligong (BM).

Narrow head slightly broader than elytra between humeri (794: 768), front moderately broad (average distance of eyes 448), its middle portion fully even, deeply excavated, about as broad as each of the side portions. Puncturation fine and sparse, diameter of a puncture smaller than basal section of 3rd antennal segment, interspaces larger than punctures. The smooth antennal tubercles represent the only elevated portions of the front.

Antennae when reflexed extending about to the posterior margin of pronotum, penultimate segments distinctly longer than broad.

Prothorax distinctly somewhat longer than broad (678: 614), widest distinctly behind the middle, to anterior margin firstly straight then shallowly concave, to posterior margin distinctly concavely narrowed, with a shallow anterior and a shallow posterior restriction on surface. Punctation differently coarse and close, in middle the punctures are about as fine as on head, very sparse, near anterior, posterior margin and the sides its diameter often exceeds the section of 3rd antennal segment, interspaces sometimes smaller than half of a puncture.

Elytra large, between humeri somewhat narrower than head, much broader than head in its broadest point (935: 794), somewhat longer than broad (973: 935), sides behind prominent shoulders scarcely straightly enlarged posteriorly, distinctly restricted in posterior quarter, posterior margin very deeply emarginated (length of suture 819). Surface very uneven (resembling *S. kitondoensis* Cameron from Africa), impression of suture not very distinct, humeral impression somewhat before middle of elytra enlarged and deepened, in posterior half a distinct external impression. Punctation very coarse and differently close, average diameter of a puncture larger than section of 2nd antennal segment. In posterior two third the elytra are smooth near suture on the rest the interspaces of punctures are as large as or smaller than the punctures.

Abdomen cylindrical, scarcely narrowed posteriorly, basal furrows of first segments very deep, 7th tergite with a distinct membranous fringe at posterior margin. Punctation very fine and very sparse.

Legs slender, posterior tarsi at least as long as two thirds of the femora, 1st segment about as long as 2 and 3 together, much longer than the last.

Whole surface lacks microsculpture.

♀ 8th sternite broadly rounded.

To differ *S. australicus* from the related species see key below.

15. **Stenus (Hypostenus) cursorius** L. Benick, 1921

Stenus cursorius. L, Benick 1921, *Ent. Mitt.* 10: 193 (n.n.).
Stenus cursorius, L. Benick 1938, *Stett. Ent. Ztg.* 99: 5, 26.
Stenus cursorius, Puthz (in press). *Bull. Inst. r. Sci. nat. Belg.* (figs).
Stenus planifrons, Fauvel 1889, *Rev. Ent.* 8: 253.
Stenus planifrons, Fauvel 1903, *l.c.* 22: 262.

This species is widely distributed in the whole Oriental, Australian and Melanesian Regions, subspecies also in the Ethiopian Region. From Australia it was firstly announced by Fauvel 1903.

Material from Australia examined: N. Australia: 2 ♀♀ Adelaide River (coll. Fauvel); Qld: 1 ♂ Paluma Dam, Monteith (UMQ); 2 ♂♂, 2 ♀♀ Townsville (BM, SAM, coll.m.); 1 ♂, 2 ♀♀ Mulgrave River, Hacker (BM, DEI); 3 ♂♂, 5 ♀♀ Cairns, Hacker (DEI, SAM); 1 ♀ Coen, Cape York, Hacker (DEI); 1 ♀ Redlynch, R. G. Wind (CAS); 1 ♂ Mont Molloy, Darlington (MCZH); 1 ♀ Gayndah, Macleay (MLM);

diameter of a puncture nearly as large as basal section of 3rd antennal joint, interspaces larger than punctures, middle of front almost impunctate.

Antennae when reflexed extending about to the posterior margin of pronotum, joints of club distinctly longer than broad.

Prothorax bulging, distinctly longer than broad (696: 594), widest behind the middle, to anterior margin slightly convexly (before anterior margin somewhat concavely), to posterior margin very distinctly concavely narrowed (cordiforme), with a shallow anterior and distinct posterior restriction on surface. Punctation moderately fine and sparse, punctures near anterior and posterior margins somewhat larger than section of 3rd antennal segment, interspaces here not at all as large as punctures, finer in the middle, about as fine as on front, interspaces larger than punctures, middle sometimes nearly impunctate.

Elytra in the ♂ nearly as broad as head (832: 839), in the ♀ somewhat broader, slightly longer than broad (882: 832), humeri angulate, sides nearly straight, distinctly restricted in posterior quarter, posterior margin deeply emarginated (length of suture 772). Sutural depression not very distinct, humeral depression distinct but shallow. Punctation very coarse and moderately dense, diameter of a puncture larger than section of 2nd antennal segment, interspaces about half as large as a puncture, sometimes about as large as near suture, on posterior declination of elytra the punctation is much finer and sparser.

Abdomen cylindrical, immarginated, slightly narrowed posteriorly, basal furrows of first segments very deep. 7th tergite with a distinct membranous fringe at posterior margin. Except for the bases of tergites 3 and 4 the puncturation throughout is extremely fine and sparse, diameter of a puncture about as large as one eyefacet,-interspaces three times or more as wide as punctures.

Legs slender, hind tarsi at least as long as two thirds of femora, 1st segment somewhat shorter than the three following together, nearly twice as long as the last 323–136–110–85–78. 4th segment simple.

The whole insect lacks microsculpture, except for hind portion of sternite 7.

♂ femora in middle somewhat enlarged. 6th sternite at posterior margin nearly imperceptibly emarginated. 7th sternite broadly shallowed and there distinctly denser puncturated and pubescent like the preceeding ones, with a shallow and broad emargination at posterior margin. 8th sternite with a triangular excavation in posterior sixth (much deeper than in *caviceps*). 9th sternite about as in the related species. 10th tergite broadly rounded. Aedeagus (Fig. 8) about as in *atrovirens* but the parameres longer.

♀ 7th sternite with a very shallow emargination at posterior margin, before it denser punctated, pubescent, and somewhat microsculptured. 8th sternite rounded.

Stenus neboissi can be distinguished from the Australian *Steni* having their abdomen immarginated and the tarsi simple as follows: from *australicus* Blackburn by its larger head and the nearly even elytra, from *caviceps* Fauvel, *leai* Bernhauer et Schubert, and *convexiusculus* L. Benick by its extremely fine abdominal puncturation, from *villosiventris* Lea by lacking long erect abdominal pubescence and broader head. It resembles mostly *S. australicus* which should be regarded as its sister-species.

I am pleased to name this remarkable new species after Mr. A. Neboiss, Curator of Insects in the National Museum of Victoria, to express my thanks for cooperation.

Holotype in the National Museum of Victoria, Melbourne, paratypes in The Bishop Museum, Honolulu, and in my collection.

14. **Stenus (Tesnus) australicus** Blackburn, 1891

Stenus australicus, Blackburn 1891, *Proc. Linn. Soc. N.S.W.* (2) 5: 788.

From the British Museum Natural History I got the ♀ holotype for revision and give a redescription of it because of the insufficient diagnosis given by the author:

Brilliant black, differently coarsely and sparsely punctated, scarcely pubescent.

margin moderately emarginated (length of suture 678). Sutural and humeral impression distinct but not deep. Puncturation about as coarse and close as on pronotum, the inner third scarcely sparser punctated than the outer two thirds.

Abdomen cylindrical, moderately narrowed posteriorly, basal restrictions of first segments moderately deep, 7th tergite with a distinct membranous fringe posteriorly. Punctation coarse and close, on first segments as coarse as on elytra, posteriorly finer, on tergite 7 about as large as basal section of 3rd antennal segment, distances about as large or somewhat larger than punctures themselves.

Legs moderately slender, posterior tarsi about two thirds as long as tibiae 115–90–90–102–147.

The whole surface lacks microsculpture.

♂ femora thicker than in ♀. 3rd–5th sternite coarsely and closely punctated, 6th sternite with a very fine and little dense punctation, 7th sternite with a very shallow emargination at posterior border, not shallowed along the middle, very finely and densely puncturated and pubescent. 8th sternite (Fig. 26). 9th sternite (Fig. 10). 10th tergite rounded. The aedeagus (Fig. 9) has a large opening of the median lobe anteriorly which shows apical portions of membranes set with small spines. Inside there are a strong sclerotized broadly tubous internal sac and basally two longitudinal clasps. Parameres about as long as median lobe, closely set with fine setae at their ends.

♀ 8th sternite broadly rounded. Valvifera with a long tooth apicolaterally. 10th tergite broadly rounded. Distinctly sclerotized spermatheca lacking.

For determination see key below.

Distribution: N.S.W., Qld.

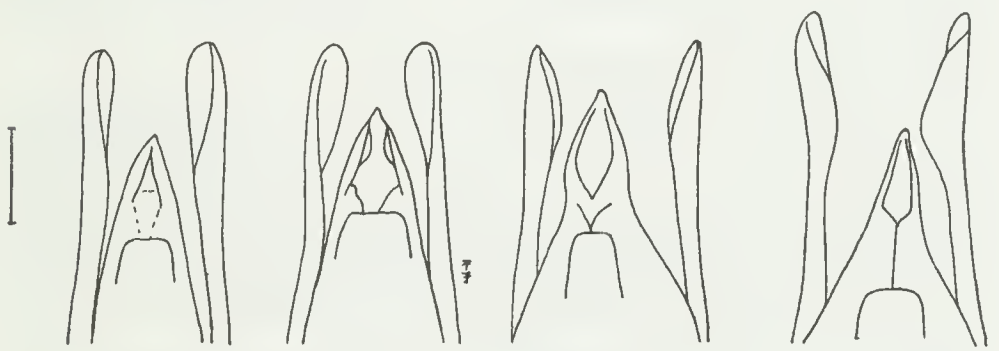

Fig. 11-14—Apical portion of aedeagus ventral facies, for demonstrating the variability of *Stenus piliferus obesulus* Fauvel: 11 (Brisbane), 12 (Blackall), 13 (Molloy, N. Qld), 14 (Wide Bay). Scale = 0·1 mm.

17. **Stenus (Hypostenus) piliferus obesulus** Fauvel, 1878 ssp. propr.

Stenus obseulus, Fauvel 1878, *Ann. Mus. Civ. Stor. Nat. Genova* 13: 506.
Stenus hackeri, L. Benick 1928, *Ent. Mitt.* 17: 180 ff.
Stenus piliferus gayndahensis, Puthz 1966, *Mem. Est. Mus. Zool. Univ Coimbra.* 297: 11 f., figs.

Because of not knowing the types of *gayndahensis* and of remarks of Lea 1899 (see above) in 1966 I confused *piliferus obesulus* with *gayndahensis*. Both are quite distinct, although very similar in general appearance. The striking differences are to be found in the ♂ sexual characters, in the aedeagus and in the 9th sternite. Both forms belong to the same monophyletic group, *gayndahensis* is the apomorphic species (after Hennig).

1 ♂ Bellenden Ker, Mjöberg (SAM); 2 ♂♂ Laura, Mjöberg (SAM); 1 ♂, 1 ♀ N. Qld, Hacker (SAM); 2 ♂♂, 2 ♀♀ Rockhampton, Lea (SAM).

Distribution: N. and N.E. Australia, New Guinea, New Caledonia, Oriental Region.

16. **Stenus (Hypostenus) gayndahensis** Macleay, 1871

Stenus gayndahensis, Macleay 1871, *Trans. Ent. Soc. N.S.W.* 2(2): 149.
Stenus gayndahensis, Fauvel 1877, *Ann. Mus. Civ. Stor. Nat. Genova* 10: 209.
Stenus gayndahensis, Lea 1899, *Proc. Linn. Soc. N.S.W.* 23: 545.
Stenus piliferus gayndahensis, Puthz 1966, *Mem. Est. Mus. Zool. Univ. Coimbra*, 297: 11 f. (falsus).

Because of a note of Lea 1899 I confounded this species with *piliferus obesulus* Fauvel. The original description is insufficient, Macleay also confounded his species with two others, therefore it was necessary to choose a lectotype (see below).

Redescription: Black, shining, coarsely and closely punctated, with a short but distinct argenteous pubescence. Antennae yellowish red, the club infuscated. Palpi yellow, 3rd joint infuscated. Legs reddish yellow, femora at apex narrowly darkbrown, bases of tibiae lighter than apical two thirds, which are sometimes brownish, apices of tarsal joints infuscated. Labrum brown.

Length: 3·5–4·1 mm.

Material examined: 1 ♂, 1 ♂ syntypes (on one card); the ♂ left has "a short raised smooth line on the middle" = *gayndahensis* lectotype, the ♂ right has the front uniformly punctated = *cursorius* L. Benick. Because of the smooth head portions the left ♂ is without any doubt the true *gayndahensis* Macleay. In his collection there were to be found 4 specimens from Wide Bay (by Macleay determinated as "*gayndahensis*" but all belonging to *piliferus obesulus*, which is from its general facies very similar to *gayndahensis*). ♂ lectotype: 1 *Stenus gayndahensis*, Macl. Gayndah; 2 ♂ lectotype left/Puthz 1969; 3 *Stenus gayndahensis* Macleay left vid. V. Puthz 1969; 4 *Stenus cursorius* Bck. ♂ right det. V. Puthz 1969.

N.S.W.: 1 ♂, 1 ♀ Bogan River, Armstrong (coll. Steel); Qld: 2 ♀♀ "Coomoo 1, Dawson distr. Austr. mér." (coll. Fauvel; is it near Dawson River or Cooma in Victoria?); 1 ♂ Mt. Glorious, Savage (QM); 1 ♂, 1 ♀ Brisbane, Haseler (UMQ, coll.m.); 1 ♂, 1 ♀ Archer Creek, Mt. Garnet, Brooks (NMV); 1 ♂ Cairns, Oke (NMV); 1 ♂ Mogill near Brisbane, Gressitt (BMH). Specimens quoted by Lea 1899 should be found in the SAM (not seen and because of many wrong determinations of Lea doubtful), 1♂1♀ Townsville (BM); 1♂ Eungella Nat. Park 4 Aug. 1968 T. Weir (UMQ).

Head about as broad as elytra between shoulders (692: 678), front narrow (average distance of eyes 333) with five distinct shining plaques; one in the middle, two antennal tubercles, and one near each inner eye margin. The front has two distinct and narrow longitudinal furrows, its smooth median portion is about as broad as each of the side portions, distinctly elevated, extending beyond the inner margins of eyes. Punctation moderately coarse and very dense, diameter of puncture about as large as section of 6th antennal segment, distances smaller than half a puncture.

When reflexed the short antennae do not extend to the posterior margin of pronotum, penultimate joints distinctly longer than broad.

Prothorax scarcely longer than broad (589: 577), broadest in the middle, to anterior margin convexely rounded, to posterior margin shallowly concavely restricted. Punctation coarse and close, diameter of a puncture nearly as large as section of second antennal joint, distances smaller than half a puncture. The interspaces between the punctures are larger along the middle, nearly as large as one puncture, giving a facies of a smooth central line which is not raised.

Elytra somewhat broader than long (872: 832) with the shoulders prominent, sides posteriorly scarcely enlarged, distinctly restricted in posterior quarter, hind

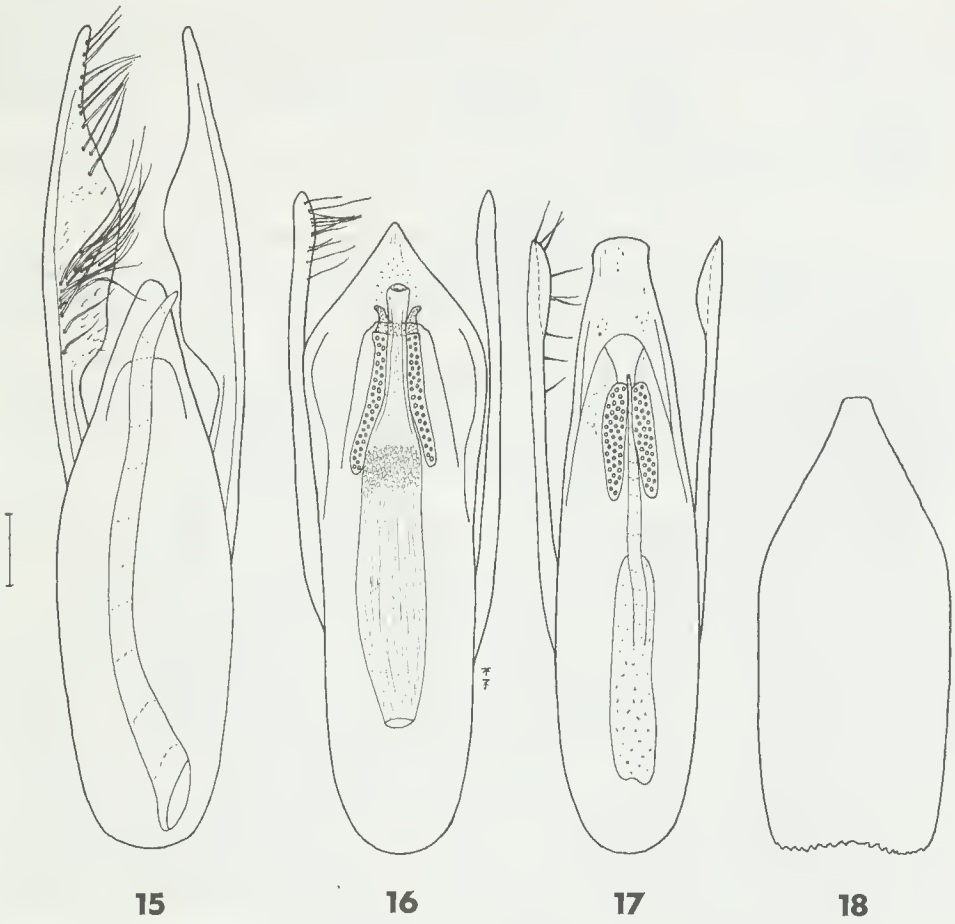

Fig. 15-18—Ventral aspect of aedeagus, setae of right paramere not figured. 15: *Stenus coeruleus* Waterhouse (paratype), expulsation mechanism not figured. 16: *Stenus platythrix* n. sp. (paratype). 17: *Stenus pseudocoeruleus* n. sp. (Cairns). 18: 9th sternite of ♂ of 17. Scale = 0·1 mm.

by which it is at once distinguished from all other Australian species. The sister-species is *hestiocorus* Puthz of New Britain (cf. Puthz 1968d).

Material examined: ♂ holotype and ♀ paratype Port Bowen, N.S.W. (BM); ♂ holotype of *semicoeruleus* L. Benick env. Sydney (ZMB). N.S.W.: 1 ♂ Barrington House via Salisbury, Monteith (UMQ); 1 ♂ Atherton, ex citrus, Ettershank (UMQ); 2 ♀♀ Atherton, ex *Passiflora edulis*, Ettershank (coll.m.); 1 ♂ Eungai, Carter et Deane (UMQ); 7 ♂♂, 15 ♀♀ N.S.W. (DASP, CAS, NMV, American Museum of Natural History, coll.m.); 1 ♂, 4 ♀♀ Sydney (coll. Fauvel, coll.m., CSIRO); 1 ♀ Kurrajong, H.S.C. (UMQ); 3 ♂♂, 1 ♀ Clyde River (CSIRO); 2 ♂♂, 1 ♀ Illawarra, Carter (NMV); 1 ♂, 2 ♀♀ Comboyne, Armstrong (coll. Steel); 1 ♂, 1 ♀ Narara, Oke (NMV); 1 ♀ Clarence R., Lea (SAM); 2 ♀♀ Gosford (SAM); 1 ♂, 1 ♀ Upper Williams River, Lea et Wilson (NMV); Qld: 1 ♀ Deception Bay, Belton (UMQ); 2 ♂♂ Nambour, Yeo (UMQ); 1 ♀ Tibrogargan Creek, Cantrell (UMQ); 1 ♀ Eungella, Woodward (UMQ); 1 ♂ Cedar Creek, Shepherd (UMQ); 2 ♀♀ Lamington National Park, Monteith (UMQ); 1 ♂ Maleay, Deane (UMQ); 2 ♀♀ Brisbane, Martin, Webb (UMQ); 2 ♂♂, 1 ♀ Millaa Millaa, Monteith (UMQ); 2 ♂♂, 1 ♀ Blackall Rgs., Wilson (UMQ, NMV);

Material examined: ♂ type 3♀♀ paratypes Qld. (BM); V: 1 ♂, 1 ♀ Warburton, Oke (NMV); Qld: 1 ♂ Maryborough, E. W. Fischer (coll. Scheerpeltz); 1 ♂, 2 ♀♀ Molloy, Darlington (MCZH, coll.m.); 1 ♂, 3 ♀♀ Wide Bay (amongst them 1 ♀ syntype of *obesulus* (of which the type, not seen, is in BM), coll. Fauvel, MLM); 2 ♂♂, 2 ♀♀ Brisbane, Hacker, Monteith (types of *hackeri* Bck. amongst them, DEI, UMQ); 3 ♂♂, 5 ♀♀ Blackall, Hacker (types of *hackeri* Bck. amongst them, DEI, coll.m.); 1 ♂ Bulburin, State Forest, Webb (UMQ); S.A.: 1 ♂ Lucindale, Lea (SAM); N.S.W. :2♂♂1♀ Clarence R., Lea (SAM); 1♂4♀♀ Tweed R., Lea (SAM); 1 ♂ Richmond R., (SAM).

This subspecies of the polytypic *piliferus* Motschulsky (which is distributed over the whole Oriental, Australian and Melanesian Region) shows a remarkable variability in Australia which is figured in Figs. 11–14. At the present state the few material does not allow any considerations on different subspecies in Australia.

Distribution: V, S.A., N.S.W., Qld.

18. **Stenus (Hypostenus) hornensis** sp. nov.

This new species resembles *S. gayndahensis* Macleay and perhaps represents a subspecies of it. Decision is possible only after knowing the male. A detailed diagnosis is not necessary; a comparison with *gayndahensis* is sufficient.

Black, slightly shining, coarsely and very densely punctated, distinctly but shortly argenteous pubescent. 1st antennal segment blackish brown, 2nd–6th segment reddish yellow, the club blackish brown. Palpi reddish yellow, apex of 2nd joint (narrowly) and apical two thirds of 3rd joint dark brown. Legs blackish brown, base of tibiae and bases of tarsal segments reddish yellow. Labrum blackish brown, moderately densely pubescent.

Length: 4·5 mm (abdomen somewhat extended).

♀ holotype Horn Island, Pellew Group, N.T., 22–28.II.1968, B. Cantrell leg.

This new species is distinguished from *gayndahensis* by its colouration, its more robust facies and above all its punctation of head and pronotum which is much denser than in *gayndahensis*. *S. gayndahensis* has the front distinctly furrowed longitudinally and five well separated shining plaques, the longitudinal furrows of *hornensis* are less distinct, the smooth plaques distinctly (although not at all) reduced, facies of front therefore more even and more uniformely punctated. Pronotum in opposition to *gayndahensis* without a smooth median line.

Stenus hornensis can be distinguished from *piliferus obesulus* by its different colouration and denser punctation, especially that of head.

Holotype in the Department of Entomology of the University of Queensland Museum of Entomology, Brisbane (T. 6700).

19. **Stenus (Hypostenus) coeruleus** Waterhouse, 1877

Stenus coeruleus, Waterhouse 1877. *Ent. mon. Mag.* 14: 24.
Stenus coeruleus, Fauvel 1877, *Ann. Mus. Civ. Stor. Nat. Genova* 10: 209 f
Stenus coeruleus, Fauvel 1878, *l.c.* 13: 506.
Stenus coeruleus, Lea 1899, *Proc. Linn. Soc. N.S.W.* 23(1898): 545.
Stenus coeruleus, L. Benick 1928, *Ent. Mitt.* 17: 178 (falsus).
Stenus coeruleus, Puthz (in press). *Mitt. Zool. Mus. Berlin* 46.
Stenus semicoeruleus, L. Benick 1928, (nec Cameron 1928) *l.c.* 179 ff.

This bright blue species belongs to a group which is very uniform in its general facies and of which the species are often confounded. Benick confounded *coeruleus* with his *semicoeruleus* which has been synonymized by me. The species regarded as *coeruleus* by Benick is a new one described below.

To differ *coeruleus* from the resembling species see key below. ♂ 8th sternite (Fig. 27). Aedeagus (Fig. 15) has a broad tubous internal sac and very large parameres

1 ♂, 2 ♀♀ Cairns, Britton (BM, CSIRO); 3 ♂♂, 4 ♀♀ Nerang (CAS); 1 ♀ Mt. Tambourine, Lea (DEI); 1 ♀ Townsville, Balogh (Hungarian National Museum, Budapest); 1 ♀ Mt. Glorious, Gressitt (BMH); 1 ♀ Childers, Pemberton (BMH); 1 ♂ Coolangata, Muir (BMH); 1 ♂, 1 ♀ Mogill near Brisbane, Gressitt (BMH); 1 ♂ Australia (CAS).

Distribution: N.S.W., Qld.

Remarks: Before knowing the types of *coeruleus* I determined this species as "*semicoeruleus* Bck." which should be corrected in the various collections.

20. **Stenus (Hypostenus) pseudocoeruleus** sp. nov.

This new species resembles very closely *S. coeruleus* and the other blue or blue-green coloured *Hyposteni* from Australia. Determination only by the general facies is difficult.

♂ holotype and 5 ♂♂, 8 ♀♀ paratypes Cairns, Hacker, Balogh, Williams and Chiu Chong; 2 ♂♂, 2 ♀♀ paratypes Hambledon, XI.1921, Pemberton; 2 ♂♂ paratypes Babinda, 18.IV.1919, F. X. Williams; 1 ♀ paratypes Eungai, N.S.W., XI.1928, Carter and Deane; 3 ♂♂, 1 ♀ paratypes New Guinea: N.E. Papua, Mt. Lamington, 1300–1500 ft, C. T. McNamara. 1♀ paratype Cairns district Lea (SAM).

Length: 5·5–6·3 mm.

Measurements (in microns): Width of head 940: average distance of eyes 508; width of pronotum 699; length of pronotum 889; distance between humeral angles about 826; width of elytra 1029; length of elytra 1270; length of suture 1003.

♂ sternite 5 in its apical half finely and very sparsely puncturated, the punctures smaller than one eye facet, interspaces more than twice as large as punctures (in *coeruleus* the punctation is distinctly coarser and denser, the punctures are somewhat larger than one eye facet, the interspaces somewhat larger than the punctures, distinctly smaller than two punctures). 6th sternite shallowed in its apical middle, somewhat finer but twice as dense punctated than sternite 5. 7th sternite with a very fine and dense punctation in the middle, especially in basal half, where it is also somewhat shallowed (in *coeruleus* there is no ventral impression nor a shallowed portion). 8th sternite (Fig. 28). 9th sternite (Fig. 18). 10th tergite as in *coeruleus*. Aedeagus (Fig. 17) has a median lobe which is very broadly rounded apically. Inside there are longitudinal expulsation bands, a broad internal sac, and a strongly sclerotized tube. Parameres about as long as median lobe with some scattered long setae.

This new species can be distinguished from *platythrix* m. (s.b.) by the not reticulated anterior abdomen, from *improbus* m. (s.b.) by its proportions, finer elytral punctation and different ventral characters of abdomen, from *coeruleus* as mentioned above, and from *coelestis* Fauvel by different ventral characters of abdomen, from all by the aedeagus.

This species belongs to a phylogenetic group which has most of the species in New Guinea.

Holotype in the Deutsches Entomologisches Institut, Eberswalde, D.D.R., paratypes in Queensland Museum, Brisbane (T 6693–6695), the University Museum of Queensland, Brisbane, the British Museum Natural History, London, the Hungarian National Museum, Budapest, the DEI, the Bishop Museum, Honolulu, coll. Benick (Lübeck) and my collection.

21. **Stenus (Hypostenus) improbus** sp. nov.

This new species resembles very closely the two preceding ones and *coelestis* Fauvel. From all it is very difficult to separate it by knowing only the general facies.

Length: 6·0–6·5 mm.

Measurements (in microns): Width of head 1014; average distance of eyes 522; width of pronotum 724; length of pronotum 928; distance between humeral angles about 864; width of elytra 1092; length of elytra 1348; length of suture 1053.

♂ holotype Cairns, Hacker.

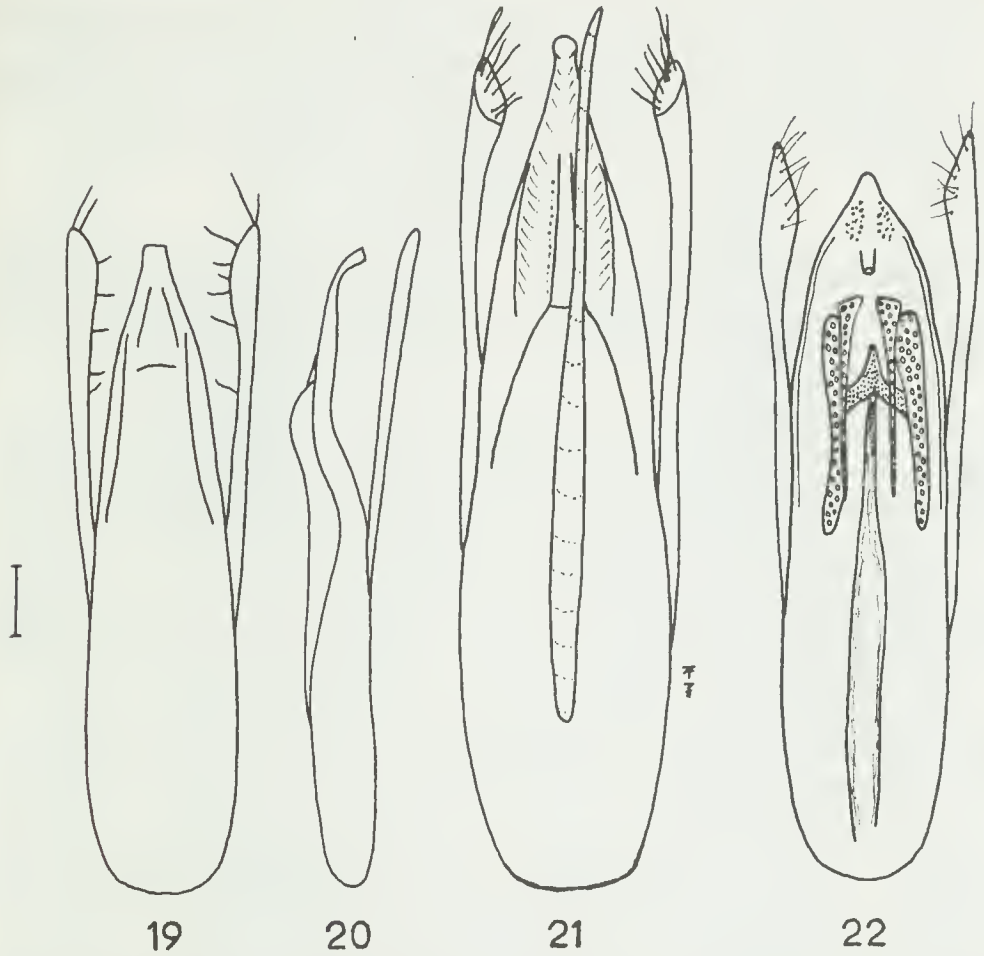

Fig. 19-22—Aedeagus, ventral and (20) lateral aspects. 19, 20: *Stenus improbus* n. sp. (holotype), without internal structures. 21: *Stenus bifenestratus* L. Benick (W. Aust.), without internal sac and expulsation mechanisms. 22: *Stenus guttulifer* Waterhouse (paratype). Scale = 0·1 mm.

It differs from *coeruleus* by its greenish shine, the elytra, which in proportion to the head are narrower and longer, the head, which is finer and sparser punctated and coarser punctation of elytra. The punctures of elytra are at least as large as the section of the 2nd antennal segment, their interspaces somewhat smaller than in *coeruleus*, the abdominal pubescence sparser and less erect.

♂ Punctation of sternite 3–5 coarse and sparse, twice as coarse at base, in the middle of sternite 5 punctures are nearly as large as basal section of 5th antennal segment, interspaces smaller than punctures. 6th sternite with a distinct impression in posterior fourth, sides carinated, posteriorly prominent like a small tooth, punctuation in impression fine and close, pubescence short, posterior margin between carinae very shallowly and nearly straightly emarginated. 7th sternite with a basal impression, finely punctated, pubescent, and coriaceous. 8th sternite deeply and narrowly emarginated (length of sternite: length of emargination = 63: 22). 9th sternite and 10th tergite like in *coeruleus*. The aedeagus (Figs. 19, 20) resembles that

of *pseudocoeruleus*, but the median lobe is narrower, its apex remarkably curved dorsally. Internal sac with a long tube which is somewhat expulsated in the type.

Stenus improbus can be distinguished from *pesudocoeruleus* by its proportions, coarser and closer puncturation of the elytra, and the ventral male characters, from *coelestis* Fauvel by its colour and the proportions, from both by the aedeagus.

Holotype in the Deutsches Entomologisches Institut, Eberswalde, D.D.R.

22. **Stenus (Hypostenus) platythrix** sp. nov.

In its general facies this new species resembles *S. coeruleus* and its allies, with which it was confounded by Lea although it is easy to differ. For description a comparison is sufficient. Dark blue, shining, coarsely and not densely punctated, procumbently pubescent. Antennae, palpi, and legs yellow, apices of tarsal joints infuscated. Clypeus densely pubescent. Labrum dark brown, sparsely pubescent.

Length: 5·5–6·0 mm.

♂ holotype and 1 ♂, 1 ♀ paratypes Cairns dist., A. M. Lea; 1 ♀ paratype env. Ingham, Qld, 22–28.III.1965, Expedition Dr. J. Balogh; 1 ♂, 2 ♀♀ paratypes Longland's Gap Evelyn Tableland, N. Qld, 350 m, 10.III.1956, J. L. Gressitt; 1 ♀ paratype E. Evelyn, N. Qld, in jungle, 11.III.1956, J. L. Gressitt. 1 ♀ paratype Kuranda 28 Nov. 1909 Bryant (BM); 7♂♂ 10♀♀ paratypes N. Qld. Blackburn (SAM, coll.m.); 17♂♂ 16♀♀ paratypes Cairns district, Lea (SAM, coll.m.).

Measurements (in microns): Width of head 864; average distance of eyes 445; width of pronotum 648; length of pronotum 813; distance between humeral angles about 826; width of elytra 991; length of elytra 1180; length of suture 953. Posterior tarsi 203–83, 89–89–152.

One contradiction to *coeruleus* and the other resembling species the pubescence in the new species is sparsely and procumbent, especially on the abdomen ("*platythrix*"). Also the whole abdomen is microsculptured while in the other species only the last tergites have microsculpture.

♂ 3rd–5th sternite with denser punctation along the middle than on sides. 6th sternite shallowed along the middle, finely and densely punctated, chagreened, and pubescent, at posterior margin nearly imperceptibly emarginated. 7th sternite in the middle somewhat coarser punctated than sternite 6, but although finely and densely, chagreened, and pubescent, at posterior margin with a narrow, very shallow emargination. 8th sternite with atriangular notch in posterior sixth (length of sternite: length of emargination = 81: 14). 9th sternite with the sides apicolaterally somewhat produced and distinctly sawed, middle concave. 10th tergite broadly rounded. Aedeagus (Fig. 16) with a triangularly narrowed median lobe and a broad and tubous internal sac. Parameres slender, extending distinctly but not far beyond the median lobe.

♀ 8th sternite rounded, in middle somewhat produced.

Holotype in coll. Scheerpeltz (Wien), paratypes ibidem, in the Hungarian National Museum, Budapest, the Bishop Museum Honolulu, and in my collection.

23. **Stenus (Parastenus) bifenestratus** L. Benick, 1926

Stenus bifenestratus, L. Benick 1926, *Ent. Mitt.* 15: 278 f.

The types of this species have been destroyed in the last war with the Hamburg Museum. Specimens of the same series (topotypes) were found in Fauvel's collection.

This species is easy to identify by its very dense but not confluent elytral punctation and the spot (Fig. 29).

♂ ventral abdomen coarsely and densely punctated, interspaces shining, punctation of the middle of sternite 7 somewhat finer and closer. 8th sternite with a moderately narrow triangular notch in posterior eleventh. 9th sternite with a short rounded tooth on each side apicolaterally, concave in middle. 10th tergite rounded. Aedeagus (Fig. 21) with a long tube of internal sac.

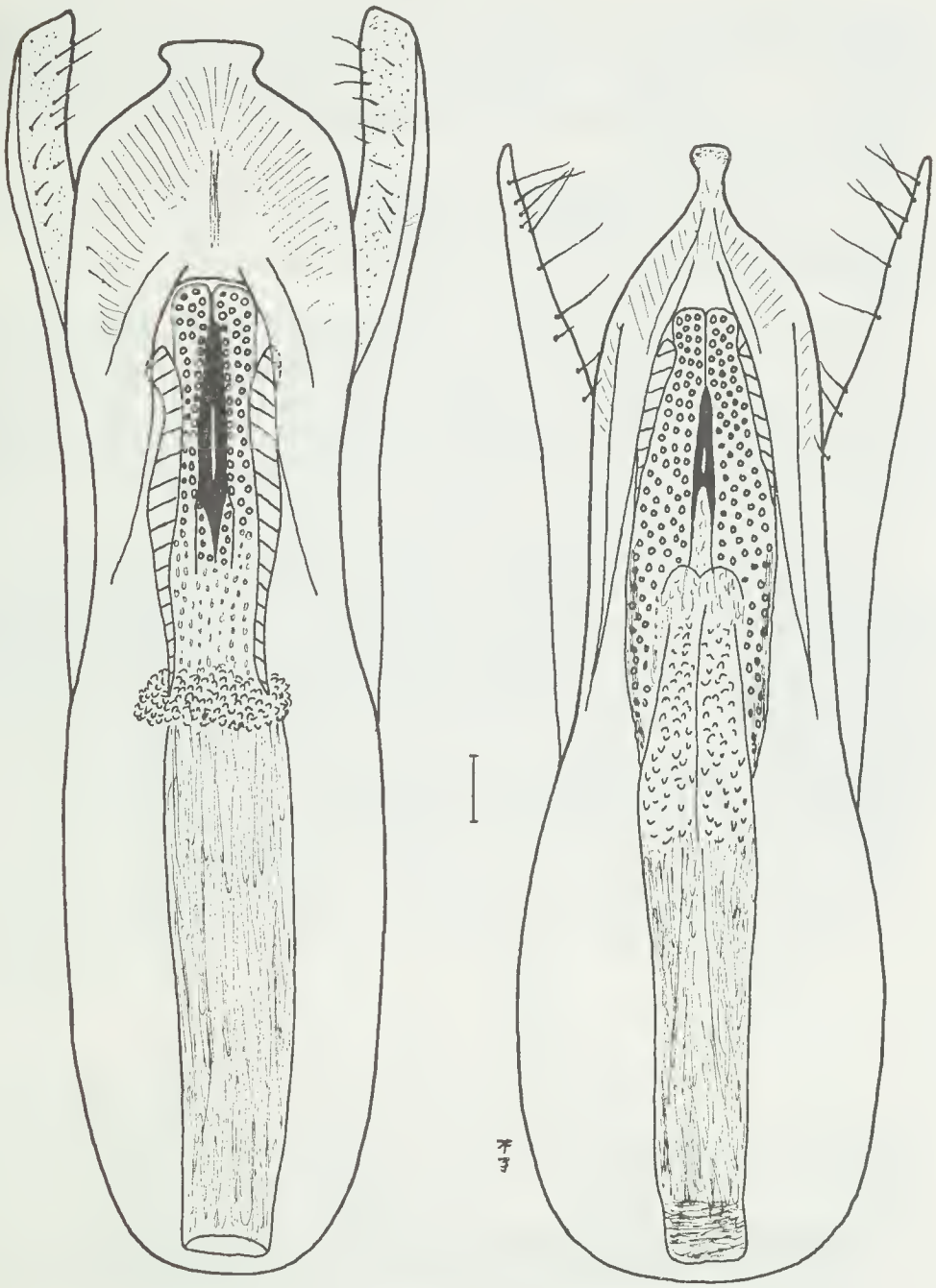

Fig. 23, 24—Ventral aspect of aedeagus. 23: *Stenus maculatus* Macleay (lectotype). 24: *Stenus pustulifer* Fauvel (Club Terrace, E. V). Scale = 0·1 mm.

Material examined: 2 ♂♂, 2 ♀♀ "Austr. occ." (coll. Fauvel, coll.m.); 1 ♀ W. Aust. Darlington 450 ft, 5.IV.62, E. S. Ross and D. Q. Cavagnaro leg. (CAS); 2 ♂♂, 5 ♀♀ Dingup (WAMP), coll.m.); 1 ♂ Namaaring (NMV); 1 ♀ W. Margaret River, Sedlacek (BMH); 3 ♀♀ Bridgetown, Darling Rgs., Lea (SAM); 1 ♂ W. Aust. (QM); 1 ♂ Mt. Tambourine, Oke (NMV: probably wrong locality—Neboiss i.l.).

Distribution: W. Australia.

24. **Stenus (Parastenus) guttulifer** Waterhouse, 1877

Stenus guttulifer, Waterhouse 1877, *Ent. mon. Mag.* 14: 24.
Stenus guttulifer, Fauvel 1877, *Mus. Civ. Stor. Nat. Genova* 10: 208 f.
Stenus guttulifer, Lea 1899, *Proc. Linn. Soc. N.S.W.* 23: 545.
Stenus guttulifer, L. Benick 1926, *Ent. Mitt.* 15: 278 f.

This species also is easy to identify by its narrow facies, confluent punctation and the small elytral spot which is somewhat variable in its width (Figs. 30–32).

♂ ventral abdomen moderately coarsely and moderately closely punctated. 8th sternite with a broad-triangular emargination in posterior eleventh (88: 10). 9th sternite apicolaterally moderately produced, in the middle shallowly concave. 10th tergite broadly rounded. Aedeagus (Fig. 22) inside with a remarkable, strongly sclerotized expulsation clasp. Parameres well extending beyond median lobe with some scattered setae at their ends.

♀ 8th sternite rounded, in middle distinctly produced.

Material examined: ♂ holotype and ♂ paratype N.S.W.: King George's Sound (BM); 1 ♀ ibidem (coll. Fauvel); 1 ♀ Sydney (coll. Fauvel); 2 ♂♂, 3 ♀♀ Qld (DASP); W. Australia: 2 ♂♂, 2 ♀♀ Albany (coll. Fauvel, coll.m.); 1 ♀ Margaret River, Darlington (MCZH); 1 ♂ W. Margaret River, Sedlacek (BMH); 1 ♀ Darlington, 450 ft, Ross and Cavagnaro (CAS); 1 ♀ Merivale Downs e. Esperance, Brown (coll.m.); 2 ♂♂, 3 ♀♀ Pemberton, Glanert (WAMP); 2 ♂♂ Mundaring (NMV); 3 ♂♂, 1 ♀ W. Australia (NMV, coll. Benick); 1 ♀ Donnybrook, W.A. (SAM); 2 ♂♂, 2 ♀♀ Swan River, Lea (SAM).

Regarding the internal structures of the aedeagus, *S. guttulifer* resembles *S. thalassinus* Puthz from New Guinea and *S. bifenestratus*.

Distribution: Australia.

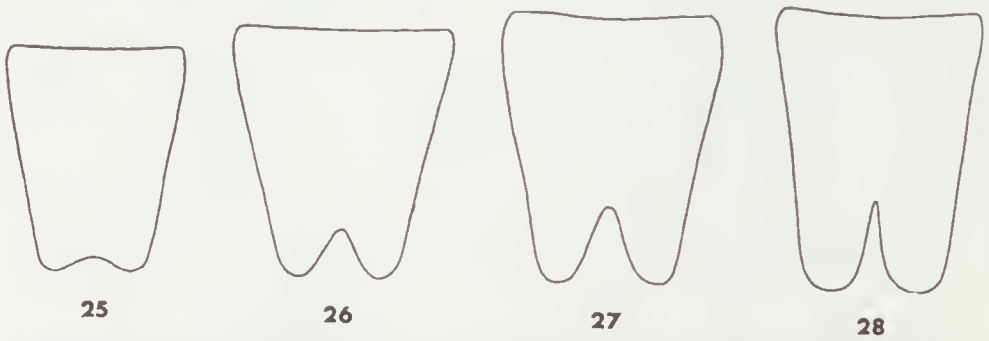

Fig. 25-28—8th sternite of ♂. 25: *Stenus olivaceus* Macleay (Gayndah). 26: *Stenus gayndahensis* Macleay (lectotype). 27: *Stenus coeruleus* Waterhouse (Cairns). 28: *Stenus pseudocoeruleus* n. sp. paratype). 25, 26 and 27, 28 same scale.

25. **Stenus (Parastenus) maculatus** Macleay, 1871

Stenus maculatus, Macleay 1871, *Trans. Ent. Soc. N.S.W.* 2(2): 148.
Stenus maculatus, Fauvel 1877, *Ann. Mus Civ. Stor. Nat. Genova* 10: 208.
Stenus maculatus, Fauvel 1878, *l.c.* 13: 405 f.
Stenus maculatus, Lea 1899, *Proc. Linn. Soc. N.S.W.* 23 (1898): 545.

This very remarkable species was often confounded with Fauvel's *pustulifer*, from which it is not easy to distinguish by general facies. The best characters of differentiation are the sexual characters:

♂ posterior trochanter with a sharp and prominent tooth, posterior femora with a striking enlargement in the middle, distinctly curved before it. 5th and 6th sternite with a distinct impression in posterior middle, sparser and finer punctated than on sides. 7th sternite shallowly impressed in basal middle, finely and moderately densely punctated and pubescent in posterior middle. 8th sternite with a moderately broad and deep rounded notch posteriorly. Aedeagus (Fig. 23) with the apical portion of the median lobe enlarged, its apex very broadly rounded. Parameres long spoon shaped.

♀ 8th sternite rounded, not or indistinctly produced in middle. Spermatheca strongly sclerotized, distinct. There are also some other distinctly sclerotized structures in the last segments: striking differences to those of *pustulifer* have not been found by me.

Material examined: 3 ♂♂, 1 ♀ syntypes from Gayndah (MLM) on two cards. ♂ lectotype: 1 Gayndah; 2 *Stenus maculatus* Macl., Gayndah; 3 ♂ lectotype: light/Puthz 1969; 4 ♂ paralectotype left/Puthz 1969; 5 *Stenus maculatus* Macleay vid. V. Puthz 1969. Aedeagus of the lectotype extracted, lectotype lacks the right antenna. Paralectotypes 1 ♂, 1 ♀ ibidem, genitalia of female extracted.

N.S.W.: 1 ♀ Woy Woy (UMQ); 1 ♂, 3 ♀♀ Sydney, Du Boulay (NMV, coll. Fauvel, coll.m.); 1 ♂, 3 ♀♀ N.S.W. (NMV, DASP, coll. Fauvel); Qld: 10 ♂♂, 9 ♀♀ Brisbane, Illidge, Pottenger, Hacker, Wassell (UMQ, QM, CSIRO, coll. Benick, coll.m.); 1 ♀ Highvale, Teh (UMQ); 3 ♂♂ Mt. Glorious, Cribb (UMQ); 1 ♀ Sandgate, Diatloff (UMQ); 1 ♂ Ellis Beach, D. Smith (UMQ); 2 ♀♀ Sunnybank, Pottenger (QM); 1 ♂, 1 ♀ National Park, Hacker (QM); 1 ♀ Mt. Tambourine, Pottenger (QM); 4 ♂♂, 1 ♀ Mulgrave River, Hacker (DEI, coll.m.); 1 ♂ Kuranda, Carter (NMV); 2 ♂♂, 1 ♀ Blackall Rgs., Wilson (NMV, coll.m.); 1 ♀ Sth. Pine R., Brooks (BMH); 1 ♀ Mackay (NMV); 1 ♂, 3 ♀♀ Qld, Hacker (NMV, SAM); 1 ♀ Australia (NMV).

The normal facies of elytra and its spot shows Fig. 33. I also saw 1 ♀ from Malanda, N. Qld, G. F. Hill leg. (coll. Scheerpeltz) which differs from *maculatus* by its length (8·1 mm somewhat extended), finer and sparser abdominal punctation, and larger elytra (Fig. 34) having very close and regular rugae. Possibly this female represents a new species or subspecies. Before not knowing the male decision is impossible.

Distribution: N.S.W., Qld, mainly in localities of open forest dominated by *Eucalyptus*.

26. **Stenus (Parastenus) pustulifer** Fauvel, 1878

Stenus pustulifer, Fauvel 1878, *Ann. Mus. Civ. Stor. Nat. Genova* 13: 505.
(*Stenus degeneratus* Puthz i.l.)

This species was found confounded with *maculatus* in nearly all collections studied. Before not knowing the type I regarded it as a new one which I named "*degeneratus*" which should be corrected in some collections.

Because it is very similar to *maculatus*, and both species are also considerably variable, a determination only by regarding the general facies is difficult. Sure characters for differentiation are the sexual characters:

♂ posterior trochanter without or with a blunt tooth, posterior femora less enlarged in the middle than in *maculatus* not so strikingly curved before it. 5th and 6th sternite very slightly shallowed along middle, somewhat sparser and finer punctated than on sides. 7th sternite finely and moderately densely punctated in posterior middle. 8th sternite with a moderately narrow and deep rounded notch posteriorly. Aedeagus (Fig. 24) with the apical portion of the median lobe narrowed in proportion to basal

portion, narrowed and curved to the apex which is moderately narrowly rounded and button-shaped. Parameres triangularly narrowed to their apices.

♀ 8th sternite rounded, distinctly produced in middle. Spermatheca and internal structures resembling those of *maculatus* (see above). Elytra (Fig. 35).

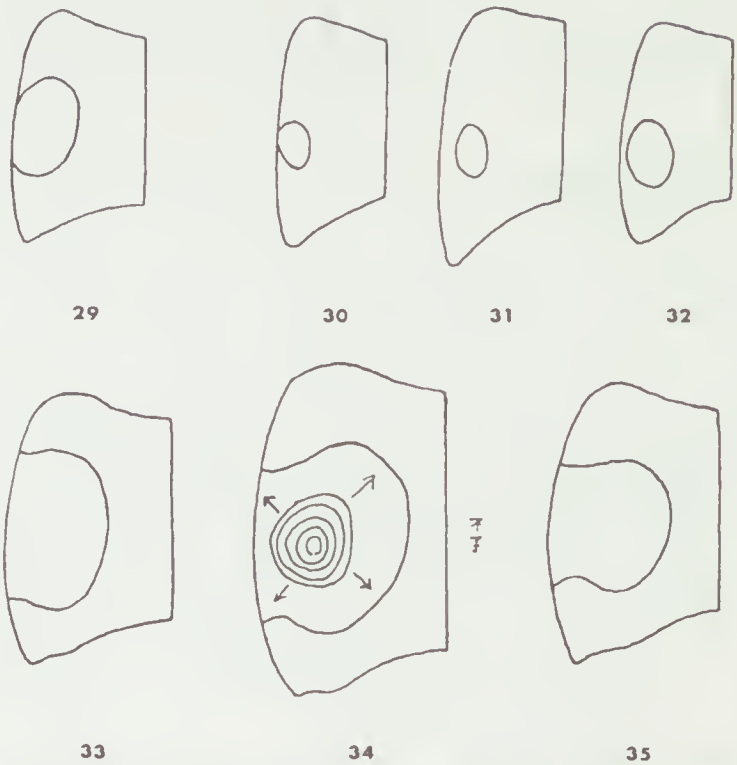

Fig. 29-35—Left elytra (same scale). 29: *Stenus bifenestratus* L. Benick (W. Aust.) 30-32: *Stenus guttulifer* Waterhouse (30: Albany, 31: Merivale, 32: W. Margaret River). 33:*Stenus maculatus* Macleay (Mulgrave River). 34: *Stenus* cf. *maculatus* Macleay (Malanda). 35: *Stenus pustulifer* Fauvel (Mt. Tomah).

Material examined: ♂ holotype N.S.W. (BM); V: 4 ♂♂ Warburton, Oke (NMV, coll.m.); 5 ♂♂, 9 ♀♀ Belgrave, Dixon (NMV, coll.m.); 1 ♂ Emerald, Oke (NMV); 1 ♂ Club Terrace, E. Vic., Monteith (UMQ); N.S.W.: 1 ♂ Otford (UMQ); 1 ♂, 2 ♀♀ Pt. Lockout via Ebor, 5200 ft, Cantrell (UMQ, coll.m.); 1 ♂ Ebor, Monteith (coll.m.); 1 ♀ (cf) Gosford, Carter (SAM); 1 ♀ Narara, Oke (NMV); 2 ♂♂, 2 ♀♀ Mt. Wilson, Carter (CSIRO, NMV); 1 ♀ (cf.) Barrington House via Salisbury, Monteith (UMQ); 2 ♂♂ Mt. Kiera via Wollongong, Monteith (UMQ, coll.m.); 1 ♀ Macquarie Pass via Wollongong, Monteith (UMQ); 1 ♀ Carrai Plateau via Kempsey, Monteith (UMQ); 2 ♂♂ Illawarra, Carter (NMV); 1 ♂, 1 ♀ Blue Mountains, Ferguson (CSIRO, coll.m.); 1 ♂ Mt. Irvine, Armstrong (coll. Steel): Qld: 1 ♀ Lamington National Park, Monteith (UMQ); 1 ♀ (cf.) Finchhatton Gorge via Finchhatton, Monteith (UMQ); 1 ♀ National Park, 3000 ft, Turner (QM); 1 ♀ (cf.) Crater Nt. Park via Ravenhoe, Cantrell (UMQ); 1 ♀ National Park, McPershon Range, 3–4000 ft, Darlington (MCZH); 1 ♀ Kuranda, Oke (NMV); 1 ♂ Australia (NMV).

Distribution: V, N.S.W., Qld, mainly from rainforest areas.

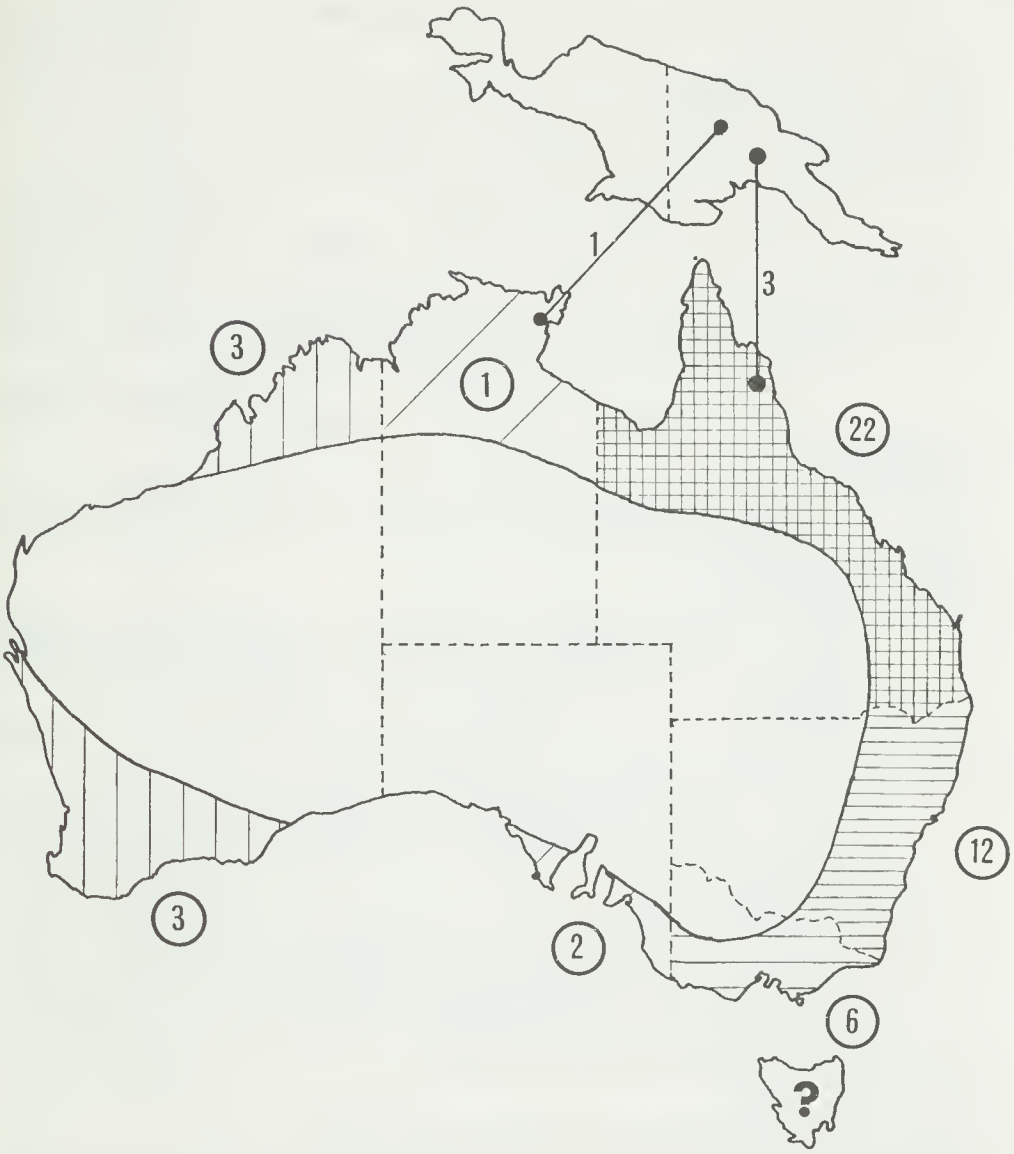

Fig. 36—Number of *Stenus* species occurring in the Australian provinces where average yearly rainfall is over 20 in. (cf. Paranomov 1959).

Key to the Australian Species of the Genus *Stenus* Latr.

1 (22) Abdomen completely margined throughout.
2 (15) Tarsi simple.
3 (6) Whole surface, especially that of abdomen, densely microsculptured.
4 (5) Elytra shorter and broader, on apical portion with distinct coppery shine, abdomen also coppery shining, aedeagus (fig. 3). 4·0-4·5 mm. W. Aust. . . . . *janthinipennis* Lea.
5 (4) Elytra longer and narrower with a greenish shine, not coppery, aedeagus (fig. 5). 3·6-3·9 mm. Qld. . . . . *retitogatus* sp. n.

6 (3) Surface lacks microsculpture or has only indistinct trace of a very shallow reticulation.
7 (12) Abdomen impunctate or very finely punctated, punctures at least as large as one eye facet.
8 (11) Middle of pronotum impunctate or with a nearly extinguished punctation.
9 (10) Elytra distinctly coppery. 9th sternite of ♂ (fig. 1), aedeagus (fig. 2). 4·0-4·8 mm. S. Aust., V, NSW, Qld. *cupreipennis* Macleay.
10 (9) Elytra black with a dark greenish tint, aedeagus (fig. 6). 3·4-4·0 mm. Qld. *atrovirens* Fauvel.
11 (8) Middle of pronotum distinctly punctated (but finer than on sides). Abdomen between the very fine punctures without any microsculpture. Elytra distinctly coppery. 4·2-4·4 mm. V, NSW, Qld. *puncticollis* Macleay.
12 (7) Punctation of abdomen distinctly coarser, punctures larger than one eye facet.
13 (14) 3rd segment of palpi black. 3·4-3·7 mm. W. Aust. *macellus* Fauvel.
14 (13) 3rd segment of palpi yellow. 8th sternite of ♂ (fig. 25), aedeagus (fig. 4). 4·0-4·3 mm. NSW, Qld. *olivaceus* Macleay.
15 (2) Tarsi bilobed.
16 (19) Elytra with smaller reddish yellowish spots.
17 (18) Narrower, elytral punctation confluent, spots smaller (figs. 30-32). Aedeagus (fig. 22). 5·0-6·0 mm. Australia. *guttulifer* Waterhouse.
18 (17) Broader, more robust, elytral punctation very dense but not confluent, spots larger (fig. 29). Aedeagus (fig. 21). 4·8-5·8 mm. W. Aust. *bifenestratus* L. Benick.
19 (16) Elytra with very large yellowish reddish macules.
20 (21) Punctation of the fore-parts mostly regular, elytra (fig. 33). ♂ trochanter of hind legs with a sharp and prominent tooth, posterior femora strikingly enlarged in middle, 8th sternite's notch broader, aedeagus (fig. 23). ♀ 8th sternite rounded, not or indistinctly produced in middle. 6·0-7·8 mm. NSW, Qld. *maculatus* Macleay.
21 (20) Punctation of the fore-parts more irregular, tortuous-confluent on elytra (fig. 35). ♂ trochanter or hind legs without or with a blunt tooth, posterior femora less enlarged in middle, 8th sternite's notch narrower, aedeagus (fig. 24). ♀ 8th sternite rounded, distinctly produced in middle, 6·5-8·0 mm. V, NSW, Qld. *pustulifer* Fauvel.
22 (1) Abdomen not, or only the first and second segments very finely margined.
23 (34) Tarsi simple.
24 (27) Abdominal punctation extremely fine and sparse.
25 (26) Elytra with deep impressions, head distinctly narrower than elytra. 4·1 mm. V. *australicus* Blackburn.
26 (25) Elytra nearly even, head as broad or scarcely narrower than elytra, aedeagus (fig. 8). 4·0-4·7 mm. Qld. *neboissi* sp. n.
27 (24) Abdominal punctation coarse and differently close.
28 (29) Abdominal pubescence long and erect. ♂ parameres distinctly shorter than the median lobe. 5·0-5·5 mm. V, NSW, Qld, W. Aust. (?). . . . . *villosiventris* Lea.
29 (28) Abdominal pubescence fine and procumbent.
30 (31) Head as broad as elytra, these short, not longer than pronotum. ♂ sexual characters (cf. Puthz under press a). 4·0-4·7 mm. Qld, SE. New Guinea. . . . . *caviceps* Fauvel.

31 (30) Head distinctly narrower than elytra, these distinctly longer than pronotum.
32 (33) Punctation of front and abdomen coarse and dense, aedeagus (fig. 7). 4·7-5·7 mm. W. Aust. (Kimberley), Qld. . . *leai* Bernhauer et Schubert.
33 (32) Punctation of front finer and sparser, middle of front mostly smooth, abdomen moderately coarsely and sparsely punctated, median lobe very narrow. 4·8-5·3 mm. NSW, Qld. . . . . *convexiusculus* L. Benick.
34 (23) Tarsi bilobed.
35 (42) Smaller species, not blue/green/copper/violet-metallic.
36 (37) Whole surface extremely densely punctated, not shining. Aedeagus (cf. Puthz in press a). 2·8-3·2 mm. N. Aust., Qld, New Guinea, New Caledonia, Oriental Region. . . . . *cursorius cursorius* L. Benick.
37 (36) At least portions of front shining.
38 (41) Legs yellowish red with the knees narrowly infuscated.
39 (40) Punctation of the fore-parts denser, interspaces on elytra at least as large as half a puncture. 9th sternite of ♂ (fig. 10), 8th sternite (fig. 26), aedeagus (fig. 9). 3·5-4·1 mm. NSW, Qld. . . *gayndahensis* Macleay.
40 (39) Punctation of the fore-parts sparser, interspaces on elytra often larger than half a puncture. ♂ 8th sternite (fig. 11, Puthz 1966). 9th sternite without an apical fork in middle. Aedeagus (figs. 11-14). 3·5-4·5 mm. V, Qld. . . . . *piliferus obesulus* Fauvel.
41 (38) Legs almost blackish brown. 4·5 mm. Horn Island. . . *hornensis* sp. n.
42 (35) Larger species, remarkable by their metallic colours.
43 (44) The whole abdomen distinctly microsculptured, its pubescence sparse and procumbent. 8th sternite of ♂ with a triangular notch in posterior sixth, aedeagus (fig. 16). 5·5-6·0 mm. Qld. . . . . *platythrix* sp. n.
44 (43) At least segments 3-6 without any microsculpture between the punctures, pubescence different in the following species.
45 (48) Abdominal pubescence erect, more distinct in *coeruleus* than in *pseudocoeruleus*.
46 (47) Whole abdomen lacks microsculpture between punctures, punctation of apical half of 5th sternite coarse and moderately dense, diameter of puncture larger than one medial eye facet. 8th sternite of ♂ (fig. 27). aedeagus (fig. 15). 5·0-6·0 mm. NSW, Qld. . . *coeruleus* Waterhouse.
47 (46) Tergites 7-10 distinctly microsculptured, punctation of apical half of 5th sternite fine and sparse, diameter of puncture at least as large as one medial eye facet. 8th sternite of ♂ (fig. 28), 9th sternite (fig. 18), aedeagus (fig. 17). 5·5-6·3 mm. NSW, Qld, NE. Papua (New Guinea). . . . . *pseudocoeruleus* sp. n.
48 (45) Abdominal pubescence procumbent.
49 (50) 7th-10th tergite very densely microsculptured, matt. Aedeagus (cf. Puthz in press b). 5·5-6·5 mm. New Guinea (perhaps also in NE. Australia). . . . . *coelestis* Fauvel.
50 (49) 7th-10th tergite with very shallow and sparse microsculpture, shining. Aedeagus (figs. 19, 20). 6·0-6·5 mm. Qld. . . . . *improbus* sp. n.

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