TAXONOMIC AND DISTRIBUTIONAL NOTES ON
THE LITTLE KNOWN AUSTRALASIAN SPECIES OF
PTECTICUS LOEW (DIPTERA, STRATIOMYIDAE)

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Australasian species of Ptecticus Loew (Diptera, Strationiomyidae). – Tijdschrift voor Entomologie

Types and other material of the Australasian species of Ptecticus are reviewed. One new species,
Ptecticus danielsi sp. n., is described from both parts of New Guinea. Revision of the relevant
type specimens resulted in the proposal of six new synonyms: Ptecticus complens (Walker, 1858)
(= Sargus tarsalis Walker, 1861, S. rufescens Van der Wulp, 1869 and P. amplior Daniels, 1979),
P. longipes (Walker, 1861) (= P. longipennis salomonensis Lindner, 1937, P. tritus Daniels, 1979)
and P. rogans (Walker, 1858) (= P. queenslandicus Daniels, 1979). Lectotypes are designated for
P. longipennis salomonensis Lindner, 1937, Sargus rogans Walker, 1858 and S. rufescens Van der
Wulp, 1869. The identities of P. archboldi Lindner, 1957, P. connectens Brunetti, 1923, P. ferrugineus
(Doleschall, 1859) and P. rufus (Doleschall, 1859) are discussed. Additional taxonom-
ic notes and new distributional records are given for seven Australasian species. A new identifi-
cation key for all the known Australasian species of Ptecticus is presented.

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Keywords. – Ptecticus; Indonesia; New Guinea; Solomon islands; Moluccas; Australia; key; new
species.

Woodley (2001) listed 18 species of Ptecticus Loew, 1855 from the Australasian Region in his recent cata-
logue of world strationiomyids. The majority of these were treated by Daniels (1979) in a study on the
Ptecticus species from Australia, New Guinea and the Bismarck and Solomon archipelagos. Daniels
described in detail eight species as new, redescribed a further five species and mentioned one other, the ma-
terial of which he did not have at hand (P. archboldi Lindner). Thanks to the instructive illustrations of
the male terminalia, the identity of Daniels’ species is easily ascertained. On the other hand, he did not study
the type specimens of earlier authors (J.M.F. Bigot, E. Lindner, F. Walker) and his interpretation of some
earlier described species needs revision.

There are five Australasian species which were not included in the Daniels’ paper: Ptecticus connectens
Brunetti, 1923, P. longipes (Walker, 1861), P. rogans (Walker, 1859), P. rufus (Doleschall, 1859) and P.
tarsalis (Walker, 1861). On the base of our studies of the type material and/or the original descriptions we
conclude that P. connectens (Brunetti) and P. rufus
(Doleschall) are very probably valid species, though
poorly known. P. longipes (Walker) was misinterpreted
as P. tritus Daniels, P. rogans (Walker) is actually identical with P. queenslandicus Daniels and P. tarsalis
(Walker) is a mere synonym of P. complens (Walker).

P. amplior Daniels is identical with P. complens
(Walker) and P. complens sensu Daniels (not Walker)
is described here as a new species, P. danielsi sp. n. All
the species treated are re-described, their male termi-
nalia are illustrated in detail (except for P. connectens
Brunetti and P. rufus Doleschall) and their distribu-
tional data are critically evaluated.

The morphological terms (including the abbrevia-
tions of wing veins) are used in the same sense as in the Contributions to a Manual of the Palaearctic
Diptera (Papp & Darvas 2000). The examined material
is deposited in the following institutions: Ento-
myology Department of the Australian Museum, Syd-
ney (AMS), Natural History Museum, London
(BMNH), Department of Natural Sciences, Bernice P.
Bishop Museum, Honolulu, Hawaii (BPBM), Na-
tionaal Natuurhistorisch Museum – Naturalis, Leiden
Diagnosis
Thorax predominantly metallic black, pleura, legs and abdomen with yellow pattern, wing darkened anteroapically, posterior crossvein and postcubitus well developed, hind tarsi completely black.

Redescription
Male. – Head (according to the original description): Black, with reddish yellow (originally perhaps whitish) frontal callus, face dark brown, proboscis pale, antenna dark brown with black arista. Basal antennal segments pale brown, black haired, some hairs also distinct on face below antennae. Eyes short haired. Shining black frons and vertex with fairly dense, long and erect pile.

Thorax predominantly shining black with a bluish sheen on scutum, scutellum and mediotergite and a slightly violet shine on pleura. Postpronotal lobes, postalar calli and large laterotergites contrastingly yellow, pleura with a yellow propleura and a zigzag pattern consisting of a narrow subnotopleural stripe, posterior margin of anepisternum and a broad spot at upper posterior margin of katepisternum. Anterolateral corners and posterior margin of scutellum orange. Each yellow laterotergite somewhat darkened along posteroventral margin. Thoracic pubescence generally inconspicuous, short and pale, erect on anterior part of scutum, but semierect to appressed beyond suture, on scutellum and mediotergite, long and erect above fore coxae and on laterotergites.
Wings almost hyaline but distinctly infumated in apical third. However, this infumation diffuse and more distinct only along anteroapical part, beginning anterior of R. All veins relatively strong, dark brown to black, stigma brownish. R45 arising at anterior crosvein, about as long as Rs, low radial triangle about as high as posterior crosvein (between discal cell and CuA1) is long. Anterior crosvein relatively strong, placed distinctly before beginning of M1, posterodorsal margin of discal cell sinuate, posterior crosvein short. M1 and M2 slightly sinuate, M3 strongly arched in basal half and thus not parallel to M1, shortened apically but missing section at wing margin barely as long as posterior crosvein, M4 sinuate. Postcubitus well developed, strong and dark pigmented. Halteres brown, more reddish apically, poststigmal bearing ochre yellow hairs.

Legs predominantly dark brown to black but fore leg partly reddish yellow. Fore leg with coxa and femur reddish yellow though femur somewhat more brownish especially on inner side, tibia dark brown but somewhat paler on basal half (though with a brown ring in basal fourth), tarsomer 1-4 black, last tarsomere orange. Tibia-basitarsal index of fore leg 1.09. Mid leg with coxa and trochanter reddish brown, other parts black but femur on both ends, base of tibia and greater part of its ventral surface, and basal half of basitarsus yellow to pale brown, basitarsus with dark ring in basal third. Hind legs black, only distal margin of coxa and lower distal tip of femur narrowly reddish brown. Pubescence predominantly short and dense, golden yellow on pale parts and predominantly or exclusively brown to black on dark parts. Distal tips of tarsomer 5 partly golden yellow ventrally.

Abdomen shining, three basal segments yellow with extensive black pattern, remaining segments predominantly black. Tergites 1-3 each with a broad transverse band, lateral margins of tergite 3 also dark, sternites 1-3 ochre yellow. Tergites 4-6 black, only posterolateral corners of tergite 4 and 6 and narrow posterior margin of tergite 5 and 6 reddish yellow. Sternites 4-6 black, with narrow reddish yellow posterior margin. Male terminalia black, only proctiger and cerci more reddish. Abdominal pile generally pale yellow but predominantly dark brown to black on dark parts, appressed dorsally and ventrally but erect, fairly long and predominantly yellow laterally.

Male terminalia (figs. 1-4). – Epandrium suboblong, somewhat dilated proximally and deeply emarginate on anterior margin, proctiger relatively broad and cerci small. Fused gonocoxites (= syngnathus) with subtriangular posterolateral projections, posterior margin of syngnathus almost straight. Gonostylus broadly strap-like, dilated subapically, aedeagal complex peculiar, with two medially arranged consecutive vesicles having a finely warty surface.

Length. – Body 14.0 mm (according to original description), 12.1 mm (without head); wing 12.0 mm. Female. – Unknown.

Taxonomic notes
Our description is based on the male holotype from Indonesia (Irian Jaya), which is preserved in the RMNH. The type material was not examined by Daniels (1979) who discussed a possible synonymy with P. longipennis Wiedemann. Actually P. archboldi has a broadly infuscated wing apex as found in P. longipennis but there is no other evidence for synonymy. The structure of the male terminalia proves unambiguously that P. archboldi is a valid species. Moreover, P. longipennis is widely distributed in the Oriental Region (India, Malaysia, Philippines and Indonesia eastwards to Sumatra) but it has not been reliably recorded in the Australasian Region.

Type material: – Holotype $\delta$: ‘Neth. Ind. – American / New Guinea Exped. / Sigi Camp 1500m / 22.ii.1939 L.J. Toxopeus’ [printed]; ‘Ptecrticus archboldi Lind. / Lindner det.’ [name in red ink in Lindner’s handwriting]; ‘Typus Lindner 1957’ [red ink in Lindner’s handwriting]; ‘Holotype’ [printed red label], in RMNH (examined). The holotype is damaged, the head and the right fore leg are absent. The male terminalia were dissected and placed in a small plastic tube on the specimen pin.

Distribution
INDONESIA: Irian Jaya: Sigi Camp (Lindner 1957; material examined).

Ptecrticus complens (Walker) (figs. 5-9)
Sargus complens Walker, 1858: 81.
Sargus rufescens Van der Wulp, 1869. Syn. n.

Diagnosis
The species is characterized by the entirely shining black upper frons, yellowish brown thorax and somewhat infuscated apical half of wings. Compared with similar species, the black hairs on the fore and mid tarsi are reduced and the hind tarsi are predominantly yellow to yellowish brown beyond the tip of the hind basitarsus.

Redescription
Male. – Head usually with shining black upper frons, vertex including ocellar triangle and postocciput. Vertex beyond ocellar triangle shining black, rarely translucent yellowish brown. Eyes approximate
above frontal callus, frons at narrowest point much narrower than anterior ocellus. Frontal callus rounded, relatively low, white to pale yellow, barely as high in profile as diameter of fore tibia in middle, face usually of same colour. Antennae ochre yellow, arista dark brown, paler at base. Pedicel with subtriangular and apically rounded inner projection, flagellum sub-circular, with somewhat prominent anterodorsal angle. Labella of proboscis ochre yellow. Head pile usually black or rarely partly reddish brown, erect on frons, ocellar triangle, vertex and upper occiput, but pale and short on lower part of frontal callus. Upper face with fine yellowish, long, erect hairs. Golden yellow pile on proboscis mainly semi-appressed, short and dense. Postocular hair fringe practically absent but upper occiput behind eyes somewhat swollen and covered with dense appressed brown pile. Basal segments of antennae with golden yellow to pale brownish hairs.

Thorax shining ochre yellow, scutum and scutellum slightly darker. Pleura uniformly shining yellow. Thoracic pubescence exclusively pale, yellowish, generally short though dense and erect on scutum, longer only on proepisternum, laterotergites and mediotergite, large central area of anepisternum bare.

Wing hyaline, slightly brownish infuscated especially along anterior margin and in apical half, veins yellowish brown. R2+3 usually arising at anterior cross-vein and barely longer than Rs, upper posterior margin of discal cell distinctly sinuate. Posterior crossvein short but distinct, about half as long as anterior crossvein, M1 slightly sinuate, its end separated from wing margin by less than the shortest distance to M3. Postcubitus long, almost as strong as anal vein. Halter brown, with yellowish stem, posttegula bearing golden yellow hairs.

Fore and mid legs including coxae chiefly yellow. Fore basitarsus much shorter than tibia, tibia-basitarsal index 1.70-1.82. Hind leg with coxa and femur yellow, at most femur darkened on outer surface of basal half, tibia and greater part of basitarsus deep brown to black, extreme apex of basitarsus and all following tarsomeres yellow. Pubescence on legs predominantly short and dense, golden yellow but black on last three tarsomeres of fore and at least last tarsomere of mid tarsi. Longer yellow hairs distinct
mainly on hind coxa. All dark parts of hind legs with predominantly blackish pubescence. Yellowish pile on
pale part of hind tarsus sometimes more whitish ventrally and brown towards apices of tarsomeres 3-5.

Abdomen ochre yellow in ground colour, with extensive diffuse brown patches on tergites 2-5, some-
times covering entire dorsal surface on some abdominal segments. Visible part of tergite 6 wholly yellow,
terminalia also chiefly yellow. Sternites predominantly
ly dark brown, only sternite 4 partly yellow. Abdom-
inal pile golden yellow on pale parts and brown to
black on dark parts but dense dark hairs visible also in
yellow areas on entire dorsum and partly also on ven-
ter beginning at sternite 5. Male terminalia usually
yellow, sometimes darkened apically. Pile on termi-
nalia usually yellow but sometimes almost brown.

Male terminalia (figs. 5-9). – Epandrium elongate,
proctiger and cercus relatively small. Systernite with
distinct but short posterolateral projection on each side,
posterior medial process markedly lower than in
the similar Oriental P. cingulatus (Loew, 1855).

Gonostylus with a basal incision on inner side, its in-
ner margin much more rounded than in P. cingulatus.
Aedeagal complex subcylindrical, tube-like and nar-
rwed apically in lateral view, much stouter than in P.
cingulatus.

Length. – Body 16.3-17.1 mm, wing 15.0-16.9 mm.

Female. – Head as in male, but frons above frontal
callus 2.0-2.5 broader than anterior ocellus and
markedly broadened towards both ends, frontal index
5.60-5.65. Tibia-basitarsus index on fore leg 1.73.
Wing extensively dark brown infuscated, at most ex-
treme base to humeral crossvein or slightly beyond it
paler; generally much darker than in male especially
along costal margin. Tarsi distinctly more slender
than in male and black hairs less extensive, usually oc-
cupying only apex of tarsomere 3 and tarsomeres 4
and 5. Boundaries of dark brown abdominal pattern
even less distinct than in males, often consisting only
of extensive patches of appressed black hairs.

Length. – Body: 11.8-14.8 mm, wing 10.7-13.7 mm.

Taxonomic notes

The status of Pecticus complens is unequivocally
based on our examination of the holotype which is
in good condition. The female holotype of Sargus
tarsalis is very likely destroyed (Brunetti 1923, Wood-
ley 2001) but there is another specimen, a male, in
BMNH, identified as 'tarsalis' by Walker himself (see
Additional material examined). It was previously ex-
amined by Brunetti (1923) who also proposed Sargus
rufescens as a synonym of this species.

Two specimens considered to be syntypes of S.
rufescens were sent from the RMNH for our study. Un-
fortunately, the male originating from Pulau Bacan
cannot be included in the type series because only
Halmahera and Pulau Waigeo are mentioned as type
localities in the original description. Nevertheless, it is
worth mentioning that the locality Pulau Bacan is the
type locality of P. tarsalis. There is no doubt that both
specimens of S. rufescens are conspecific with P. com-
plen; the syntype female of S. rufescens is thus design-
nated as the lectotype here.

The holotype of P. amplior differs very slightly
from the other males examined by having a somewhat
yellowish brown translucent area beyond the ocellar
triangle on the vertex and partly reddish brown erect
hairs on the upper frons, vertex and the upper oc-
ciput, but all other species-specific characters
(colouration, wing venation, male terminalia) are
identical with the holotype of P. complens. P. complens
sensu Daniels (1979) is a different and easily diag-
nosed species that is described as P. danielsi sp. n.
here.

Type material. – Holotype ♂ of Sargus complens.
'East Indies / Aru Islands, A. R. Wallace'; 'complens'
[Walker’s handwriting]. Labelled as the holotype of
Sargus complens’ Walker by J. E. Chainey in 1982, in
BMNH (examined). Walker (1858) originally de-
scribed this species from an alleged female but he ap-
parently erred on the sex (see also Brunetti 1923 and
Woodley 2001).

Holotype ♂ of Sargus tarsalis: Originating from In-
donesia (Maluku, Pulau Bacan) according to the orig-
inal description (not examined, apparently destroyed,

Lectotype ♂ of Sargus rufescens (herewith designat-
W. / Coll. F. M. van der Wulp’; ‘Syntype’ [red label],
in RMNH. Material from another type locality men-
tioned in the description, Irian Jaya, Pulau Waigeo,
was not examined.

Holotype ♂ of Pecticus amplior: 'Middle Clauddie
Riv / Iron Range NQW / 11 Oct 1974 / G. Daniels’;
‘K 70677’; ‘HOLOTYPE / Pecticus amplius [sic] / G.
Daniels det.’ [red label], in AMS (examined). The de-
scription mentioned nine paratypes (3 ♂ and 6 ♀) from
different parts of the Australasian Region de-
posited in BPPM but these were not examined.

Additional material examined. – INDONESIA: Mal-
uku, Gilolo, ‘tarsalis’ in Walker’s handwriting, 1 ♂,
A. R. Wallace leg., in BMNH; Batjan [Maluku, Pulau
Wulp’, ‘Syntype’ [red label], 1 ♂, Bernstein leg., in
RMNH; Maluku, Pulau Bacan, Kampung, Wayamiga,
Jaya, Hollandia [Jayapura], vii.1957, 1 ♂; iii.1958,
3 ♂, 1 ♀, G. den Hoed leg., in ZMAN. PAPUA NEW
GUINEA: Salwalty, ‘complens’ [Walker’s handwriting],
1 ♂, A.R. Wallace leg., in BMNH.
Distribution

INDONESIA: Maluku: Kepulauan Aru (Walker 1858), Pulau Bacan (Walker 1861b sub *P. tarsalis*; material examined), Halmahera (Van der Wulp 1869, sub *S. rufescens*; material examined), Gilolo (Walker 1861c, Brunetti 1923); Irian Jaya: Pulau Waigeo (Van der Wulp 1869 sub *S. rufescens*), Jayapura (material examined), Ifar – Cyclops Mts. (Daniels 1979 sub *P. amplior*). PAPUA NEW GUINEA (Brunetti 1923), Salwalty (material examined), Bernhard Camp (Lindner 1957), Lae, Mamai Plantation – E of Port Glasgow, Normanby Is. – Wakaima, Woodlark Is. – Kulumadau Hill (Daniels 1979 sub *P. amplior*). AUSTRALIA: NQW, Middle Claudi River – Iron Range (Daniels 1979 sub *P. amplior*).

*Ptecticus connectens* Brunetti

*Ptecticus connectens* Brunetti, 1923: 149.

Diagnosis

The upper frons, vertex and medial sclerite of the occiput are dark brown, slightly paler than the dark postocular area. The thorax is uniformly yellow and the dark transverse abdominal bands are reduced, unusually narrow. The posttegula bears golden yellow hairs. The tibia and the basal half of basitarsus of the hind leg are black.

Redescription

Female (holotype). – Head semiglobular in lateral view, ocellar triangle only slightly prominent, frontal callus rather flat and broad, barely as high in profile as width of fore tibia at middle. Upper frons and vertex dark brown, narrowly blackish along eye-margin, ocellar triangle blackish. Upper frons gradually tapering towards frontal callus, at narrowest point about as broad as ocellar triangle, frontal index 4.90. Vertex also dark brown, middle occipital sclerite being somewhat paler than black postocular occiput. Frontal callus translucent white, its lower half and face whitish yellow, antennae and proboscis yellow. Basal antennal segments shining, pedicel with subtriangular and well defined inner projection, flagellar complex nearly rhomboid, about as long as high, apically transverse, arista brown. Head pubescence yellow above and below antennae and lower half of postocular area, black and erect on frons, ocellar triangle and vertex. Postocular hairs very dense and appressed, chiefly brown. Basal antennal segments with brown to black appressed hairs.

Thorax uniformly yellow including scutum, scutellum and mediotergite. Thoracic pubescence indistinct, pale yellow, generally very short and appressed, more brown on poststatural part of scutum and scutellum, longest pale hairs above fore coxae and on laterotergites.

Wing very finely tinged with yellowish brown, pterostigma indistinctly more brownish. R_{2,3} arising just at anterior crossvein vein, about as long as Rs, distinctly converging to R_{1}. Radial triangle thus comparatively very narrow, much narrower than anterior crossvein is long. Upper proximal margin of discal cell markedly sinuate, posterior crossvein well developed but shorter than half the length of anterior crossvein. All M veins sinuate, M_{3} shortened apically, but missing apical part shorter than anterior crossvein. Postcubitus developed as a distinct, brown pigmented vein that is wanting apically. Halter ochre yellow with brown knob, each posttegula with a tuft of fine golden yellow hairs.

Fore and mid legs yellow, only last 2-3 tarsomeres of both legs brownish, pubescence inconspicuous, chiefly appressed, golden yellow, semi-appressed and short, brown on distal tarsomeres dorsally beginning from distal half of tarsomere 3. Tibia-basitarsal index of fore leg 1.59. Hind leg with coxa, trochanter and femur uniformly ochre yellow, tibia and basal half of basitarsus black and black haired, rest of tarsi white and whitish haired.

Abdomen ochre yellow, with relatively narrow transverse dark bands on tergites 2-5, tergite 7 with broadly darkened distal margin and terminalia entirely brown. Dark transverse bands occupying about one third of tergites or little more and distant from any margin of abdominal segments. Venter uniformly yellow, only subgenital plate brown. Abdominal pubescence mostly golden yellow, long and erect basally, semi-erect ventrally and semi-appressed to apressed dorsally, with some short black pilosity on dark areas of tergites. Dark hairs extending posterior of dark pattern in central area of tergites 2 and 3 and arranged in a transverse band occupying middle third of tergite 1.

Length. – Body 10.4 mm, wing 9.5 mm.

Taxonomic notes

The female examined is apparently different from all other Australasian species of *Ptecticus*. Brunetti (1923) described the frons as ‘shining blue black’. Actually the frons is dark brown now and the medial sclerite of the occiput is of the same colour, i.e., slightly different from the black postocular part of the occiput. It is similar to *P. temasekianus* Rozkošný & Kovac, 2002, described recently from Singapore (Rozkošný & Kovac 2002), but we believe that it is different. Some differences were found, particularly in structural and colour characters but also in wing venation. However, it must be noted that *P. connectens* is based on a unique female and *P. temasekianus* on a unique male.

Among the Australasian species, *P. connectens* seems to be most similar to *P. substitutus* Daniels.
(based on the male holotype). Distinct differences were found in the pubescence of the head (‘upper frons with yellow procline hairs, being rather dense on lower half and sparse and in a single row parallel to eye margin on upper half’ in Daniels’ species), the yellow hairs on basal antennal segments (brown in *P. substitutus*) and in the pattern of the hind tarsus (basitarsus black to brown haired only in basal third and tarsomeres 3-5 or 4-5 deep brown to black in *P. substitutus*). As a rule, such differences are not known between both sexes in other species of *Pecticus*.

Type material. – Holotype ♂: ‘Type’ [round label with red margin]; ‘East Indies / Misol / A. R. Wallace’; ‘M’ [round label]; ‘connectens’ [in Walker’s handwriting]; ‘connectens Brun. n.sp. Type ♂ / (connectens WLK. M.S. nom.)’ [in Brunetti’s handwriting]. Labelled as the holotype of *Pecticus connectens* Walker [sic!] by J. E. Chainey in 1982, in BMNH (examined). The species is based on the female which Brunetti found in the Walker’s collection (BMNH) under the unpublished collection name ‘connectens’. J. E. Chainey erroneously credited this species to Walker but Walker never published it and the species was described as late as by Brunetti (1923). In a good condition, only the right wing is glued and some distal tarsomeres of hind legs are missing.

**Distribution**

**INDONESIA**: Irian Jaya: Pulau Misool (Brunetti 1923, material examined).

*Pecticus danielsi* sp. n.  
(figs. 10-14)

*Pecticus complens* Daniels 1979: 571 (not Walker, 1858).

**Diagnosis**

The upper frons and vertex are shining black. Vein R$_{2,3}$ originates at the anterior cross vein, the discal cell is relatively short, with relatively long and predominantly arched upper posterior margin. The black hairs on the orange posttegula are diagnostic. The hind tibia and entire hind tarsi are black. The gonostylius is markedly tapered in the distal half.

**Description**

**Male.** – Head with shining black upper frons, vertex including ocellar triangle and occiput. Eyes approximate above frontal callus, frons at narrowest point as broad or narrower than anterior ocellus. Frontal callus rounded, relatively low, pale yellow, barely as high in profile as diameter of fore tibia at middle, face usually of same colour, central area of lower face shining. Antennae pale yellow, arista dark brown. Pedicel with subtriangular and apically rounded inner projection, flagellum usually rhomboid, with distinctly prominent anterodorsal angle. Labella of proboscis pale to ochre yellow. Head pile black and erect on frons, ocellar triangle, vertex and upper occiput but some upper occipital hairs more brownish. Hairs on lower part of frontal callus pale and short. Upper face with fine yellowish, erect and longer hairs. Golden yellow pile on proboscis mainly semi-appressed, short and dense. Postocular hair fringe absent but upper occiput posterior of eyes slightly swollen and covered with dense semi-appressed golden brown pile. Basal segments of antennae with sparse yellow hairs. Thorax shining ochre yellow, scutum, scutellum and mediotergite slightly darker. Pleura uniformly shining yellow. Thoracic pubescence predominantly yellow but brownish, very short, dense and semi-appressed on scutum, scutellum and mediotergite, relatively long and yellow on proepisternum and laterotergites, large central area of anepisternum bare.

Wing hyaline, wing membrane with a slight brownish tinge, veins yellowish brown, stigma brown. R$_{5,6}$, arising at anterior crossvein, longer than Rs, upper posterior margin of discal cell relatively long, predominantly arched, only in lower third somewhat sinuate. Discal cell relatively broad, not twice as long as broad. Posterior crossvein short but distinct, about half as long as anterior crossvein or slightly longer, M$_1$ strongly sinuate, its end separated from wing margin by less than the shortest distance between M$_2$ and M$_1$. Postcubitus long, almost as strong as anal vein. Halter brown, with yellowish stem, postregula with black hairs.

Fore and mid legs including coxae chiefly yellow, only last three tarsomeres black. Fore basitarsus relatively long, tibia-basitarsal index 1.30-1.43. Hind leg with coxa and femur yellow, tibia and basitarsus deep brown to black. Pubescence on legs predominantly short and dense, golden yellow but black on last three tarsomeres of fore and mid tarsi. All dark parts of hind legs with predominantly black pubescence.

Abdomen ochre yellow in ground colour, tergites 2-5 usually with a black transverse band occupying almost anterior ½ of each tergite but well separated from lateral margins of tergites, visible part of tergite 6 wholly yellow. Venter entirely yellow. Abdominal pubescence inconspicuous, mainly golden yellow and appressed but discal area on each tergite covered with short and appressed black hairs; these hair patches usually extending posterior of the area of black transverse bands. Male terminalia usually black and black haired, only cerci and proctiger yellow and partly yellow haired apically.

**Male terminalia.** – Epandrium relatively long, about 3.0 times as long as broad at posterior margin, proctiger and cerci relatively small and simple. Syn-
sternite with a little prominent, tubercle-like postero-lateral projection on each side and a short bilobate medial process at posterior margin. Gonostylus long and curved inward apically, conspicuously dilated in basal half, not bicuspidate. Aedeagal complex subcylindrical, tube-like, relatively slender, rounded apically.

Length. – Body 9.7-11.8 mm, wing 9.4 -11.2 mm.

Female. – Head as in male, but frons above frontal callus about 3.0 times as broad as anterior ocellus at narrowest part and slightly broadened towards ocellar triangle, frontal index 4.62-4.70. Tibia-basitarsus index of fore leg 1.57-1.59. Wings almost hyaline as in male. Female tarsi much more slender than in male, three apical tarsomeres of fore and mid leg usually less darkened, often yellow and blackish haired (fore tarsomeres) or even with black hairs reduced (mid tarsomeres). Black abdominal bands usually as broad as in male, abdominal segment 6 yellow with a small dark dorsal medial spot at anterior margin. All following abdominal segments dark, both cercal segments of same length.

Length. – Body 9.4-11.2 mm, wing 8.8-11.5 mm.

**Taxonomic notes**

*P. danielsi* sp. n. was misinterpreted by Daniels (1979) as *P. complens*. It possesses the black hind tibiae and tarsi, and the hyaline or barely infuscated wings as found in *P. rogans* and *P. ferrugineus*. From both these species it differs by the species-specific male terminalia and the black haired posttegulae. Some characters in the wing venation seems to be more or less diagnostic: the discal cell is stouter and shorter than in *P. rogans*, its upper posterior margin is by far less conspicuously sinuate; vein R$_{2+3}$ usually arises at anterior crossvein but the radial triangle is as narrow as in *P. rogans*. The female abdomen bears well defined transverse bands on tergites 2-5 which are not partly reduced or absent as in *P. ferrugineus*. 

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**Figs. 10-14.** *Ptecticus danielsi* sp. n. – Male terminalia, lateral view (10); male abdomen (11); male terminalia, dorsal part (12), aedeagal complex (13), ventral part (14).

Additional material examined. – INDONESIA: Irian Jaya, Orchane Mts., 1927, 1♂, A. Kalthofen leg., in ZMAN.

**Distribution**

INDONESIA: Irian Jaya: Waris, Ifar (Daniels 1979 sub *P. complens*, material examined), Bernhard Camp, Oranje Mts. (material examined). PAPUA NEW GUINEA: Imbia nr. Maprik, Wau in Morobe District, Finschhaffen on Houn Peninsula, Mamai Plantation – E of Port Glasgow (all Daniels 1979 sub *P. complens*, material examined).

**Psecticus ferrugineus** (Doleschall)

(figs. 15-18)

*Psecticus ferrugineus* (Doleschall, 1859).

*Sargus ferrugineus* Doleschall, 1859: 83.

*Psecticus atritarsis* Edwards, 1915: 596.  
?*Psecticus ferrugineus celebensis* Lindner, 1935: 49.  

**Diagnosis**

A predominantly ochre yellow species, only the upper frons and vertex may be black, the last three tarsomeres on fore and mid legs are sometimes brownish, the hind tibia and tarsus are always entirely dark brown to black. Vein R3+4 originates at the anterior cross vein, the stigma is dark brown and the upper posterior margin of the discal cell is arched rather than sinuate. The transverse abdominal bands are barely distinct, developed at most as transverse hair patches consisting of short black pile or completely absent. The male gonostylus is flat and lacks any outer projection.

**Redescription**

Male. – Head usually with shining black upper frons, vertex including ocellar triangle and postocciput, but specimens with a yellowish brown upper frons and vertex are not rare. Eyes approximate above frontal callus, frons at narrowest point about as broad as anterior ocellus. Frontal callus rounded, relatively low, pale yellow, lower in profile than diameter of fore tibia at middle, face usually of same colour, central area of lower face shining. Antennae ochre yellow, arista dark brown. Pedicle with subtriangular and apically rounded inner projection, flagellum rhomboid, with prominent anterodorsal angle. Labella of proboscis ochre yellow. Head pile usually black and erect on frons, ocellar triangle and vertex but often partly yellowish on upper occiput, pale yellow on frontal callus. Upper face usually with fine yellowish or partly brownish, erect and longer hairs. Golden yellow pile on proboscis mainly semi-appressed, short and dense. Postocular hair fringe absent, upper occiput behind eyes covered with dense appressed golden brown pile. Basal segments of antennae with golden yellow to pale brown hairs, but marginal hairs on outer surface often darker.

Thorax shining ochre yellow, only mediotergite sometimes slightly more brownish. Thoracic pubescence predominantly yellow but short, appressed and sometimes at least partly more brownish on scutum, scutellum and mediotergite, relatively long and yellow on proepisternum and laterotergites, large central area of anepisternum bare. Longer hairs on lower half of mediotergite sometimes brownish.

Wing hyaline, sometimes indistinctly brownish infuscated along apex, veins yellowish in basal part to level of humeral crossvein and brown on rest of wing, stigma brown. R3+4 arising at anterior crossvein and barely longer than Rs, radial triangle almost as high as anterior crossvein, upper posterior margin of discal cell predominantly arched, only in basal third slightly sinuate. Posterior crossvein short but distinct, barely half as long as anterior crossvein, M1 slightly sinuate, its end separated from wing margin by about half the length of the shortest distance to M1. Postcubitus long, almost as strong as anal vein. Halter ochre yellow, with paler stem, posttegula with golden yellow hairs.

Fore and mid legs including coxae chiefly yellow, only last three tarsomeres of fore leg usually brown but sometimes completely yellow. Fore basitarsus much shorter than fore tibia, tibia-basitarsal index 1.50-1.67. Last three tarsomeres of mid leg predominantly yellow though sometimes also dark brown haired. Hind leg with coxa and femur yellow, tibia and tarsus deep brown to black. Pubescence on legs predominantly short and dense, golden yellow, all dark parts of hind legs with uniform blackish pubescence.

Abdomen ochre yellow to pale brownish, usually
without defined transverse bands, but often with transverse hair patches consisting of short, black and appressed hairs. However, these dark hair patches are completely absent in some pale (mainly immature) specimens. Tergites 4 and 5 sometimes each with a trace of a narrow, short, brownish band. Venter entirely yellow. Abdominal pubescence inconspicuous, mainly golden yellow and appressed but sometimes black on discal areas as described above. Visible part of tergite 6 wholly yellow and yellow haired, male terminalia chiefly yellow but brown to black haired, only cerci and proctiger covered with yellow hairs.

Male terminalia. – Epandrium elongate, proctiger and cercus relatively small and simple. Synsternite with low posterolateral projection on each side and a slightly corrugated distal margin. Gonostylus pointed on basal inner angle and somewhat dilated subapically, without any outer projection. Aedeagal complex subcylindrical, tube-like, slightly broadened towards distal end.

Length. – Body 8.5-12.7 mm, wing 7.5-12.3 mm.

Female. – Upper frons and vertex often rather brown instead of black, or even yellow, frons at narrowest point slightly broader than ocellar triangle, frontal index 4.25. Frontal callus seems to be more prominent than in male, in profile about as high as diameter of fore tibia. Head pubescence as in male but yellowish hairs regularly visible on occiput among black pile. Halteres entirely yellow, tibia-basitarsal index 1.62-1.66. All other characters as in male including species-specific wing venation distinct from *P. rogan*.

Abdominal hair patches sometimes absent and then abdomen purely yellow and golden yellow haired. On other hand, narrow brownish transverse bands on tergites 4 and 5 may be present. Female terminalia often brownish in various extent, yellow and brown haired.

Length. – Body: 9.7-12.8 mm, wing 9.6-12.5 mm.

**Taxonomic notes**

Although the original type material of *P. ferrugineus* was probably destroyed, the species concept

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seems to be well established by interpretations of Osten-Sacken (1881; a note under P. rogans) and Van der Wulp (1898) which were accepted by Brunetti (1907, 1923) and Daniels (1979). On the other hand, the specimens identified as P. ferrugineus in Lindner’s collection belong to P. danielsi sp. n. The synonymy of P. atritarsis was proposed already by Brunetti (1923). Woodley (2001) formally synonymized both Lindner’s subspecies with the nominotypical form but actually both these taxa may be distinct from P. ferrugineus. First of all, no specimens of P. ferrugineus have been reliably collected in the Oriental Region and, moreover, the distinguishing characters mentioned briefly by Lindner (1935) refer rather to some Oriental species than to P. ferrugineus. Regrettably, the type material of both subspecies was not available because its location is not known.

According to Doleschall’s description (1859) the hind tibiae and tarsi are entirely black and the wings are not conspicuously infuscated. Both these characters are also found in P. danielsi sp. n. and P. rogans. Considering the material examined, both above-mentioned species always possess a black upper frons and vertex as well as well defined dark transverse bands on abdominal tergites 2-5. P. rogans differs from both other species of this group by characteristic wing venation: vein R 2+3 originates distinctly from before the anterior crossvein, the radial triangle above it is relatively narrow and the upper posterior margin of the discal cell is conspicuously sinuate. Moreover, the discal cell is distinctly longer and more slender than in both other species and the male gonostyli bears a very characteristic, long out-}

**Distribution**

INDONESIA: Maluku: Pulau Ambon (Doleschall 1859); Irian Jaya: Mimika River (Edwards 1915 sub P. atritarsis, material examined), Jayapura, Rivierkamp, Alkmaar, Regeneiland, Irian Jaya, Res. Hollandia, host. *Crinum*, loc. kweek, 8 iii. 1958, 6♂, 8♀, R. T. Simon Thomas leg., in AMS; Papua New Guinea, Brit. New Guinea [Papua New Guinea], Bunato Saputa, 229. First of all, no specimens of P. ferrugineus nigripennis of P. ferrugineus celebensis were captured in Indonesia (Sulawesi, Bonthain, Wawa Karaeng). The museum depository is not known.


**Ptecticus longipes** (Walker) (figs. 19-24)

*Sargus longipes* Walker, 1861a: 232.
**Ptecticus tritus** Daniels, 1979: 568. Syn. n.

**Diagnosis**

Thorax and abdomen predominantly metallic black, pleura and legs with pale yellow pattern, posterior cross vein absent and postcubitus only hyaline, not pigmented, hind tarsi predominantly white.

**Redescription**

Male. – Head black and yellow, with large bare eyes. Eyes almost touching to touching for a relatively long distance (equalling length of 5-6 ommatidia), frons elongate triangular, gradually dilated towards vertex. Frons, vertex and occiput black, frontal callus, face and proboscis pale yellow. Frontal callus prominent, nose-shaped, longer than maximum width of fore tibia. Basal antennal segments pale brown, flagellum reddish yellow, arista black. Pedicel with rounded inner projection, flagellum suboval, higher than long. Head pile mostly erect, black on vertex, ocellar triangle and greater part of postocular area, but pale
yellow (or at most partly black) on upper frons, upper face and lower part of postocular area, short and almost white on proboscis. Both basal antennal segments with black hairs.

Thorax predominantly shining black with a bluish to violet sheen on mesonotum, scutum and mediotergite. Postpronotal lobes, postalar calli, narrow posterior margin of scutellum and very narrow anterior margin of mediotergite yellow to ochre yellow, pleura yellow to brownish yellow on propleura, relatively broad upper and lower margin of anepisternum, upper half of katepisternum, posterior half of anepimeron, meron, and margins of laterotergite (except for lower margin). Darkened parts of pleura shining brown with a slight metallic sheen. Thoracic pubescence moderately long and pale, erect on scutum, scutellum, laterotergites and mediotergite, especially long above fore coxae.

Wings almost hyaline, all veins relatively strong, dark brown to black, stigma yellowish brown. R2+3 arising at anterior crossvein, much longer than Rs, low radial triangle about half as high as anterior crossvein is long. Anterior crossvein relatively strong, placed virtually above beginning of M1, posterodorsal margin of discal cell very slightly arched, posterior crossvein absent. M1 and M3 only very slightly sinuate, M3 straight and thus parallel to M2, shortened apically, the missing part at wing margin almost as

Figs. 19-24. *Ptecticus longipes* – Male terminalia, lateral view (19); female terminalia (20); male terminalia, dorsal part in dorsal (21) and ventral view (22), ventral part in dorsal (23) and ventral view (24).
long as posterodorsal margin of discal cell, M, somewhat arched in basal half. Postcubitus hyaline, not pigmented. Halteres black, only stem yellowish in basal half, posttégulae bearing ochre yellow (rarely also brown) hairs.

Legs yellow and brownish to black. Fore leg yellow including coxa, with all tarsomeres brownish and apical two tarsomeres black. Basitarsus of fore legs unusually long, tibia-basitarsal index of fore leg 1.13-1.19. Mid leg yellow but often apical half of femur and tibia partly or completely brownish while, on the other hand, basal tarsomere often more yellow than that of fore leg. Hind leg with brownish coxa and femur, tibia and basal half of basitarsus black, rest of tarsi whitish or pale yellow, only apical tarsomeres more brownish ventrally. Pubescence predominantly short and dense, golden yellow on pale parts and predominantly or exclusively brown to black on dark parts but black hairs often extended also on fore and mid tibia and ventral parts of fore and mid tarsi in particular. Hairs on pale parts of hind tarsi almost white.

Abdomen shining black with a violet metallic sheen, sometimes posterior corners of tergites yellowish to reddish brown, sternite 2 with a transverse yellow basal patch and posterior margins of the following sternites narrowly yellow. Male terminalia shining black, only ventral part more brown and distal appendages almost yellow. Abdominal pile whitish and black: pale, erect and long hairs visible on tergite 1 and broad lateral margins of tergites 2-3, tergites beginning from tergite 2 covered with semi-appressed, dense black hairs, similar hairs also on cerci. Venter with inconspicuous, predominantly appressed, dense, brown to black pubescence.

Male terminalia. – Subglobular, epandrium conspicuously arched and transverse, proctiger almost equilateral and cerci relatively short. Synsternite with broad and tapering posterolateral projections, medial process bipartite. Gonostylus short, pointed on inner side apically. Aedeagus relatively flat, with a deep posterior incision, gonocoxal apodemes short and broad.

Length. – Body 10.0-12.8 mm, wing 9.5-13.0 mm.

Female. – Frons broader than in male, but relatively narrow when compared with some other species, about 3.0 times as broad as anterior ocellus in narrowest point, frontal index about 6.16-6.50. Frons, scutum and base of abdomen rather deep black than metallic sheen. Fore and mid legs almost uniformly ochre yellow, though black haired on ventral side of tibiae and around tarsomeres, last two tarsomeres on both legs brownish. Fore basitarsus shorter than in male, tibia-basitarsal index 1.28-1.31. Pale abdominal spots and extent of pale patches on venter sometimes more conspicuous than in male. Apical segments of female cerci longer than half the length of basal segment.

Length. – Body 9.5-12.1 mm, wing 8.9-12.4 mm.

Taxonomic notes

*Sargus longipes* was treated as a species of *Sargus* by all earlier authors until Woodley (2001) transferred it into the genus *Ptecticus*. Brunetti (1923) suggested *S. tibialis* (based on a male) to be a synonym of *S. longipes* (based on a female) as a result of his examination of both alleged holotypes preserved in BMNH. However, the specimen labelled as the holotype of *S. tibialis* actually originated from Gilolo and not from Batchian (Palau Bacan) as stated in the original description. The holotype of *S. tibialis* should differ, according to Brunetti (1923), from *S. longipes* only by the almost entirely black hind femora. There is no doubt that Brunetti really compared both specimens in question and that these specimens are conspecific. Nevertheless, the real holotype of *S. tibialis* must be considered to be lost.

*Ptecticus longipennis salomonensis* is distinctly different from the Oriental *P. longipennis* (Wiedemann, 1824) and is identical with *P. longipes* as shown by our comparison of two of Lindner’s original syntypes of *P. longipennis salomonensis* and the lectotype of *P. longipennis* (designated by Rozkošný 2002). Moreover, Lindner (1937) described in the same paper a different species under the name *Ptecticus salomonensis* which is now considered to be a mere synonym of *P. isabelensis* Lindner, 1937. *P. longipennis salomonensis* Lindner, 1937 is thus a primary homonym of *P. salomonensis* Lindner, 1937, which was why Daniels (1979) proposed the new name *P. tritus* for *P. longipennis salomonensis*.

Type material. – Holotype ♂ of *Sargus longipes*: ‘Holotype’ [round, red margined label], ‘E.Indies / New Guinea / A. R. Wallace’ [Wallace’s handwriting]; ‘longipes’ [Walker’s handwriting]. Labelled as the holotype of *Sargus longipes* Walker by J. E. Chainey 1982, in BMNH. The holotype originates from Dorey in Irian Jaya and it is a female, not a male as stated in the original description. The head and the greater part of the left wing are missing.

Holotype ♂ *Sargus tibialis*. Probably lost. The ♂ of this species deposited in BMNH, labelled ‘E. Indies / Gilolo / A. R. Wallace’ [in Wallace’s handwriting]; ‘tibialis’ [Walker’s handwriting]; ‘Gil.’ [round label] and designated as the holotype of *Sargus tibialis* Walker by J. E. Chainey in 1981 cannot be the real holotype which, according to the original description (Walker 1861b), was collected on ‘Batchian’ (♂ Palau Bacan). Nevertheless it is apparently conspecific and was very probably identified by Walker himself.
though collected later on Gilolo (cf. Walker 1861c). The specimen is quite damaged (the head, tip of abdomen, the right fore leg, both mid legs and the right hind leg are missing).

Lectotype ♂ of Ptecticus longipennis salomonensis ♂ (herewith designated): ‘Type’ [red margined round label]; ‘Pt. longipennis salomonensis Lind.’ [in red ink in Lindner’s handwriting]; ‘Type Lindner 1936’ [in red ink in Lindner’s handwriting]; ‘Solomon Is. / Isabel / Tatamba / 27.vi.1935 / R. A. Lever’. Labelled as a syntype of Ptecticus longipennis salomonensis Lindner by J. Chainey in 1982, in BMNH (examined). In fairly good condition, with both antennal flagella and the right hind leg missing. The examined paralectotype ♀ with the same labels as lectotype is also deposited in the BMNH. In good condition, only the right antenna (except for the scape) missing. In addition to both specimens examined, further 2 syntypic ♂ and 3 ♀ from the same locality were not examined. A pair of them is also deposited in BMNH, the location of rest material is not known.

Ptecticus tritus was suggested as a new name for P. longipennis salomonensis Lindner by Daniels (1979) and it is thus based on the same type material.

Additional material examined. – PAPUA NEW GUINEA: Mamai Plantation, E of Port Glasgow, 150 m, light trap, 16.ii.1965, 1 ♂, 1 ♀, R. Straatman, in AMS. SOLOMON IS.: Vella Lavella, Kundurumbangara, 80 m, Malaise trap, 19.xi.1963, 1 ♂, 23.xi.1963, 1 ♀, P. Shanahan leg., in AMS; Small Gela, x.1996, 30 ♂, 1 ♀, M. J. A. de Koster leg., in ZMAN.

Distribution

INDONESIA: Maluku: Pulau Bacan and Gilolo (Walker 1861b and 1861c, respectively, sub S. tibialis); Irian Jaya: Dorey (Walker 1861a sub S. longipes). PAPUA NEW GUINEA: Erima, Astrolabe-Day (Van der Wulp 1898 sub Sargus longipes), Ambunti, May River, Bulolo, Finschhafen, Brown River, Milne Bay, Mamai Plantation, E of Port Glasgow (all Daniels 1979 sub P. tritus, material examined). SOLOMON ISLANDS: Santa Isabel: Tatamba (Lindner 1937 sub P. longipennis salomonensis and Daniels 1979 sub P. tritus); Malaita: Dala, Auki. FLORIDA
GROUP (James 1948 sub *P. salomonensis*), Nggela Is.: Haleta; Small Nggela: Tanatan Cove nr. Dende; Vel-lal Lavella: Kundurumbangara, Malawari (all Daniels 1979 sub *P. tritus*), Small Gela (material examined). QUADALCANAL: Quadalcanal I., Lunga River Valley, Malimbu River Valley and Umasami River Valley (James 1948 sub *P. salomonensis*); Tambalia (Daniels 1979 sub *P. tritus*). New Georgia Island (James 1948 sub *P. salomonensis*).

*Ptecticus rogans* (Walker)  
(figs. 25-28)

*Sargus rogans* Walker, 1858: 81.  
*Ptecticus doleschalii* Bigot, 1879: 231.  

**Diagnosis**

A predominantly ochre yellow species but with the upper frons and vertex black. Vein R2+3 originates before the anterior cross vein, the discal cell is about twice as long as broad, its upper posterior margin is relatively short and strongly sinuate. The posttegula bears golden yellow hairs. The hind tibia and tarsus are entirely dark brown. The transverse abdominal bands are narrow and short, more or less distinct. The male gonostylus is bicuspidate in lateral view.

**Redescription**

**Male.** – Head with shining black upper frons, vertex including ocellar triangle and postocciput. Eyes approximate above frontal callus, frons at narrowest point much narrower than anterior ocellus. Frontal callus rounded, relatively low, pale yellow, barely as high in profile as diameter of fore tibia at middle, face usually of same colour, central area of lower face shining. Antennae pale yellow, arista dark brown. Pedicel with subtriangular and apically rounded inner projection, flagellum short oval to rhomboid, with slightly prominent anterodorsal angle. Labella of proboscis ochre yellow. Head pile black and erect on frons, ocellar triangle, vertex and upper occiput but pale and short on lower part of frontal callus. Upper face with fine yellowish, erect and longer hairs. Golden yellow pile on proboscis mainly semi-appressed, short and dense. Postocular hair fringe virtually absent but upper occiput behind eyes slightly swollen and covered with dense semi-appressed brown pile. Basal segments of antennae golden yellow to pale brownish haired.

Thorax shiny ochre yellow, scutum, scutellum and mediotergite slightly darker. Pleura uniformly shiny yellow. Thoracic pubescence predominantly yellow but mostly brownish, very short, dense and semi-appressed on scutum, scutellum and mediotergite, relatively long and yellow on proepisternum and laterotergites, large central area of anepisternum bare.

Wing hyaline, indistinctly pale brown infuscated along apex, veins yellowish brown, stigma yellow. R2,3 arising distinctly before anterior crossvein and longer than Rs, upper posterior margin of discal cell relatively short strongly sinuate. Discal cell rather long, about twice as long as broad. Posterior crossvein short but distinct, about half as long as anterior crossvein. M, slightly sinuate, its end separated from wing margin by a distance equal to length of posterior crossvein. Postcubitus long, almost as strong as anal vein. Halter brown, with yellowish stem, posttegula with golden yellow to brownish hairs.

Fore and mid legs including coxae chiefly yellow, only last three tarsomeres darkened due to conspicuously brown hairs. Fore basitarsus much shorter than fore tibia, tibia-basitarsal index 1.48-1.56. Hind leg with coxa and femur yellow, tibia and basitarsus deep brown to black, only two basal tarsomeres sometimes yellowish ventrally. Pubescence on legs predominantly short and dense, golden yellow but brown on last three tarsomeres of fore and mid tarsi. All dark parts of hind legs with predominantly blackish pubescence, only hairs on ventral surface of tarsi sometimes more or less yellowish.

Abdomen ochre yellow in ground colour, tergites 2-5 each usually with a brownish transverse patch occupying ¼-½ of tergite length and ½ or slightly more of its width. However, this dark pattern is sometimes markedly or entirely reduced. Venter entirely yellow. Abdominal pubescence inconspicuous, mainly golden yellow and appressed but extensive discal area on each tergite covered with short and appressed black hairs which are also present in specimens with reduced brownish pattern. Visible part of tergite 6 wholly yellow and yellow haired, male terminalia chiefly brown and black haired, only cerci and proctiger more yellow and yellow haired apically.

Male terminalia. – Epandrium elongate, proctiger and cercus relatively small and simple. Synsternite with low, tubecle-like, posterolateral projection on each side and a deep, subcircular central emargination at distal margin. Gonostylius unusually plate-like, narrowed towards distal margin and with a slender outer projection and thus markedly bifid in lateral view even *in situ*. Aedeagal complex subcylindrical, tube-like, broadly rounded apically and distinctly flattened towards basal part.

**Length.** – Body 8.7-12.8 mm, wing 7.9-11.2 mm.

**Female.** – Frons broader than in male, slightly dilated towards ocellar triangle, frontal index 3.83-4.0. Last three tarsomeres of fore and mid tarsi usually as brown as in male, tibia-basitarsal index of fore leg 1.56-1.58. Abdominal tergites 2-5 with gradually broadened transverse bands, tergite 6 predominantly yellow, segment 7 yellow but broadly brown dorsally.

ROZKOŠNÝ & DE JONG: *Australasian Ptecticus*
and with a medial brown patch ventrally, terminalia brown and dark haired, only proctiger and cerci on inner side yellowish haired. Very similar to *P. ferrugineus* Doleschall but differing by the wing venation in the radial area (R<sub>4</sub>, arising before anterior crossvein, long, stigma yellow, upper posterior margin of discal cell strongly sinuate) and by having mostly well defined transverse abdominal bands.

Length. – Body: 8.8-11.2 mm, wing 8.7-13.7 mm.

**Taxonomic notes**

The type of *Sargus rogans* was examined by Brunetti (1923) who stated that 'Walker described both sexes but only the type ♀ is now present, badly mouldy'. The same author also studied the holotype of *P. doleschalli* and essentially confirmed the synonymy already proposed by Osten-Sacken (1881). Nevertheless, the name *P. doleschalli* was used by Van der Wulp (1898). *P. rogans* was apparently correctly interpreted by Osten Sacken (1881) and Brunetti (1907, 1923) though Brunetti (1923) supposed that the wholly dark brown thorax distinguished it from all the related species. Actually, the thorax is ochre yellow, i.e., of the same colour as in *P. ferrugineus* and other similar species. The synonymy of *P. queenslandicus* is based on our study of the type material (the holotype and a paratype).

Type material. – Lectotype ♀ of *Sargus rogans* (herewith designated): 'Type' [printed in blue circle]; 'East Indies / Aru Is./ A. R. Wallace' [Wallace’s handwriting]; 'Aru' [round blue label]; 'rogans' [Walker’s handwriting]. Labelled as a syntype of *Sargus rogans* Walker by J. E. Chaine in 1982, in BMNH. *Sargus rogans* Walker was described from both sexes collected on the Aru Is. (Indonesia, Maluku, Kepulauan Aru) but only one damaged female is preserved in BMNH.

The second syntype was very probably lost. The lectotype was moulded, the flagellum and the left wing are missing, the right wing is partly damaged.

Holotype ♂ of *Pecticus doleschalii*: ‘*P. doleschalii*, ♂ / Insul. Mysol / J. Bigot’ [large oblong label in Bigot’s handwriting]; ‘may = rogans WLK. /, diff. in colour of thorax and coxae / EB 1921’ [Brunetti’s handwriting]; ‘*Pecticus doleschalii* Big. / I. Mysol / ex Bigot Coll. / BM 1960-539’; ‘BMNH (E) ♀ / 240039’ [printed]. Labelled as the holotype of *Pecticus doleschalii* Bigot by J. E. Chaine in 1982, in BMNH (examined). The specimen is in fairly good condition but the head and the apex of the abdomen beginning from the 6th segment are missing.


Additional material examined. – INDONESIA: Irian Jaya, Bivak Elland, i.1909, 2♂, Lorentz 1909-1910, in ZMAN; same date, 1♂, ‘*Pecticus rogans* W., det. de Mejijere’, in RMNH. PAPUA NEW GUINEA: Morobe District, Mt. Missim, 1600 m, 29.iv.1978, 1♂, 4.v.1978, 1♂, 8.v.1978, 2♀, T. Pratt leg., in BPBM. AUSTRALIA: Queensland, West Claudie River, 4 km SW road junction, 12.44 S, 143.15 E, 6.xii.1986, 1♂, G. Dodson leg., in UQIC.

**Distribution**

*P. rogans* is well known from the Australasian Region but is also recorded from India and Philippines (cf. Woodley 2001). However, both these records appear to be problematic. The record from India is based on both sexes from Lucknow but Brunetti (1907) pointed out that the hind tarsi are yellow instead of black and later noted that identification of these specimens requires confirmation (Brunetti 1923). A record from the Philippines is based on a note by Brunetti (1907): ‘Osten-Sacken has seen a specimen from the Philippines named by Walker as this species’, but this remark was never published by Osten-Sacken (1881) or confirmed by other authors.

INDONESIA: Maluku: Kepulauan Aru (Walker 1859, Brunetti 1907); Irian Jaya: Pulau Misool (Bigot 1879 sub *P. doleschalii*), Dorey Hum (Osten-Sacken 1881), Tamara, Berlinhafen (Van der Wulp 1898 sub *P. doleschalii*), Bivak, Lorentz River, Rivierkamp, Alkmaar, Regen Island (De Mejijere 1913), Bivak El-land (material examined). PAPUA NEW GUINEA: Morobe Distr. – Mt. Missim. AUSTRALIA: N Queensland: Middle Claudie River, Cape Weymouth, Tully River bridge, Milgrave River, Crystal Cascades nr. Cairns (all Daniels 1979 sub *P. queenslandicus*), West Claudie River (material examined).

*Pecticus rufus* (Doleschall)

*Sargus rufus* Doleschall, 1859: 83

Original description (diagnosis in Latin, short description translated from Dutch):

Ferrugineus, oculis viridibus, abdomen transversim late nigro fasciato, antennis pedibusque rufis, alis flavicansibus. Long. 7**m**.

Affinis *S. latifascia* Walck. [sic!]

Almost bare. The head is somewhat broader than the thorax, hemispherical; the eyes large, bluish green;
the epistomium white, the antennae brownish red.

The entire body, as the legs, rusty coloured; the abdomen long, its anterior part narrower; a broad black band on the 2nd to 5th segment.

The wings long and broad, with brown yellow veins, somewhat yellowish.

Amboina. During the dry season rare.

Taxonomic notes

No additional information beyond the original description is available for this species. Nevertheless, its colour seems to be unique to a such an extent that Brunetti (1923) presumed it to be valid. The unicolorous reddish yellow legs are not known in any other Australasian (or Oriental) species.

Type material: Amboina (= Pulau Ambon) is the type locality given in the original description. The number of specimens or sex of the types are not mentioned. The location of the type material is unknown (Woodley 2001). It was very probably destroyed.

Distribution

INDONESIA: Maluku: Palau Ambon (Doleschall 1859).

A KEY TO THE AUSTRALASIAN SPECIES OF Ptecticus

In addition to the Australasian species discussed in this paper, an additional five species described by Daniels (1979) are included in the key. P. isabelensis Lindner and P. papuanus (Bigot) are apparently correctly interpreted by the same author, and the identity of P. quadrifasciatus (Walker) was discussed by Rozkošný & De Jong (2001). All the known Australasian species of Ptecticus are thus included.

1. Scutum, scutellum and abdomen predominantly shining black ........................................ 2
   – Scutum, scutellum and abdomen yellow, at most with brown pattern ........................................ 3
2. Hind tarsus completely black .......................................................... 2
   – Hind tarsus predominantly white .......................................................... P. archboldi Lindner, 1957
   – Hind tarsus predominantly white .......................................................... P. longipes (Walker, 1861)
3. Hind legs entirely black .......................................................... P. papuanus (Bigot, 1879)
   – At least hind femur yellow .......................................................... 4
4. All legs entirely reddish yellow .......................................................... P. rufus Doleschall, 1859
   – At least hind tibia and/or hind tarsus partly or entirely black .......................................................... 5
5. All tarsomerses dark brown to black, concolorous with hind tibia .......................................................... 6
   – At least some hind tarsomerses white, yellow or yellowish brown, paler than hind tibia .............. 9
6. Hairs on posttegula black, gonostylus long, curved inward apically (Fig. 14) ........... P. danielsi sp. n.
   – Hairs on posttegula predominantly or exclusively yellow to pale brown, gonostylus otherwise shaped .......................................................... 7
7. Wing brown infuscated, costal margin to apex of R, almost black; male mid basitarsus with black hairs on apical ½ ....... P. spatuloides Daniels, 1979
   – Wing not as intensively infuscated, male mid basitarsus without black hairs ................................ 8
8. R₃, arising before anterior crossvein, radial triangle above anterior crossvein very low, stigma yellow, male gonostylus bicuspidate .......................................................... P. rogans (Walker, 1858)
   – R₃, arising at anterior crossvein, radial triangle above anterior crossvein higher, stigma brown, gonostylus not bicuspidate .......................................................... P. ferruginus (Doleschall, 1859)
9. Hind basitarsus extensively white to yellow, at most partly brown to black haired .......... 10
   – Hind basitarsus entirely black and black haired .......................................................... 12
10. Upper frons with black hairs; hind basitarsus black and black haired in basal half ................. P. connectens Brunetti, 1923
   – Upper frons with yellowish hairs; darkening of hind basitarsus less extensive ......................... 11
11. Hind basitarsus darkened in basal third and black haired in same area: P. substitutus Daniels, 1979
   – Hind basitarsus entirely yellow and black haired only posteriorly ................................ P. belvolus Daniels, 1979
12. Abdominal tergite 5 entirely black .......................................................... P. isabelensis Lindner, 1937
   – Abdominal tergite 5 at least partly yellow ...... 13
13. Face below antennae with fine black hairs .......................................................... P. gilvus Daniels, 1979
   – Face below antennae with fine yellow hairs .... 14
14. Posttegula with golden yellow hairs, abdominal spots diffuse and brownish or virtually indistinct, wing markedly infuscated ................ P. complens (Walker, 1858)
   – Posttegula with black hairs, abdominal spots well defined, wings not markedly infuscated .... 15
15. Abdominal tergite 1 with basolateral spots, hind tarsomerses 2-5 white ................................. P. quadrifasciatus (Walker, 1860)
   – Abdominal tergite 1 without basolateral spots, all hind tarsomerses brownish orange ................. P. eximius Daniels, 1979

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