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NEW PLATYPODIDAE (COLEOPTERA) FROM THE RAIN FORESTS OF PAPUA NEW GUINEA*

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Abstract

Eighteen new species of Platypodidae from the rain forests of Papua New Guinea are described, all but two belonging to the genus *Platypus*, the others one each to the respective genera *Crossotarsus* and *Baiocis*. Description is also given of the new male of *Platypus distinctipes* Schedl, and *P. diversiporus* Schedl is recognized as the female of *P. truncatipennis* Schedl.

New species described are : *Crossotarsus pregnans*, *Baiocis unispineus*, *Platypus acetabuliformis*, *P. aequilaterus*, *P. daedalus*, *P. evanidus*, *P. hebetatus*, *P. hippocrepicus*, *P. nemorosus*, *P. nudiusculus*, *P. patens*, *P. pectinatus*, *P. ternus*, *P. tristis*, *P. vaginervis*, *P. gumicus*, *P. runcinatus* and *P. watutensis*.

Introduction

Beetles of the family Platypodidae, known as pin-hole borers, breed mainly in newly felled and damaged trees where their galleries riddle the sap and heartwood. In these galleries broods of young are raised that feed not on the wood but on ambrosia fungi introduced by the parents which grow on the gallery walls. Economically the insects are responsible for degrade of felled logs, occasionally also lumber, and are of particular importance as pests to the timber trade in the wet tropics. Also it is not uncommon in the tropics to find Platypodidae attacking living trees where the latter are put under stress.

Papua New Guinea lying only between 1° and 12° S of the equator has over 75 % of its land mass covered with rain forests. The very varied flora of this forest with some 650 species of woody trees, shrubs, and lianas, together with a topography of mountains ranging up to 4500 m and enumerable islands, potentially offers great opportunities for speciation for a wood inhabiting insect group. Schedl (1972b) records 218 Platypodidae from the complete island of New Guinea, that is Irian Jaya together with Papua New Guinea, and since that date a further 30 species have been described

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(Roberts 1979, Browne 1980 (a, b), 1981 (a, b, c), 1983, 1984 (a, b)). In Papua New Guinea by far the greatest number of species belong to the genus *Platypus*, but in all nine genera of the family have been recorded in the country. *Crossotarsus* and *Diapus* are also well represented. Slightly more than half of the species are endemic to the island of New Guinea, though most of these are only known from what is now Papua New Guinea. Though the described fauna is large it is the author's view that many more platypodid species remain undescribed ; in particular there appears to be conspicuous species change with altitude.

Virtually all of the endemic species were described by Schedl, in particular in his later papers (Schedl 1968, 1970, 1972a, 1975), and the holotypes of most of these are in that author's personal Collection. However, because in the early years of the Forest Research Station, Bulolo, a great deal of work on ambrosia beetle attack of logs was carried out, which included a national survey of pin-hole borers attacking logs, a very large Collection of Platypodidae now exists as part of the National Forest Insect Collection housed at Bulolo. All this was seen and named by Dr. Schedl, and 137 species occur in the Collection today. Some of these are holotypes, and many paratypes of Schedl's. This material has been available to the author for comparison. Other material connected with the present study has been obtained from the Bernice P. Bishop Museum, Honolulu, Hawaii, USA, the Australian National **Insect** Collection, CSIRO, Canberra, Australia and Naturhistorisches Museum, Vienna.

All of the new species described here have been taken from fallen or felled logs, and a number have been reared in long series.

The following abbreviations are used in this text for depositories containing specimens :

- BMNH -British Museum (Natural History), London ;
FRS, Bulolo -Forest Research Station, Bulolo, Papua New Guinea.

Opportunity is taken here to correct two errors in a previous paper (Roberts 1979). *Platypus nothofagus* sp. nov. (p. 91, 1.23) should read *Platypus nothofagus* sp. nov, and the host tree *Euodia* sp. (p. 95, 1.31) should read ***Evodia*** sp. Full responsibility is accepted by the author for these mis-spellings.

Crossotarsus pregnans sp. nov.

Male : 9.5-9.6 mm long, 2.7 times as long as wide, widest half way along elytra. Colour near uniform dark red. Head with frons lightly impressed except between antennal bases surface irregularly punctate, the punctures with strong vertical hairs particularly on either side of the epistoma ; vertex angled to frons, with hairs in isolated groups on both sides of median stria, being conspicuously long on the margins of the eyes. *Pronotum* wider than long (41 :36), widest anterior to mid-way, femoral grooves shallow, surface shining with scattered punctures. *Elytra* only a little wider than pronotum, and nearly twice as long, sides at first slightly diverging, then almost parallel until final quarter where they narrow to end in finely bifurcate angles at the base of a transverse declivity, the latter at first near vertical, but subsequently gradually inclined ; elytral disc smooth, shining, except immediately above declivity where matt, interstriae 1 narrow, the remainder wider, subequal, only 1

and 3 distinct almost up to declivity, first striae strongly impressed, remainder much less so, all but the first punctate with well separated punctures; declivity indented at suture, apically sinuate, ornamented matt all over, with numerous strong, horizontal hairs. Abdominal ventrites densely matt all over, the second to fourth each with a transverse row of short hairs, the fifth with a pair of marginal, near pyramidal bosses, finely pitted.

Holotype ♂, Papua New Guinea : some 3 km north east of Popondetta, 100 m, ex *Sterculia* sp., 13. iv. 1976 (H. Roberts) (BMNH). Paratype, 1♂ (FRS, Bulolo), same data as holotype.

This is a member of the 'Crossotarsi angulati' (Schedl 1972b) near to *C. corniventris* Schedl. Besides large size males of *C. pregnans* are distinguished by the bulbous outline of the elytra viewed dorsally, the non-bifurcate projections at the apico-lateral elytral margins, and in particular by the two prominent, well separated, marginal, near pyramidal bosses on the fifth abdominal ventrite.

Baiocis unispineus sp. nov. (Figs. 21 and 22)

Male : 2.8-2.9 mm long, 4.7 times as long as wide. Colour, the head and elytral margins fuscous, the remainder yellow. *Head* between antennae and the upper limit of the frons a longitudinal, unpigmented sulcus, the rest of the frons lightly granulate with scattered, mainly marginal hairs ; vertex angled, but not strongly to frons, a very fine median stria commencing at the posterior margin and reaching half way, surface near smooth with few scattered punctures. *Pronotum* longer than wide (22:14), widest behind narrow femoral grooves which are clearly angled posteriorly, disc smooth, shining, centrally a fine striae running from mid-way between the femoral grooves almost to the posterior margin. *Elytra* not wider than pronotum, and 1.7 times as long, widest mid-way along its length, then narrowing to a near horizontal, transversely re-entrant declivity ; elytral disc shining, interstriae indistinct throughout, striae nowhere impressed, punctures very ill defined, posterolateral angles very lightly serrate ; declivity lunate, the upper margin projecting except for incised suture, below this impressed, under the postero-lateral angle a downwardly pointing, distinct tooth on each side, throughout very few hairs. Abdominal ventrites concave, very finely and lightly punctured all over.

Female : 3.0-3.1 mm long, 5.0 times as long as wide. Colour very like the male, but more yellow. *Head* resembling the male except upper frons somewhat more bulbous with many more short hairs, and less strongly angled to vertex. *Pronotum* a little more elongate than the male, otherwise very similar. *Elytra* hardly wider than pronotum, and twice as long, for most of its length near parallel before narrowing only a little to a very short mainly vertical declivity; elytral disc shining, near glabrous, suture impressed throughout, interstriae indistinct, 1 the narrowest, striae, particularly the first serro-punctate, not impressed ; declivity at first gently convex then vertical, but the latter area lunate and narrow (less so than the male), suture strongly impressed centrally, the whole surface finely imbricate, and over the vertical area pilose. Abdominal ventrites smooth, with one or two transverse rows of long hairs.

Holotype ♂, Papua New Guinea : Stony Logging Area, Bulolo 770 m, ex *Xanthophyllum papuanum*, 3. viii. 1978 (H. Roberts) (BMNH). Paratypes, 5♂ 6♀, same data as holotype, 1♂ 1♀ (BMNH), 40 5♀ (FRS, Bulolo).

Resembling *B. pernanulus* Schedl (Schedl 1935) (Figs. 23 and 24) but larger, the male elytra of the new species apically narrows less, and from above shows no sign of

teeth near the postero-lateral angles, while when viewed from behind there is a clear single tooth pointing downwards submarginally on each side of the declivity. The absence of a strong angle between the frons and the vertex, and the initially more horizontal, less pilose declivity distinguish the female.

Platypus acetabuliformis sp. nov. (Fig. 16)

Male : 2.9-3.0 mm long, 4.0 times as long as wide. Colour brown, *Head* with frons impressed centrally, between and below the eyes median sulcus distinct, surface smooth in the impression but above and lateral to it coarsely punctate, each puncture with an upturned hair ; vertex not angled to frons, surface with numerous strong piliferous punctures. *Pronotum* clearly longer than wide (25:20), femoral grooves wide, angled posteriorly, median sulcus impressed, with along its anterior half an irregular group of small pores on either side, the surface shining throughout with scattered pits. *Elytra* only a little wider than the pronotum and 1.6 times as long, sides diverging only slightly to declivity which is near vertical ; basal half of elytral disc shining, distal half finely reticulate, matt, interstriae distinct, impunctate, in distal quarter slightly raised, 1, 4, and 6 narrower than remainder, only 1 to 4 distinct up to the margin of the declivity, but all project over this declivity, the first four as distinct small teeth, the others as a broad rim, striae except for the first impressed only in distal quarter, serro-punctate, most punctures obscure ; declivity near vertical, the margins with two pointed teeth on each side, the lower teeth much larger than the upper, in the upper part of the declivity a narrow oblique ridge extending on each elytron from below interstriae 5 to end just short of the suture as a small tooth, below this somewhat bulbous, suture on declivity raised throughout, ornamentation of declivity generally matt, with a patch of hairs near the suture of each elytron. Abdominal ventrites shining, impunctate.

Holotype ♂, Papua New Guinea : some 15 km north east of Popondetta, 50 m, ex *Amoora* sp., '29. iv. 1976 (H. Roberts) (BMNH). Paratype, 1♂ (FRS, Bulolo), same data as holotype.

Males of this species, resembling *P. modigliani* Schedl (Schedl 1936) belonging to the 'Platypi adjuncti' (Schedl 1972b), can be distinguished by the presence of a pronotal pore group, and by the ornamentation of the declivity.

Platypus aequilaterus sp. nov. (Fig. 25)

Male : 2.1-2.2 mm long, and 3.7 times as long as wide. Head and pronotum orange-brown, elytra yellow, apically tipped with dark brown. *Head* clearly impressed, otherwise very like *P. papuanus* Roberts (Roberts 1979). *Pronotum* 1.8 times as long as wide, widest behind shallow femoral grooves, disc shining, lightly pitted all over, posterior half with clearly impressed median sulcus but lacking any associated pore groups. *Elytra* only a little wider than the pronotum, widest two thirds along their length, sides near parallel, suture impressed more so near declivity, disc shining, near smooth, interstriae impunctate, none raised on disc, only at apex of declivity where all terminate in raised teeth, striae except the first hardly impressed, only lightly punctured ; declivity inclined, each elytra ending in distinct triangular tooth, with additional much smaller tooth higher up on each lateral margin, above the declivity combined interstriae 2 and 3, also 7, protrude onto declivity as distinct ridge, remaining interstriae all similar but less so, on declivity interstriae indistinct, surface matt, finely reticulate all over, with golden hairs prominent on projecting interstriae, and towards declivity margins. Abdominal ventrites finely pitted with many short hairs.

Holotype ♂, Papua New Guinea : Stony Logging Area, Bulolo, 770 m, ex *Xantho-*

phyllum papuanum, **18**. xii. 1979 (H. Roberts) (BMNH). Paratype, 1♂ (FRS, Bulolo), same data as holotype.

Belonging to the group 'Platypi mesoadjuncti' (Schedl 1972b) this species is very close to *P. papuanus*. Males of the new species are separated from the latter by their smaller size, and by the outline of the elytral declivity which has only one tooth on the lateral margins, not two, and which terminates in two equilateral points.

Platypus daedalus sp. nov. (Fig. 13)

Male : 2.3-2.4 mm long, and 3.1 times as long as wide. Colour red, with declivity near black. *Head* with frons between and below the eyes centrally impressed, median sulcus short, surface reticulate throughout, with scattered pilose punctures, particularly above the eyes. *Pronotum* a little longer than wide, femoral grooves only angled posteriorly, median posterior striae short, surface reticulate throughout, shining, with very few small pits on the disc. *Elytra* wider than pronotum and 2.1 times as long, the sides diverging to a truncate declivity which occupies the posterior fifth only, apex rounded ; disc shining, interstriae 3 and 5 evident throughout, shining, otherwise only the distal parts of 1, 6, 7, and 9 at or near commencement of declivity clear, though the remaining interstriae can be seen in outline on some part of the disc, the interstriae projecting over the declivity bearing tufts of golden-yellow hairs, striae distinct only basally where obscurely serro-punctate ; declivity truncate with interstriae 1, 3, 5 and 7 continued onto it as ribs, margin notched, with two deep projections distinguished on each lateral margin and a third at the suture, surface matt, reticulate throughout, with rows of hooked hairs on the ribs.

Female : 2.8-2.9 mm long, 4.0 times as long as wide. Colour a uniform light brown. Both *head* and *pronotum* very like the male, except striae more obvious on the frons. *Elytra* hardly wider than the pronotum, and a little more than twice as long, sides almost parallel up to commencement of declivity at distal fifth, then narrowing, at first rounded, then near transverse ; disc shining, suture somewhat impressed, interstriae all subequal except 1 which is narrower, none prominent, the base of 3 transversely rugose, striae except the first not impressed, all indistinctly serro-punctate ; declivity at first lightly convex, then vertical, marginally notched, beyond which extended to transverse apex, interstriae and striae hardly evident, upper declivity lightly rugose with horizontal pubescence, on vertical area more strongly rugose with denser pubescence, the hairs pointing outwards in opposite directions on the two elytra.

Holotype ♂, Papua New Guinea : Stony Logging Area, Bulolo, 770 m, ex *Xantho-phyllum papuanum*, **3**. x. **1978** (H. Roberts) (BMNH). Paratypes, 70 1♀, same data as holotype, 1♂1♀ (BMNH), 6♂ (FRS, Bulolo).

This species is very similar to *P. nudiusculus* sp. nov., but smaller. Males can be distinguished by having interstriae 3 and 5 more prominent, the more central striae narrower and partially punctate on the elytral disc, and on the declivity by having the projections separated by deeper notches. Virtual absence of scattered pits on the pronotum, and a more elongate non-sinuuous termination of the declivity separate females.

Platypus distinctipes Schedl 1972, male nov.

Male : 4.0-4.1 mm long, and 3.8 times as long as wide. Colour a light brown, with darker elytral

apices. Head with distinct impression containing the central striae between the eyes, otherwise nearly flat, surface ornamented all over with piliferous punctures ; from above clearly angled with vertex. *Pronotum* longer than wide (40 :35), femoral grooves not conspicuously angled, surface shining with scattered pits but no pronotal pores, and in the posterior half a distinct, strong median sulcus. *Elytra* a little wider than the pronotum, for the basal two thirds laterally slightly diverging then rapidly narrowing, each elytron ending in an elongate projection, while dorsally the elytra inclined very gradually ; disc smooth, shining, interstriae 1 clearly the narrowest, the remainder subequal, ornamentation limited to few scattered fine punctures, striae hardly impressed away from the mid-line, except the first which is strongly so, all serro-punctate, except for the first punctures mainly elongate, and often touching; declivity with crenate lateral margins ending in trifid tip at apex of elytral projections, surface matt throughout, with no trace of ornamentation of disc except for sub-surface punctures corresponding to the striae, hairs fine (like *P. solidus* Walker (Walker 1858)) and confined to the lateral and apical margins of the declivity. Abdomen with numerous fine hairs.

This male is described from one of a series of both sexes reared from a felled *Prunus* sp. from the Manki Logging Area, Bulolo, 1200 m, in August 1981. 2♂ 2♀ have been placed in the BMNH, and the same number of both sexes at the FRS, Bulolo.

Schedl (1972a) described this species from seven specimens, claiming they were males that could probably be assigned to the group 'Platypi semidepressi' (Schedl 1972b). The single paratype located at the Forest Research Station, Bulolo, together with two paratypes seen from the Bishop Museum, Honolulu, are all females, and presumably the other four specimens also belong to this sex. These paratypes seen are near identical, except for being a lighter brown in colour, to a series reared by the author, where the males clearly belong by reason of the extensions of the elytral declivity to the group 'Platypi oxyuri' (Schedl 1972b), to which *P. distinctipes* is now transferred.

The male of the species, except for being smaller, shows resemblances to *P. hebetatus* and *P. solidus*. It can be separated from both however, by the much shallower declivity angle, and in having the ornamentation of the declivity limited to rows of indistinct punctures, and hair restricted to the lateral margins and elytral apices, Numerous prominent pronotal pores in two groups, combined with the small cone below each interstriae 3 on the declivity distinguish the females of this species.

Platypus evanidus sp. nov. (Figs. 4 and 8)

Male : 2.4-2.5 mm long, 4.1 times as long as wide. Colour yellow-brown, with head and declivity darker. *Head* frons near flat, though somewhat impressed anteriorly, a well marked elongate medium sulcus mid-way between the lower half of the eyes, surface finely reticulate with scattered piliferous punctures, particularly in the upper half ; junction of frons and vertex very rounded, the latter with a median striae and a reticulate surface with piliferous punctures. *Pronotum* clearly longer than wide (28 :20), femoral grooves narrow, angled both anteriorly and posteriorly, the median sulcus fine and long, with at its anterior limit on either side a small group of very small elongate pores, surface shining with scattered pits. *Elytra* only a little wider than pronotum and twice as long, sides near parallel for two thirds of their length before narrowing sharply to near transverse apex, declivity confined to apical third ; disc shining, interstriae smooth, indistinct, not raised except immediately above declivity, 1 much narrower than remainder which except for 8 are all subequal, above the

declivity from 1 to 9 interstriae becoming progressively longer, with only 3, 5 and 9 ending as projecting teeth, the others ending as a line of granules except for 8 which ends bluntly, striae only impressed immediately above declivity except for the first which is impressed along its entire length, all indistinctly serro-punctate ; declivity first gradually convex then vertical extending further forward dorsally than laterally, interstriae all continued onto declivity as longitudinal rows of coarse granules, on the convex part these bearing long horizontal hairs, while on the vertical part though horizontal, hairs are much more dense and point outwards in opposite directions on the two elytra. Abdominal ventrites granulose, the posterior margin of the fourth with two strong teeth placed equidistant from the mid-line.

Female : 2.6-2.7 mm long, 4.4 times as long as wide. Colour orange-yellow. *Head* very like the male. *Pronotum* also like the male except that it is slimmer in proportion (26 : 19) and has the complete length of the median sulcus surrounded by a large pore-group, the pores themselves being minutely elongate. *Elytra* only a little wider than the pronotum but 1.8 times as long, sides near parallel for four fifths of their length, after which narrowing rapidly to a near transverse declivity ; disc shining, interstriae flat, smooth, 1 much narrower than the remainder, striae not impressed except for first, all minutely but distinctly serro-punctate ; declivity at first convex then vertical, the latter part somewhat impressed, indentivity of interstriae and striae lost on declivity, surface above indistinctly granulate, below more so, throughout well covered with horizontal hairs, these being particularly dense and prominent on the vertical area.

Holotype ♂, Papua New Guinea : Stony Logging area, Bulolo, 770 m, ex *Xanthophyllum papuanum*, 3. x. 1978 (H. Roberts) (BMNH), Paratypes, 3♂ 4♀, same data as holotype, 1♂ 1♀ (BMNH), 20 3♀ (FRS, Bulolo).

Belonging to the group 'Platypi pseudoadjuncti' (Schedl 1972b) this species shows resemblances to *P. associatus* Schedl (Schedl 1973). Males of *P. evanidus* can be separated by their slighter form, smaller number of pronotal pores, finer elytral interstriae near to and above the declivity and a simpler declivity which has at its posterolateral margins only one slim, strong tooth, and a surface covered only with coarse granules. The very large pronotal pore-group made up of elongate pores distinguishes the female.

Platypus hebetatus sp. nov. (Figs. 1 and 5)

Male : 4.3-4.5 mm long, and 3.7 times as long as wide. Colour dark brown with elytral apices near black. *Head* nearly flat, centrally lightly impressed, no central stria, surface finely granular all over, with scattered short hairs; vertex not strongly angled to frons, surface matt with few piliferous punctures. *Pronotum* not wider than long, widest immediately behind shallow femoral grooves, these angled posteriorly, disc shining, smooth except for numerous fine punctures, lightly impressed median sulcus in posterior half. *Elytra* a little wider than the pronotum, widest almost mid-way along its length, sides at first diverging slightly then in posterior third rapidly narrowing, disc smooth, shining, interstriae with distinct scattered punctures, 1 more so than remainder and basally rugose particularly 3 and 5, 1 half the width of the others, all of which are subequal, striae nearly throughout clearly but finely impressed the first very much so, with many touching, or near, small punctures ; declivity confined to apical third, at first transversely rounded, descending gradually with well defined slightly crenate margins, later steeper, and narrowing rapidly, margin sinuate, each elytron prolonged, ending usually in a clearly trifid apex (prolongation stouter than *P. solidus* (Fig. 6), and shorter), interstriae and striae clearly evident on apical half of declivity, surface strongly shagreened throughout with in addition pits on the elytral projections and ornamented with rows of short hairs on the interstriae

(thicker than *P. solidus*) with at the apex a brush of hairs. Abdominal ventrites densely setose

Female : 4.9-5.0 mm long, 4.0 times as long as wide. Colour, head and thorax reddish, base of elytral apices dark brown. *Head* like the male except the vertex with a strong median striae which extends half way down the frons. *Pronotum* of similar proportions to the male, distinguished by a strong pigmented sulcus in the posterior half, which has on either side at its anterior limit a single, large, prominent pronotal pore and behind this four minute pores in a group (contrast *P. solidus*, Fig. 3), surface smooth shining, with very few punctures. *Elytra* no wider than pronotum, 2.3 times as long, the sides subparallel except in the apical seventh where they narrow rapidly to form a rounded, near square apex, disc shining, smooth, interstriae distinct, all subequal except for 1 which is narrower and more tumid, striae distinct, clearly serro-punctate, all impressed, the first more so (unlike *P. solidus*); declivity at first gently convex, with suture impressed, ultimately vertical, this area bordered marginally by oblique ridges, and at the termination of interstriae 2 an indistinct tubercle, apically the declivity projecting slightly centrally at the posterior margin, surface matt with scattered short hairs. Abdominal ventrites, unlike the male, with few short hairs.

Holotype ♂, Papua New Guinea : Stony Logging Area, Bulolo, 770 m, ex *Xanthophyllum papuanum*, 18. vi. 1976 (H. Roberts) (BMNH). Paratypes, 4♂ 5♀, same data as holotype, 1♂ 1♀ (BMNH), 3♂ 4♀ (FRS, Bulolo).

This member of the 'Platypi oxyuri' (Schedl 1972b) closely resembles *P. solidus* Walker. Males of *P. hebetatus* are distinguished by the clearly though finely impressed elytral striae which extend obviously onto a densely matt declivity, the latter ending in comparatively short apical projections. The very strong, single pair of pronotal pores separate the females of this new species.

Platypus hippocrepicus sp. nov. (Fig. 15)

Male: 2.1-2.2 mm long, 3.9 times as long as wide. Colour dark reddish brown. *Head* with the frons impressed between and below the eyes, the remainder flat, median sulcus distinct, surface anteriorly smooth, behind finely reticulate with scattered coarse piliferous punctures; vertex not strongly angled to frons, the surface ornamented much as the latter. *Pronotum* clearly longer than wide (29: 21), femoral grooves angled posteriorly, median striae short, impressed, surface shining, with numerous scattered pits, but hairs very few, limited to lateral margins. *Elytra* only a little wider than the pronotum, but 1.5 times as long, basal half at first diverging then near parallel sided, ending in part vertical declivity with toothed margins; disc shining, interstriae flat, smooth, 1 narrow, the rest all larger and subequal, none clearly reaching upper margin of declivity though continuations of interstriae 2 and 3, and 7 to 9, project over the declivity as strong teeth, striae obscurely serro-punctate, only the first impressed; declivity for the most part gradually inclined, then near vertical, between the projecting teeth the surface impressed, though adjacent impressions along the suture contiguous, posterolateral margins extended as small spines, while posteriorly on each elytron well separated from the suture a single, incurving, flat, truncate projection, declivity surface where inclined smooth and shining, where vertical near matt, ornamented throughout on the margins with short hairs, these also on the face of the declivity. Abdominal ventrites punctate, shining.

Holotype ♂, Papua New Guinea : some 15 km north east of Popondetta, 50 m, ex *Amoora* sp., 29. iv. 1976 (H. Roberts) (BMNH). Paratypes 2♂, same data as holotype, 1♂ (BMNH), 1♂ (FRS, Bulolo).

Belonging to the 'Platypi pseudospinulosi' (Schedl 1972b) the two projections on

the posterior margin of the declivity, each of which are truncate, and incurved, distinguish males from other members of this group.

Platypus nemorosus sp. nov. (Figs. 17 and 19)

Male : 4.3-4.5 mm long, and 3.0 times as long as wide. Colour a uniform dark red. *Head* the frons slightly impressed, between the antennae a short distinct stria, the surface densely punctate throughout, with scattered vertical hairs; vertex not strongly angled to frons, centrally a distinct stria, scattered large punctures laterally, many with long hairs. *Pronotum* almost square, the femoral grooves very shallow, not angled, in the posterior a distinct median sulcus ending in a large near circular pore-group, which does not reach the anterior margin (contrast *P. grayi*, Fig. 18), surface shining, quite setose, nearly all over. *Elytra* wider than pronotum and 2.1 times as long, widest at commencement of declivity, for basal two thirds sides near parallel, then rapidly narrowing to form a rounded apex; disc shining, interstriae with scattered pits, carinate (less so than *P. grayi immersus* Schedl (Schedl 1972a)), 3, 5 and 7 wider than remainder 1 narrowest, for most of their length all raised, 3, 2 and 1 progressively less so, the last two of these bearing a distinct tubercle before the declivity, that on 2 larger than 1, striae deep, impunctate, matt; declivity convex, more obviously so apically, limited to distal third, interstriae only distinct on upper declivity, 1 and 2 as simple ribs, 3 to 8 as partially carinate ribs that eventually unite as a transverse boss, which opposite 3 ends as a conspicuous tooth, one each side half way down the declivity, surface matt throughout with single rows of short hairs on interstriae 3 to 9. Abdominal ventrites matt, the fourth with a pair of tubercles on the posterior margin, one on either side of the mid-line, the fifth with scattered granules.

Female : 4.5-4.6 mm long, and 3.1 times as long as wide. Colour as male. *Head* very like the male, but with a greater number of piliferous punctures, and the presence centrally of a raised median tubercle. *Pronotum* like the male except the pronotal pore-group even larger, and in outline perhaps cordiform (contrast *P. grayi*, Fig. 18). *Elytra* a little wider than the pronotum and 2.2 times as long, widest just before commencement of declivity, sides near parallel for basal three quarters, then rapidly narrowing to a near rounded apex; disc shining, interstriae with scattered pits, all distinct, 1, 2 and 4 obviously narrower than remainder, the base of 3 granulose (more coarsely than in *P. grayi* (Schedl 1972a)), striae impressed, distally progressively more so, and also wider, throughout indistinctly serro-punctate; declivity restricted to distal quarter, all interstriae distinct on upper part of declivity, all but 1 contributing to a bulbous swelling on each elytron, the surface of this area at first transversely carinate then rugose, with single rows of short yellow hairs very prominent on swellings. Abdominal ventrites matt, with transverse rows of short hairs, the fifth somewhat bulbous.

Holotype ♂, Papua New Guinea : some 15 km north east of Popondetta, 50 m, ex *Myristica* sp., 29. iv. 1976 (H. Roberts) (BMNH). Paratypes, 3♂ 3♀, same data as holotype, 1♂ 1♀ (BMNH), 20 2♀ (FRS, Bulolo).

This species is in the group 'Platypi sulcati' (Chapuis 1865), very near to *P. grayi* ssp. *immersus* Schedl. Males of *P. nemorosus* are separated by the much larger, more obviously oval group of pores located at the anterior limit of the median pronotal sulcus, and by the presence of a pair of small tubercles on the posterior margin of the fourth ventrite. No female is known for *P. g. immersus*. Smaller size, the presence of a median tubercle on a near flat frons, and a larger pronotal pore-group distinguish this sex from females of *P. grayi*.

Platypus nudiusculus sp. nov. (Figs. 11 and 12)

Male : 3.0-3.1 mm long, and 3.5 times as long as wide. Colour red, the elytra darker than the remainder. *Head* with the frons almost flat, between the antennae an indistinct sulcus, surface reticulate throughout, with between and above the eyes prominent, scattered, piliferous punctures ; on the vertex a well developed striga, with on either side of it a few strong punctures. Pronotum slightly longer than wide (22 : 19), widest behind deep femoral grooves which posteriorly are strongly angled, a short median impressed sulcus with no pronotal pores, throughout the surface shining, reticulate, glabrous, densely and minutely pitted all over. *Elytra* only a little wider than the pronotum, diverging sides lead to a truncate declivity which occupies less than the posterior third ; disc shining, except for 3 and 5 no interstriae recognisable basally, and these two alone prominent as narrow smooth, shining ribs for all the distal half of the disc, of the remainder only 1, 6, 7 and 9 evident, and these only just before declivity, all distally distinct interstriae ending in horizontal tufts of yellow-gold hairs, striae broad, very finely reticulate all over, impunctate ; declivity obliquely truncate, interstriae 1, 3 and 5, 7 less so, continuing onto declivity as ridges, the margins below half-way with three prominent notches on each side, where the two teeth so formed the lower larger than the upper, in addition at the sulcus a further small projection on each elytron but no notch between them, throughout surface matt, finely reticulate, with on the margins and ridges rows of short reflexed hairs. Abdominal ventrites finely rugose, near glabrous.

Female : 3.4-3.5 mm long and 3.8 times as long as wide. Colour a uniform brown, pale yellow beneath. *Head* with frons more impressed, and having median sulcus much better developed than the male, otherwise very similar. *Pronotum* except that femoral grooves not as strong, very similar to the male. *Elytra* hardly wider than the pronotum, and twice as long, almost parallel sided for basal four fifths, then narrowing to rounded apex, declivity convex, confined to apical fifth ; disc horizontal shining, interstriae evident but not prominent, surface finely reticulate with few very indistinct punctures, the base of 3, less so 5, with transverse ridges, striae not impressed, somewhat obscurely serro-punctate; declivity at first gradually then steeply convex, protruding posteriorly, with sinous transverse margin, in upper part both interstriae and striae evident, the second striae being particularly impressed, vertical part of declivity traversed on each side by oblique shallow groove, surface generally granular throughout, more so where vertical except on oblique groove and along suture, declivity generally pubescent, the hairs above all pointing posteriorly and mainly in rows, on the vertical part in two separated, near triangular areas, hairs shorter, denser, and on the two elytra pointing laterally, in opposite directions.

Holotype ♂, Papua New Guinea : Stony Logging Area, Bulolo, 770 m, ex *Xanthophyllum papuanum*, 17. xi. 1978 (H. Roberts) (BMNH). Paratypes, 3♂ 4♀, same data as holotype, 1♂1♀ (BMNH), 2♂ 3♀ (FRS, Bulolo).

A member of the 'Platypi adjuncti' (Schedl 1972b) in which neither sex shows pronotal pores. Males are characterised by having the distal parts only of most interstriae prominent on the elytral disc, and at the elytral apex there is no sutural notch.

Platypus patens sp. nov. (Fig. 20)

Male : 5.0-5.1 mm long, and 3.2 times as long as wide. Colour, head and thorax red, the remainder brown. *Head* the frons vertical, near flat, between the antennae a short sulcus, surface throughout

matt, between and above the eyes many punctures all with short erect hairs ; vertex strongly angled with frons, centrally a raised stria, surface on either side matt, with few hairs. *Pronotum* a little longer than wide (25 :23), widest behind the femoral grooves, which posteriorly are clearly angled, disc shining, with in the posterior half a short median sulcus, its anterior half surrounded by a small cordate group of pores, surface lightly pitted throughout. *Elytra* a little wider than the pronotum and 1.8 times as long, sides diverging, straight, widest at declivity, apex rounded ; disc shining, ribbed, interstriae except for 7 basally indistinct, only 3 and 8 broad and convex throughout, 2 and 4 broad for only part of their length, 1, 5 and 6 narrow, at the top of the declivity 1, 3, and 5 raised as projecting teeth, each with a thick brush of yellow hairs, the others carinate, striae impressed, except for the first all distally wide, the surface shagreened, serro-punctate ; declivity steeply convex, limited to distal quarter, other than 8 which margins the declivity interstriae only evident in upper quarter of declivity as rows of yellow hairs, declivity limited by a rim, below interstriae 3 a large blunt tubercle on each elytron, the suture raised throughout, surface matt covered with coarse granules, the largest near the lateral borders, between these the surface finely punctate. Abdominal ventrites shining, the fifth finely pitted.

Female : 5.6-5.7 mm long, and 4.0 times as long as wide. Colour red. *Head* very like the male except for the shining anterior of the frons, and the short hairs between the eyes which are denser. *Pronotum* clearly longer than wide (30 :25), disc shining, like the male the median sulcus with pores but this time there are many more of them, and they extend the complete length of the sulcus. *Elytra* no wider than the pronotum and 2.0 times as long, near parallel sided up to distal quarter when the elytra gradually narrow to a transverse apex ; disc finely reticulate all over, dull interstriae all distinct, all subequal in width except for 1 which is narrower, striae impressed, the first strongly, all indistinctly serro-punctate, the punctures few basally and well separated ; declivity initially convex where both interstriae and striae recognizable, then vertical where they vanish, the termination of 3 marked by an indistinct boss, surface throughout strongly reticulate, somewhat granular, covered by hairs those on the perpendicular part short and dense. Abdominal ventrites shining, reticulate with many short hairs.

Holotype ♂, Papua New Guinea : some 15 km north east of Popondetta, 50 m, ex *Myristica* sp., 29. iv. 1976. (H. Roberts) (BMNH). Paratypes, 5♂1♀, same data as holotype, 1♂1♀ (BMNH), 4♂ (FRS, Bulolo).

Another member of the 'Platypi sulcati' (Schedl 1972b) somewhere near *P. othiodes* Schedl (Schedl 1973). Males do not show the inverted v-shaped groove on the vertex and the elytra are distinct in having only interstriae 1, 3, 5 and 8 prominent, three of these ending above the declivity in a dense brush of horizontal hairs.

Platypus pectinatus sp. nov. (Figs. 9 and 10)

Male: 4.3-4.4 mm and 3.0 times as long as wide. Colour, head and thorax black, elytra and abdomen reddish black. Surface finely reticulate throughout. *Head*, with frons near vertical, lightly impressed centrally, only a minute stria mid-way between the antennae, between and above the eyes coarsely and irregularly punctate, punctures piliferous ; vertex with stria and scattered punctures. *Pronotum* longer than wide (20 :16), widest behind small femoral grooves, which are not conspicuously angled, disc shining, posteriorly a short median sulcus ending well short of the posterior margin, pronotal pores absent, surface with scattered numerous small punctures. *Elytra* hardly wider than the pronotum, and only 1.6 times as long, margins basally diverging slightly, ending in an abrupt declivity with rounded margins ; disc shining, strongly ribbed, all interstriae convex, 2 and 3 along their entire length, 5, 6, 7 and 9 only distally, all these projecting over the declivity margin as carinate teeth, in

contrast 4 and 8 do not reach this margin, and 1 only just, striae broad, the first alone deeply impressed throughout, the others only distally, all distinctly serro-punctate ; declivity near vertical, slightly convex, the lateral margins expanded into two strong teeth on each side, with on the sutural margin at the apex one other much smaller tooth, the surface shining, with irregular depressions, and a few near vertical rows of scattered hairs. Abdominal ventrites matt, with very few hairs.

Female : 4.9-5.1 mm long and 3.3 times as long as wide. Colour black. Surface finely reticulate. *Head* very like male except punctures more numerous. *Pronotum* more elongate than the male (31 : 24), and with posterior short sulcus surrounded along its entire length on both sides with a narrow group of small pores, the whole within a shallow cordiform depression evident when viewed obliquely from behind, the surface also much more finely punctured than male. *Elytra* not much wider than pronotum and 1.5 times as long, sides until the final fifth near parallel after which narrowing to give a near transverse apex, disc shining, suture impressed throughout, other than 1 which is narrow interstriae indistinct, remainder larger, subequal in width, the bases of 1 to 4 transversely and strongly ribbed, striae very lightly impressed, the first more so and with numerous distinct, near touching, elongate punctures, the remainder punctures indefinite and well separated ; declivity confined to apical fifth, at first lightly convex, then vertical, lateral margins notched and indented apically, interstriae and striae weakly evident only on upper convex parts of declivity, the surface here transversely carinate and bearing a cover of short, well separated, yellow hairs, all of which point backwards, the perpendicular face granulose with a dense near triangular patch of short hairs on each elytron which point outwards, between these groups laterally, and between them and the hairs on the upper part of the declivity glabrous strips. Abdominal ventrites finely pitted, particular-y the fifth, each with a transverse row of hairs.

Holotype ♂, Papua New Guinea : Stony Logging Area, Bulolo, 770 m, ex *Xanthophyllum papuanum*, 26. ii. 1978 (H. Roberts) (BMNH). Paratypes, 3♂, same data as holotype, 1♂ (BMNH), 2♂ (FRS, Bulolo).

This is a distinctive species belonging to the 'Platypi adjuncti'. The elytra in the male are strongly ribbed longitudinally, many of the ribs projecting as prominent raised teeth over a near vertical declivity bordered by four marginal projections.

***Platypus terms. sp. nov.* (Figs. 2 and 7)**

Male : 2.3-2.5 mm long and 3.7 times as long as wide. Colour reddish brown. *Head* with frons anteriorly impressed, near flat between and above the eyes, sulcus distinct, surface finely reticulate with large scattered piliferous punctures ; frons not angled to vertex. *Pronotum* longer than wide (27 : 21), femoral grooves not strongly angled, median striae short, impressed, surface throughout smooth, shining, with very few pits and no hairs except on margins. *Elytra* a little wider than pronotum and 1.7 times as long, sides diverging for slightly more than basal half then parallel, ending in a part vertical declivity with a toothed margin ; disc shining, interstriae flat, smooth, 1 narrow, the remainder wider but subequal, none reaching margins of declivity though extensions of 2 and 3, and 7, 8 and 9, project over the declivity as two teeth on each elytron, one dorsal, the other near lateral ; declivity at first gradually inclined, then for a short part vertical, posterolaterally each side extended as a small spine, on the posterior margin on each elytron a stronger spine, each more than twice as long as the posterolateral spines, at the suture margin incised, the face of the declivity beneath the projecting teeth raised, between them impressed, particularly in the upper part, this at the suture produces a short raised carina, declivity surface smooth, shining throughout, with short hairs bordering the upper margin, and scattered over the face. Abdominal ventrites strongly punctate, shining.

Female : 2.6-2.7 mm long and 4.2 times as long as wide. Colour brown. *Head* the frons shallowly impressed, median stria distinct, surface irregularly, coarsely punctured, with scattered short hairs ; vertex not strongly angled with frons, with a median carina. *Pronotum* twice as long as wide, femoral grooves angled posteriorly, median stria long, surrounded by impressed, near cordate group of pores, surface shining with scattered pits, with hairs limited to the lateral margins of the pore-group. *Elytra* a little wider than the pronotum and nearly twice as long as wide, ending in transverse, initially convex, subsequently vertical declivity ; disc horizontal, shining, impressed throughout at suture, interstriae flat, impunctate, 1 much narrower than the remainder all of which are subequal, bases of 1 to 5 transversely ribbed, striae serro-punctate, the first more distinctly than the remainder, and impressed, both interstriae and striae lose their identity at commencement of declivity ; declivity occupying only last quarter of elytra, at the suture impressed throughout, postero-laterally the margin with two blunt projections, nowhere the interstriae and striae evident, surface lightly carinate throughout and well covered with short horizontal hairs. Abdominal ventrites punctate, shining.

Holotype ♂, Papua New Guinea : Stony Logging Area, Bulolo 700 m, ex *Xanthophyllum papuanum*, 17. viii. 1978 (H. Roberts) (BMNH). Paratypes, 3♂ 2♀, same data as holotype, 1♂ 1♀ (BMNH), 2♂ 1♀ (FRS, Bulolo).

This species is very like *P. hippocrepicus* sp. nov., but males can be separated from the latter by their larger size, by having the distinctive projections on the posterior margins near the suture end as spines, not incurving truncate blades, and by the raised commencement of the sutural margin on the declivity. Females of *P. ternus* are distinctive in that the pronotal pore-group is bordered by a margin of prominent hairs.

Platypus tristis sp. nov. (Figs. 26 and 28)

Male: 3.6-3.7 mm long and 3.3 times as long as wide. Colour orange-brown, except for near black apices of elytra. *Head* the frons near flat, the median stria short, and sunk in a small pit midway between the base of the eyes, surface obscurely, but densely punctate throughout, and covered with short light, vertical hairs ; vertex not strongly angled to frons, centrally a carina within an inverted parabola-shaped groove that carries a row of strong hairs. *Pronotum* almost square, femoral grooves strongly angled posteriorly, surface shining, smooth, except for scattered small pits, sulcus short with no pore-group. *Elytra* twice as long as pronotum, and a little wider, basally sides diverging, straight, until reaching steeply inclined, apically round declivity, where the body is widest ; disc shining, apically strongly grooved, among the interstriae only 1 and 9, possibly 5 also, clearly running the whole length of the disc, otherwise interstriae basally indistinct, and most not evident until mid-way along length of disc, all interstriae, except perhaps 8 and 9, separately reaching top of the declivity, over which none project, striae basally obscurely serro-punctate, only the first impressed along its entire length, the remainder only from mid-way along the disc, impressions throughout wide, surface of interstriae distally near carinate, with few punctures and hairs, except at commencement of declivity where all end in separate horizontal hair brushes which hardly project over the declivity, striae surface finely reticulate throughout with scattered pits; declivity only occupying apical fifth, steep, very slightly convex, no evidence of interstriae and striae anywhere, centrally on each elytron, approximately beneath termination of interstriae 3, an indistinct boss, declivity border very lightly rimmed all round, surface matt, covered with coarse granules, those along the borders and sutural margins the smallest, also with very short, irregular rows of hairs on each elytron pointing obliquely outwards. Abdominal ventrites matt all over, with a single transverse row of short hairs on each.

Female : 3.8-3.9 mm long and 3.3 times as long as wide. Colour brown, the thorax lighter. *Head* very like male except for vertex which is distinguished by a centrally placed strong oval groove that

anteriorly is slightly pointed, associated with the groove clear adjacent small punctures, each of which bear an inwardly pointing hair, and within the groove centrally a carina on a tumid swelling. *Pronotum* slightly longer than wide (37 :32), femoral grooves shallow, median sulcus surrounded by near caudate group of pores, those in the anterior half nearly twice as big as those of the posterior half, and more strongly impressed. *Elytra* subparallel, widest near halfway, dorsally near horizontal for four fifths, after which giving way to a declivity initially gradually inclined then vertical ; disc shining, interstriae clearly evident except distally, basally 3 and 5 transversely, rugose, striae impressed, but only the first punctured ; declivity with clear sutural impression, opposite interstriae 3 on each elytron at the declivity commencement an indistinct ridge, which laterally almost reaches the elytral margins, the surface indistinctly punctate throughout, on the vertical part the punctures arranged in near vertical rows, at the top of the declivity irregularly carinate, and with short yellow hairs, those above the ridge pointing posteriorly, while those below it longer, and inclined postero-laterally.

Holotype ♂, Papua New Guinea : Stony Logging Area, Bulolo, 770 m, ex *Protium* sp., 3. i. 1979 (H. Roberts) (BMNH). Paratypes, 3♂ 2♀, same d&a as holotype, 1♂ 1♀ (BMNH), 2♂1♀ (FRS, Bulolo).

A member of the 'Platypi sulcato-truncati' near *P. truncatigranosus* Schedl (Schedl 1970). Compared to the latter males of *P. tristis* lack projecting, blunt teeth over the declivity, and no interstriae are recognisable on the upper declivity. Schedl's description of the female is not distinctive enough to segregate *P. tristis*, but if compared with the female of a different but still closely related species, *P. truncatipennis* Schedl (Schedl 1964) (Fig. 27), the females of *P. tristis* are distinguished by the elongate oval impression on the vertex, and a pore-group caudate in shape, not oval, which has the anterior pores only twice as big as the posterior, not three times as in *P. truncatipennis*.

***Platypus truncatipennis* Schedl, 1964 fem. nov.**

Schedl (1972a) described *Platypus diversiporus* from three females, two taken in Papua, Western District Oriomo (now Papua New Guinea), and one in New Guinea (NW), W of Sentatni (now Irian Jaya), near to Jayapura (Sentatni is a typographical error for Lake Sentani-pers. comm. J. L. Gressitt). Schedl placed this species in the 'Platypi pseudospinulosi' (Schedl 1972b).

The author collected six female platypodids in 1977 which match very closely to the holotype and one paratype of *P. diversiporus* taken from Oriomo. However, all these were taken with accompanying males which agree very well with three specimens of *P. truncatipennis* in the FRS, Bulolo, all named by Schedl. Undoubtedly *P. diversiporus* is the female of *P. truncatipennis*. The former name must therefore give way and the species be placed in the 'Platypi sulcato-truncati' (Schedl 1972b). Once again this illustrates the danger in the Platypodidae in defining species on female specimens only.

The females of *P. truncatipennis* discussed here were taken in a log of *Eucalyptus deglupta* at Baku, 15 km S. W. of Madang, 100 m, 18. iv. 1977 (H. Roberts). Two of the specimens are in the BMNH and the remainder in the FRS, Bulolo.

The female of *P. truncatipennis* closely resembles that of *P. tristis* sp. nov. It can be separated from that species by the complete absence of an elliptically shaped groove on the vertex, and by the form and composition of the pronotal pore-group. This pore-group in outline is near oval, not caudate as in *P. tristis*, with the pores in the anterior two thirds at least three times the size of those in the posterior third of the group.

***Platypus vaginervis* sp. nov.** (Fig. 14)

Male : Length 1.8-1.9 mm and 3.4 times as long as wide. Colour, head and thorax yellow-brown, elytra brown. *Head* hardly impressed, with scattered shallow punctures, vertex not strongly angled to frons. *Pronotum* a little longer than wide, widest behind shallow femoral grooves, disc smooth, shining, with scattered pits, the posterior half with a clearly impressed median sulcus which has no associated pore-groups. *Elytra* very little wider than pronotum, disc dull, finely reticulate, interstriae impunctate, all distinct up to the upper margin of the declivity, striae except for the first not impressed, irregularly serropunctate ; declivity antero-posteriorly and transversely convex, surface matt throughout, the upper margin opposite interstriae 3 and 7 with short teeth, the margin laterally with two indentations, surface of declivity with grooves opposite interstriae 2 and 4, the latter deep and containing at their distal limit a half-moon pit. Abdominal ventrites setose with no conspicuous marginal projections.

Holotype ♂, Papua New Guinea : Stony Logging Area, Bulolo, 770 m, ex *Xanthophyllum papuanum*, 6. iii. 1980 (H. Roberts) (BMNH). Paratype, 1♂, same data as holotype (FRS, Bulolo).

Similar to *P. daedalus* sp. nov. but smaller, with the declivity margin less digitate, and the declivity surface having elongate impressions that commence at the apex of the disc and finish half way down it, the outer pair deep, each with half-moon pits.

***Platypus gumicus* sp. nov.** (Figs. 30 to 33)

Male : Length 3.6-3.7 mm, and 4.8 times as long as wide. Colour uniformly dark reddish brown to black. *Head* frons near flat, no median sulcus, with scattered piliferous punctures ; junction of vertex and frons rounded, with incipient medium striae, and some piliferous punctures. *Pronotum* nearly twice as long as wide, femoral grooves strongly angled only posteriorly, medium sulcus fine, short, and with no distinct pore group though single irregular line of small pores on either side of sulcus, surface with only scattered pits. *Elytra* hardly wider than pronotum, and nearly twice as long, sides near parallel throughout, before ending in almost vertical declivity which is surrounded by three prominent pairs of projecting teeth ; disc shining, interstriae smooth, distinct, 1 much narrower than remainder, which are all subequal, over the declivity 2 ending as a short pointed tooth, 3 to 6 united to form a large rectangular tooth, and 8 and 9 as a smaller square tooth, striae not for the most part impressed except the first along all its length and the second just before the declivity, all striato-punctate ; declivity without any clear evidence of interstriae, surface shining, with the gap below the large tooth marked on the declivital face by an oblique ridge ending at the incised elytral apex, hairs conspicuous only beneath the projecting teeth. Abdominal ventrites, free of teeth, transversely haired.

Female : Very similar to the male in length, proportions and colour. *Head* like the male except more heavily punctured. *Pronotum* distinguished by very prominent pore-group of even sized pores completely surrounding the fine medium sulcus, and the surface well covered with coarse punctures (much more so than in male). *Elytra* as the male in size and proportions, but with a much simpler

declivity which is at first convex before becoming vertical ; disc with interstriae and striae all ending before the declivity which is clearly incised apically and bears only an indistinct transverse lunar carina extending over both elytra.

Holotype ♂, Papua New Guinea :Gumi Logging Area, Bulolo, 1900 m, ex *Gabulimima* sp., 13. iv. 1976 (H. Roberts) (BMNH). Paratypes 3♂1♀, same data as holotype, 1♀ (BMNH), 1♂ (FRS, Bulolo), 2♂ Latep Logging Area, Bulolo, 1700 m ex *Vavaea* sp., 18. vi. 1976 (H. Roberts) (FRS, Bulolo).

Belonging to the group 'Platypi adjuncti' (Schedl 1939) males of *P. gumicus* are separated by their smaller size, and slimmer more delicate projections about the declivity, and females by the incised apical declivity.

Platypus runcinatus sp. nov. (Figs. 34 to 37)

Male : 3.1 to 3.2 mm long, and nearly six times as long as wide. Colour deep red to brown. Head frons nearly flat with a definite short impression mid-way just below the level of the eyes, surface subnitid with many vertically orientated, elongate pores, many bearing short hairs ; vertex not strongly angled to frons, surface anteriorly subnitid, shining, with groups of shallow pits. *Pronotum* longer than wide (40 :28), femoral grooves strongly angled only posteriorly, sulcus fine without pore-group, surface shining, with scattered pits. *Elytra* hardly wider than pronotum, and twice as long, sides near parallel ending in a slightly inclined, narrow antero-posterior declivity, this apically not incised, but bordered by two pairs of prominent blunt, narrow projections; disc shining, interstriae smooth, distinct, 1 much narrower than the remainder and ending in a short pointed tooth over the declivity, 2 not reaching the declivity, but 3 to 5 and 7 to 9 separately extended as teeth around the declivity, striae, except for the first not impressed, all striato-punctate ; declivity surrounded by two strong pairs of teeth, with beneath each of the upper pair a strong inwardly inclined tooth, and inside the lower pair an equally prominent downwardly inclined tooth, surface with elytral striae shown by only a few hairs, shining. Abdominal ventrites lightly punctured, and bearing laterally irregularly distributed hairs.

Female : Very similar in length, proportions and colour to male. *Head* like male except sub-central impression more prominent. *Pronotum* distinguished by a well developed pore-group of similar sized, evenly distributed pores, sited in the posterior half of the pronotum, and the surface heavily punctured all over. *Elytra* as the male in outline and proportions, but distinguished by a simple declivity, that is initially convex and then vertical, and that lacks any surrounding prominent teeth ; disc shining, interstriae 3 and 5 basally rugose, the first more than the latter, all interstriae ending well before the vertical part of the declivity, the latter essentially simple with a weak transverse lunar carina, that ends laterally on each side in a small tooth.

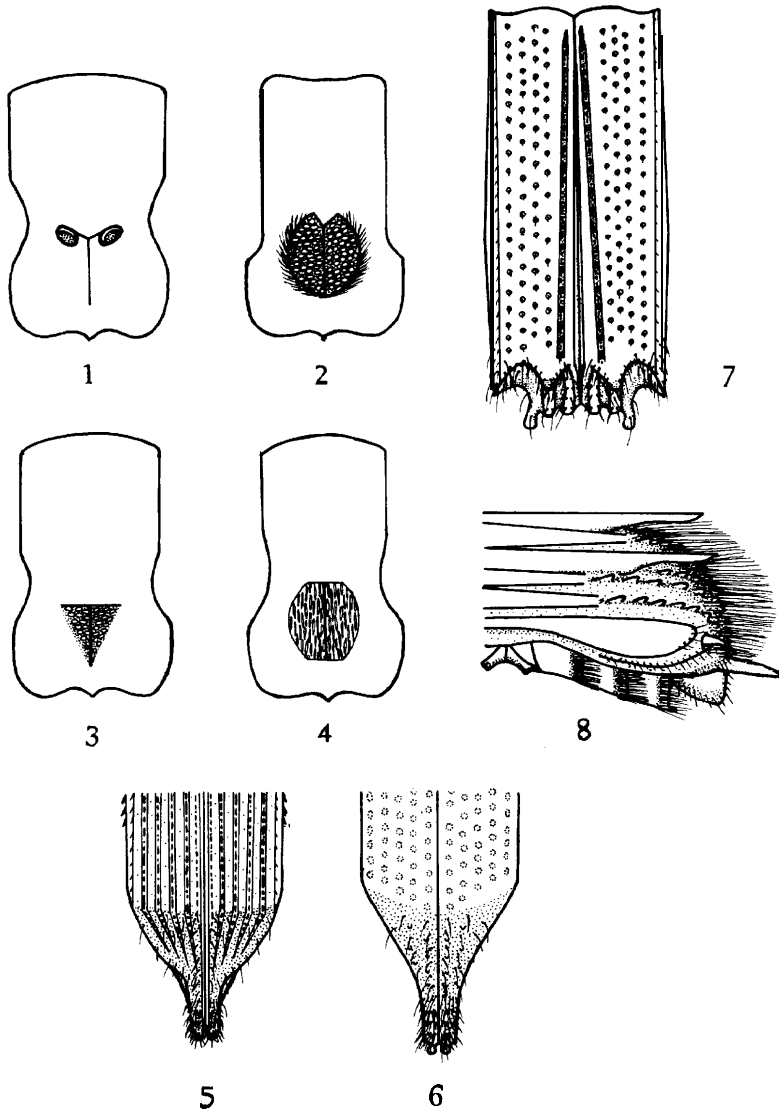
Holotype ♂, Papua New Guinea : Mt. Giluwe 2900 m, ex *Nothofagus pullei*, 24. v. 76 (H. Roberts) (BMNH). Paratype 1♂1♀, same data as holotype, 1♀ (BMNH) 1♂ (FRS, Bulolo), 3♂ Latep Logging Area, Bulolo, 1700 m, ex *Vavaea* sp., 18. vi. 76 (H. Roberts) (FRS, Bulolo).

P. runcinatus, like the last species, which except for size it superficially resembles, belongs probably to the 'Platypi adjuncti', Males of this species can be distinguished from *P. gumicus* by the narrower projections around the declivity and by the presence of two additional pairs of spines on the declivity. Females of this species are separated

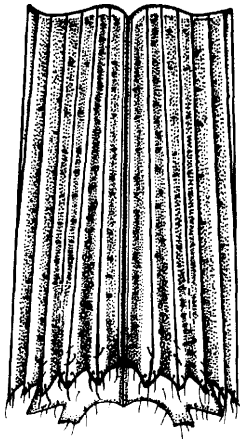
by a simpler declivity (Fig. 34). It is noteworthy that *Vavaea* sp. is a host common to both these related species, and at Latep the two were taken in the same fallen tree.

Platypus wa tu tensis sp. nov. (Fig. 29)

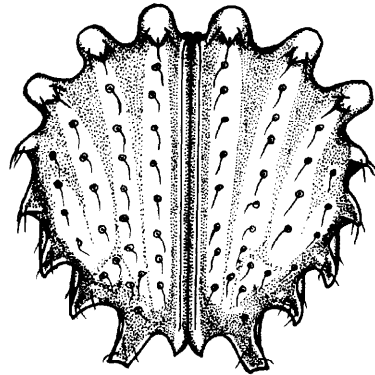
Male :2.0-2.1 mm long and 3.0 times as long as wide. Colour orange brown. Head clearly



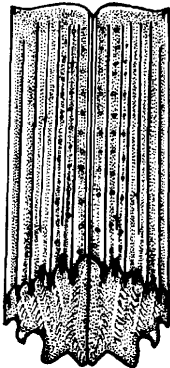
Figs. 1-8. *Platypus hebetatus* sp. nov.: 1. dorsal view of female pronotum ; 5. dorsal view apices male elytra. *P. solidus* (Walker) (for comparison) ; 3. dorsal view female pronotum ; 6. dorsal view apices male elytra. *P. evanidus* sp. nov. : 4. dorsal view female pronotum ; 8. lateral view apices male elytra. *P. ternus* sp. nov. : 2. dorsal view female pronotum ; 7. dorsal view male elytra.



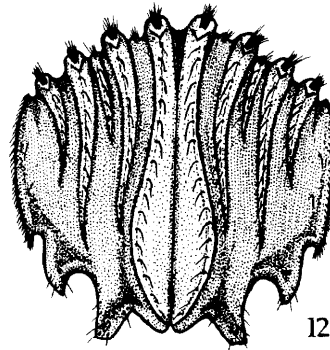
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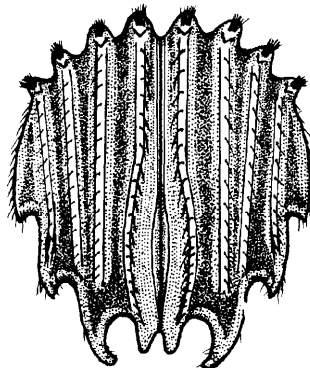
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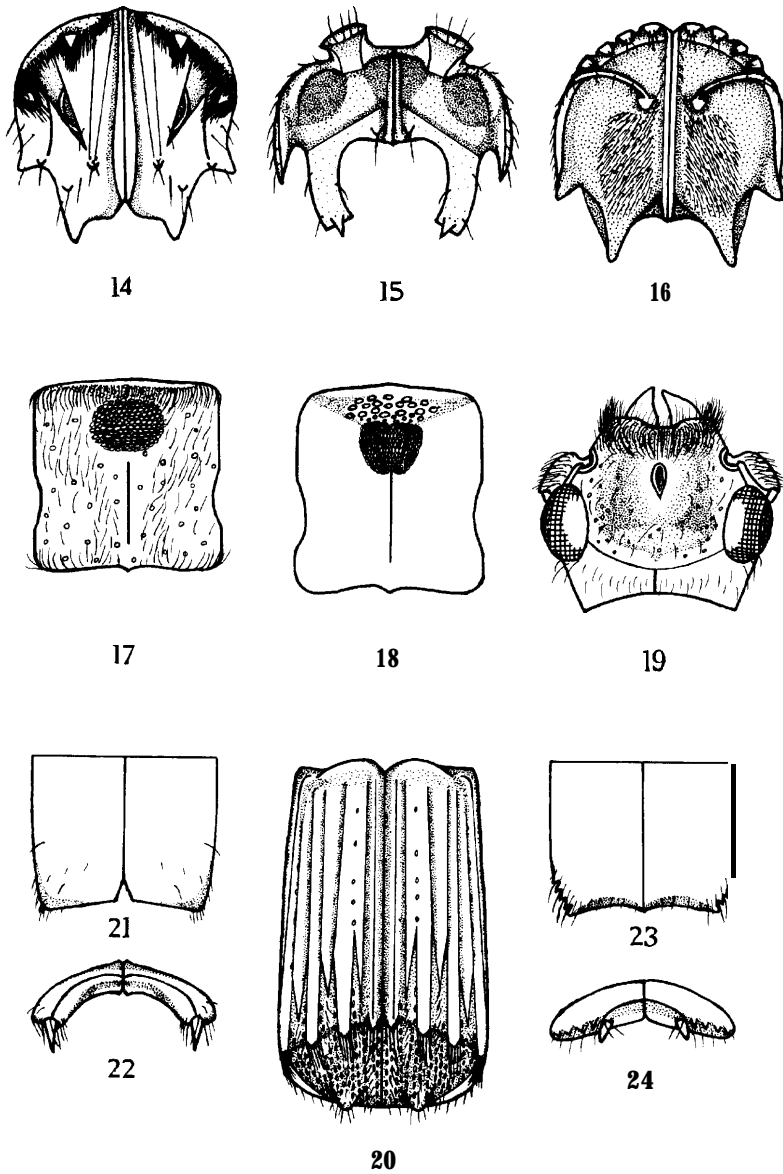


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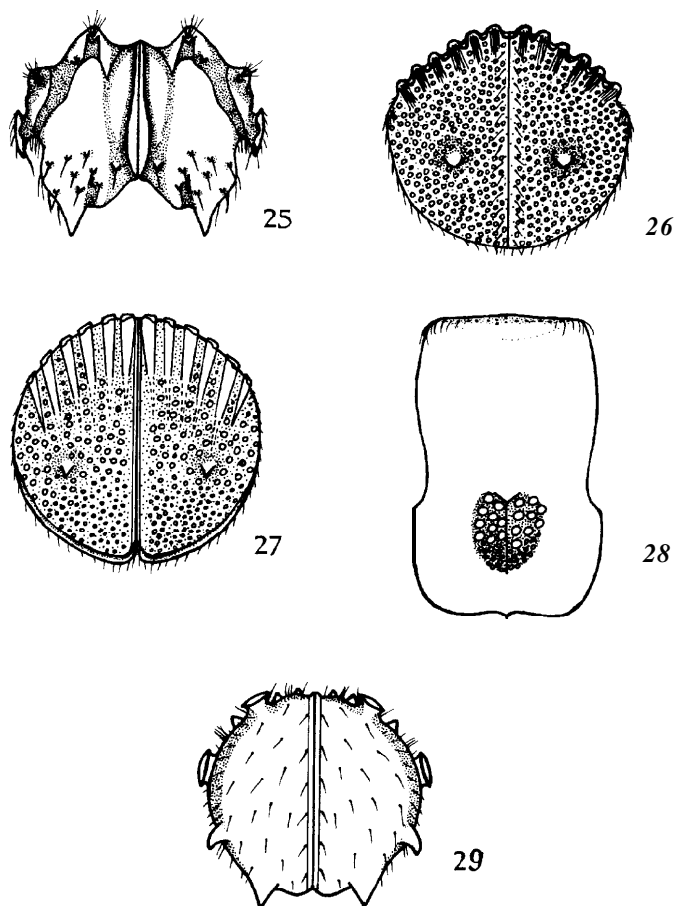
Figs. 9-13. *Platypus pectinatus* sp. nov. : 9. dorsal view male elytra ; 10 posterior view male declivity. *P. nudiusculus* sp. nov. : 11. dorsal view male elytra ; 12. posterior view male declivity. *P. daedalus* sp. nov. : 13. posterior view male declivity.



Figs. 14-24. *Platypus vaginervis* sp. nov.: 14. posterior view male declivity. *P. hippocrepicus* sp. nov. : 15. posterior view male declivity. *P. acetabuliformis* sp. nov. : 16. posterior view male declivity. *P. nemorosus* sp. nov. : 17. dorsal view male pronotum ; 19. anterior view female head. *P. grayi* Schedl (for comparison) : 18. dorsal view female pronotum. *P. patens* sp. nov. : 20. dorsal view male elytra. *Baiocis unispineus* sp. nov.: 21. dorsal view apices male elytra; 22. posterior view male elytra. *B. pernanulus* (Schedl) (for comparison) : 23. dorsal view apices of male elytra ; 24. posterior view male elytra.

impressed, with a short central striga, surface subnitid all over, vertex not strongly angled to frons. *Pronotum* not as wide as long (18 :20), widest immediately behind shallow femoral grooves, disc shining, posterior half with clearly impressed median sulcus, which at its apex has a small pore-group, the anterior pores elongate, those behind round. *Elytra* wider than pronotum, widest just before elytral declivity, sides diverging and then subparallel, disc subnitid, interstriae subimpunctate, odd interstriae raised toward and up to declivity, 1 very narrow, 3, 7, and 9 much more convex, striae throughout hardly impressed, only lightly punctured ; declivity near vertical, with interstriae 3, 7 and 9 projecting over it from the elytral disc, the first as a flat topped tooth, the others as smaller, more pointed teeth, interstriae 5 ending before declivity, but also raised in silhouette as a small flat topped tooth visible from behind, no trace of interstriae or striae on declivity, which is smooth and shining with numerous vertical rows of short golden-yellow hairs. Abdominal ventrites lightly but irregularly pitted, strongly setose, the posterior margin of the fourth ventrite raised as two small parts.

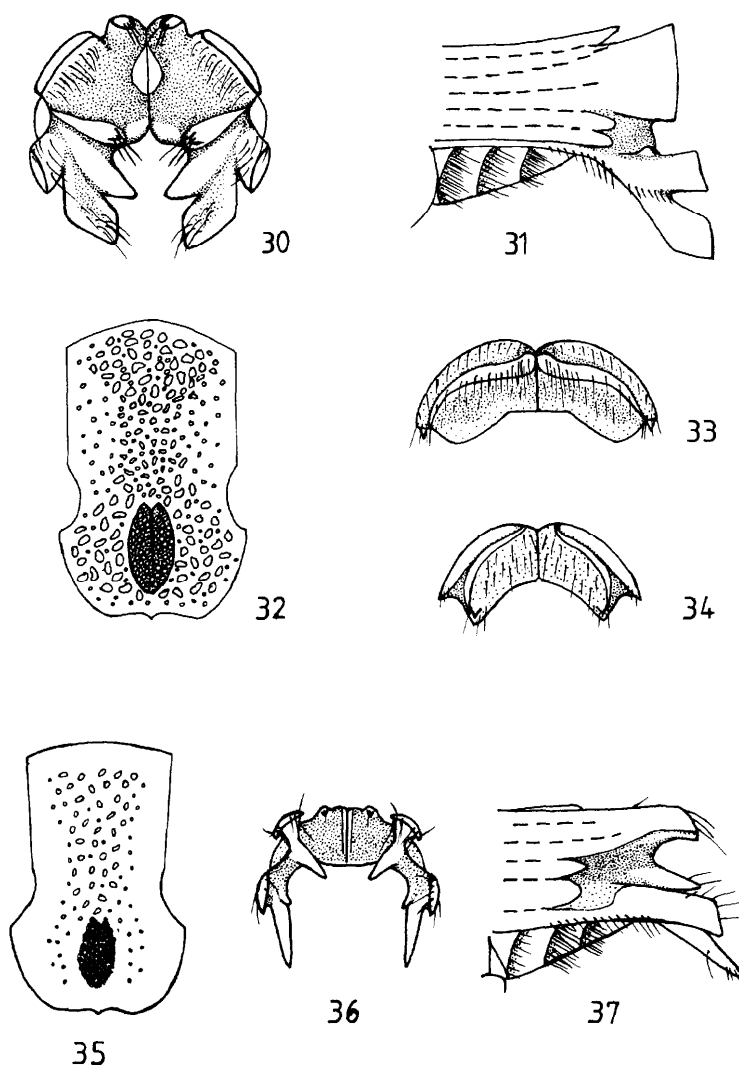
Holotype ♂ Papua New Guinea : Stony Logging Area, Bulolo, 770 m, ex *Xanthophyllum papuanum*, 23. v. 1979 (H. Roberts) (BMNH). Paratype, 1♂ same data as



Figs. 25-29. *Platypus aequilaterus* sp. nov. : 25. posterior view male declivity. *P. tristis* sp. nov. : 26. posterior view male declivity ; 28. dorsal view female pronotum. *P. truncatipennis* Schedl (for comparison) : 27. posterior view declivity of male. *P. watutensis* sp. nov. : 29. posterior view male declivity.

holotype (FRS, Bulolo).

Possibly belonging to the 'Platypi adjunct?' this species shows some affinity with *P. pectinatus* sp. nov. A distinctive near vertical declivity almost free of ornamentation separates the males.



Figs. 30-37. *Platypus gumicus* sp. nov.: 30. posterior view male declivity ; 31. lateral view male declivity ; 32. dorsal view female pronotum ; 33. posterior view female declivity. *P. runcinatus* sp. nov. : 34. posterior view female declivity ; 35. dorsal view female pronotum ; 36. posterior view male declivity ; 37. lateral view male declivity.

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