

New records and species of Anthicidae (Coleoptera) from the Indo-Australian transition zone

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Abstract. New faunistic information on the Anthicidae from Sulawesi, Moluccan Archipelago, Aru Islands and Raja Ampat Islands is presented. Three new species are described and illustrated, namely *Papuanthicus frustrator* sp. nov. (Sulawesi), *P. moluccensis* sp. nov. (Halmahera & Hiri), and *Pseudoleptaleus aruensis* sp. nov. (Aru Islands). Two new combinations are made: *Hirticollis puncticeps* (Pic, 1901) comb. nov. and *Papuanthicus dilutus* (Pic, 1901) comb. nov. (both from *Anthicus*). Updated keys to *Papuanthicus* Telnov, 2006 and *Pseudoleptaleus* Pic, 1900 are presented. New faunistic information on Wallacean Anthicinae and Notoxinae is given.

INTRODUCTION

The Anthicidae of Wallacea, New Guinea and surrounding islands remains insufficiently studied. There are only few species known from this geographically huge area, one of World's biodiversity hotspots. The current work deals with the Anthicinae & Notoxinae of this region, presents new information on the distribution of species and also descriptions new taxa. Additional faunistic information is based on material collected in Sulawesi, Moluccas (Halmahera, Saparua and Hiri), Aru Islands (Trangan), and Raja Ampat Islands (Misool, Salawati). Two new combinations are made: *Hirticollis puncticeps* (Pic) comb. nov. and *Papuanthicus dilutus* (Pic, 1899) comb. nov. (both from *Anthicus*). Updated identification keys to the genera *Papuanthicus* Telnov, 2006 and *Pseudoleptaleus* Pic, 1900 are presented. Several of these specimens were collected by the expeditions of the Entomological Society of Latvia to Halmahera (2007), as also Misool, Seram and Saparua (2009).

MATERIAL AND METHODS

All the species are listed alphabetically. All the label texts are reproduced exactly, with no corrections or additions; labels (if more than one for the same specimen) are separated by slashes (/). Author's comments are placed in square brackets []. If not stated otherwise, all labels are printed.

Acronyms for the type material stores:

- BMNH The Natural History Museum (British Museum, Natural History), London (United Kingdom);
MSNG Museo Civico di Storia Naturale "Giacomo Doria", Genova (Italy);
NME Naturkundemuseum Erfurt (Germany);

NMW National Museum Wales, Cardiff (United Kingdom);
OUMNH Oxford University Museum of Natural History, Oxford (United Kingdom);
DTC Dmitry Telnov, private collection, Rīga (Latvia).

Other legends used in the text: distr. - district, env. - environs, LF - light trap, N.P. - National Park; nr. - near, prov. - province, vill. - village or little settlement. Some of the abbreviations employed are not Standard English language abbreviations.

DESCRIPTIONS

Papuanthicus frustrator sp. nov.

(Figs 1-4)

Type material. Holotype (♀): SO Sulawesi, nr. Kasiputih, 20 m, rotten wood, 17.v.1995, Kurbatov, (NME).

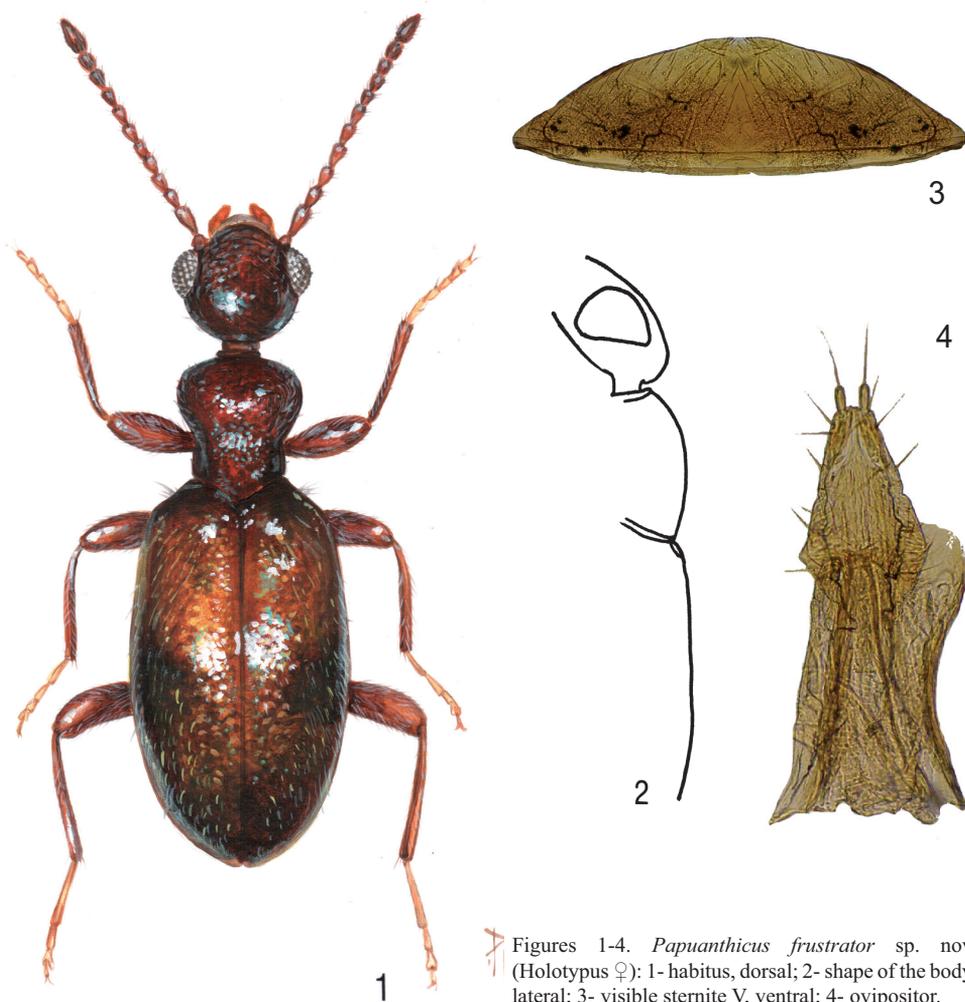
Description. Measurements of the holotype. Total body length 2.31 mm, maximum width in median area of elytra 0.78 mm; head 0.50 mm long, through eyes 0.50 mm broad, pronotum 0.52 mm long, maximum width 0.44 mm, minimum width 0.28 mm, elytra 12.9 mm long, 0.78 mm wide.

Colouration. Head and pronotum orange-brown (head slightly darker), elytra yellowish with dark brown median apical spot (prolonged anteriorly along the suture), and irregular dark brown median spot on each elytron (not reaching lateral margin and interrupted on suture). Antennae pale orange-brown with two terminal antennomeres darkened. Palps yellowish. Legs yellowish, protibiae distally, but meso- and metatibiae almost completely darkened. Underside pale orange-brown.

Head circular, dorsally flattened, dull. Eyes oval, very large, prominent. Head evenly rounded posterior to eyes, tempora a little shorter than eye. Frontoclypeal suture distinct, straight. Punctures very large and dense, rough, intervening spaces smaller than punctures. Pubescence whitish, fine and decumbent, transversely directed. Some slightly longer erect tactile setae on tempora. Antennae reaching base of pronotum, covered with short whitish pubescence and numerous long and erect setae. Four terminal antennomeres widened. Basal antennomere widened cylindrical. Second antennomere 1/4 shorter than third one. Antennomeres 7-8 widened distally, 9-10 wide and short; antennomere 9 as long as broad, antennomere 10 shorter than broad. Terminal antennomere cylindrical, as long as two penultimate antennomeres combined. Terminal maxillary palpomere shortly cultriform.

Pronotum dorsally flattened, dull. Almost straight on anterior margin, sides converging toward base, with shallow lateral constriction in prebasal area. Both anterior and posterior collars narrow. Disc of pronotum dorsally not impressed at lateral constriction (in lateral view; Fig. 2). Punctures very densely, crateriform, intervening spaces much smaller than punctures. Toward base punctures becoming larger. Laterally densely but finely punctured except for basal area, which is roughly and crateriform punctured. Pubescence whitish, short and fine, decumbent, directed posteriorly. Some not much longer erect tactile setae on sides.

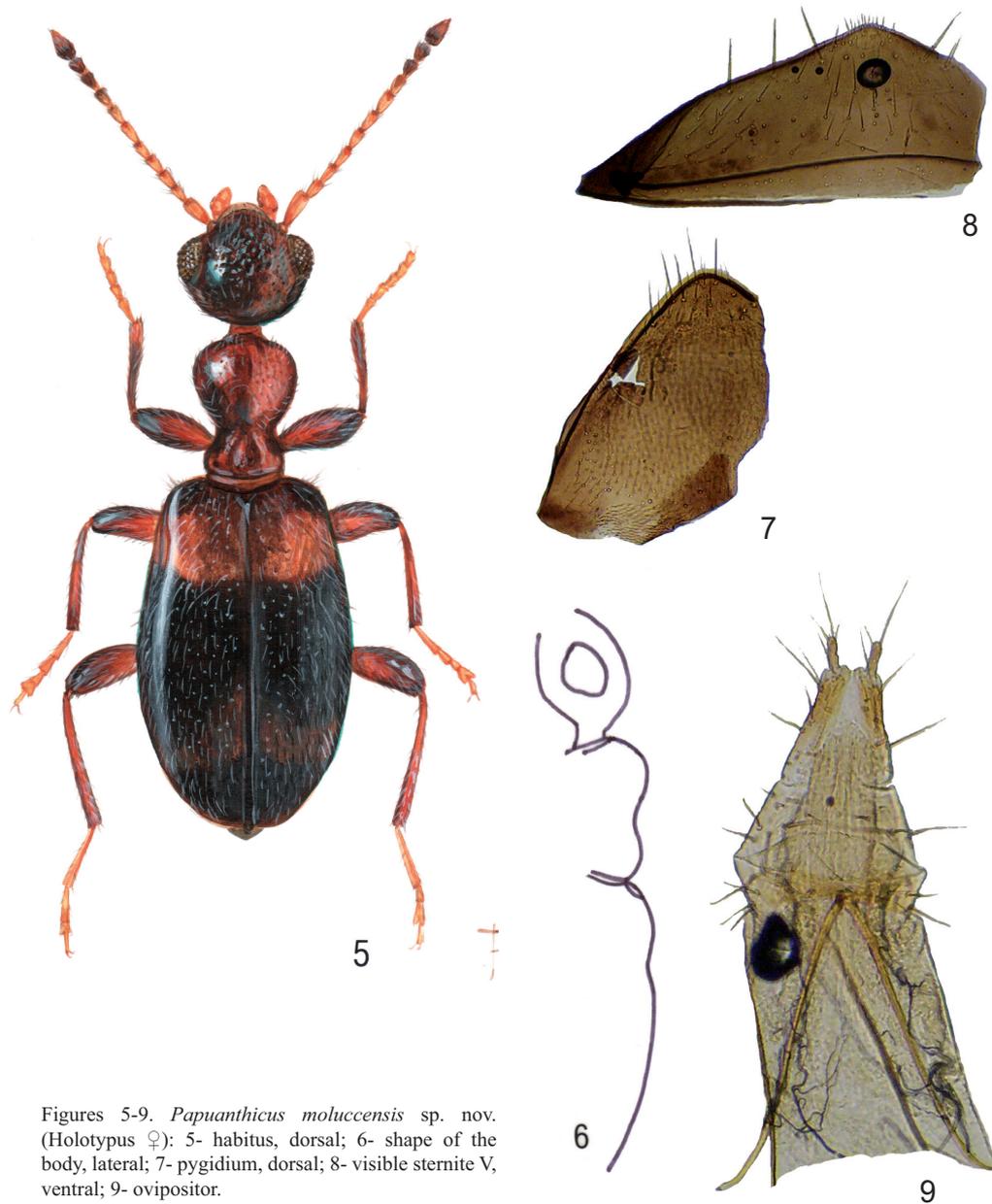
Scutellum very small, sharply triangular, shiny. Elytra shiny, dorsally flattened. Slightly widened on sides at middle. Humeri rounded, but distinct. Postbasal transverse impression



Figures 1-4. *Papuanthicus frustrator* sp. nov. (Holotypus ♀): 1- habitus, dorsal; 2- shape of the body, lateral; 3- visible sternite V, ventral; 4- ovipositor.

not indicated. Punctures distinct, quite dense but flat, intervening spaces equal to 2x larger than punctures. Toward apex, punctures becoming smaller, much more flat, and sparse. Pubescence yellowish, long, sparse, appressed, directed posteriorly with exception of postbasal area, where pubescence is directed slightly obliquely posteriorly. Some not much longer erect tactile setae on disc and sides. Sutural striae not indicated. Hind wings fully developed.

Legs with inconspicuous, sparse yellowish pubescent. All tibiae with two short distal spurs. Basal metatarsomere slightly shorter than combined length of other metatarsomeres. Penultimate tarsomeres distinctly bilobate. Claws simple. Posterolateral margins of



Figures 5-9. *Papuanthicus moluccensis* sp. nov. (Holotypus ♀): 5- habitus, dorsal; 6- shape of the body, lateral; 7- pygidium, dorsal; 8- visible sternite V, ventral; 9- ovipositor.

mesepisterna with tuft of long setae, building sharp “spine”, visible from under humeral area of each elytron. Pygidium completely covered by elytra, triangular, shortly rounded apically in females. Visible sternite V broadly rounded apically in females (Fig. 3). Ovipositor as in figure 4.

Dimorphism. Male is unknown.

Differential diagnosis. The new species has distinctive coarse and rough punctures on pronotal disc. Very closely related to *P. dilutus* (Pic, 1901) (new combination see below) from S Sulawesi, which is, however, completely yellow without dark markings on elytra and with sparser and finer punctures on forebody.

Note. Holotype is missing left antennomeres 4-11, left and right protarsomeres 3-5, and right mesotarsus.

Etymology. From Latin “frustror” - irrelevance, uselessness. So called because of its non-Papuan origin, making irrelevant the previous idea of geographical range of genus *Papuanthicus*; which was hitherto limited to New Guinea only, and is now extended westward to Sulawesi.

Distribution. Known only from the type locality, Kasiputih surroundings in southern Sulawesi.

Papuanthicus moluccensis sp. nov.

(Figs 5-9)

Type material. Holotype (♀): INDONESIA, prov. Maluku Utara (North Moluccas), Halmahera, Halmahera tengah (Central), Weda Selatan dist., Loleo vill. S env., Tilope vill. 15-18 km SW, Oham, 0°14'46,74"N 127°52'38,19"E, ~150 m, 13-14.ix.2007, primeval lowland forest, UV light, leg. D. Telnov & K. Greke, (NME). Paratypes (2 ♀♀): same labels as in the holotype, (DTC); (1 ♀): INDONESIA, prov. Maluku Utara (North Moluccas), Halmahera tengah (Central), Weda Selatan dist., Loleo vill. SW env., Tilope vill. env., 0°13'58,16"N 127°54'27,18"E, 12-13.ix.2007, white light, leg. D. Telnov & K. Greke, (DTC); (1 ♀): IDO: N-Molukken Hiri Island, 3km N Ternate, 100-400 m, 0°53' N, 127°20'E, 22.i.2006, leg. A. Weigel, plantage, (NME).

Description. Measurements of the holotype. Total body length 2.21 mm, maximum width in postmedian area of elytra 0.72 mm; head 0.52 mm long, through eyes 0.47 mm broad, pronotum 0.50 mm long, maximum width 0.36 mm, minimum width 0.19 mm, elytra 1.19 mm long, 0.72 mm together broad.

Colouration. Head dark reddish-brown, pronotum orange-brown, elytra black except broad yellowish to orange-brown transverse band in postbasal area; this band is reaching lateral margins of elytra, is not interrupted on suture and prolonged anteriorly in the middle and reaching base of elytra; shoulders remains black or almost black, not affected by pale colouration. In postmedian area with transverse band of extremely vaguely indicated, almost invisible paler colouration. Antennomeres 1-6 or 1-7 orange, 7-8 darkened completely or only distally, 9-11 black or dark brown. Palps pale yellowish brown. Femora orange-brown, darkened in distal half or third; tibiae darker than femora; tarsi yellowish to pale yellowish-

brown. Mouth parts yellowish. Underside of head dark reddish, underside of pronotum orange-brown, abdomen dark brown to black-brown.

Head oval, dorsally slightly globose, shiny. Eyes round, large, slightly prominent. Temporal area nearly as long as eye, evenly rounded together with head base. Frontoclypeal suture quite deep, straight. Punctures large, deep, rough. Intervening spaces smaller to equal to punctures. On vertex punctures becoming weaker and sparser. Pubescence yellowish, fine and sparse, partly decumbent, partly semierect, directed outward to margin. On tempora with two long erect tactile setae on each side. Antennae not reaching base of pronotum, covered with short whitish pubescence and numerous long and erect setae. Four terminal antennomeres widened to a weak club. Basal antennomere widened cylindrical. Second antennomere only slightly shorter, than third one. Antennomere 7 widened distally, 8-10 wide and short, 9-10 shorter than broad. Terminal antennomere obtuse conical, as long as two penultimate antennomeres combined. Terminal maxillary palpomere short and broad, weakly securiform.

Pronotum rounded anteriorly and laterally, strongly constricted laterally behind middle, slightly widened on posterior lobe. Anterior collar narrow, basal collar broad. Dorsum of pronotum glossy and shiny except for dull area in lateral constriction. Disc of pronotum dorsally broadly and deeply impressed at lateral constriction (in lateral view; Fig. 6), with shallow longitudinal impression before base and with an oval pore on each side of this impression (pronotal base slightly bigibbose). Punctures distinct but flat and sparse on anterior lobe. Dorsally roughly and confusedly punctured in lateral constriction, spaces between punctures much smaller than punctures diameters. Laterally shiny and almost impunctate, only in the constriction area densely longitudinally strigose, but also shiny. Pubescence yellowish, longer than on head, decumbent, directed posteriorly. With three long and erect tactile setae on each side of anterior lobe.

Scutellum small, shiny, rounded apically. Elytra glossy and shiny, dorsally slightly globose. Slightly widened on sides in postmedian area. Humeri rounded, but distinct. With very shallow, broad postbasal transverse impression. Punctures distinct, deep, but sparse, intervening spaces equal to 3x greater than punctures. Toward apex, punctures becoming smaller, more flat, and sparse. Postbasal transverse impression almost impunctate. Pubescence yellowish, fine and sparse, decumbent, directed posteriorly with exception of area of postbasal transverse impression, where pubescence is directed slightly obliquely laterally. Several longer erect tactile setae on disc and sides. Sutural striae very fine and short, only visible on apex. Hind wings fully developed.

Legs with inconspicuous, sparse whitish pubescent. All tibiae with two short distal tibial spurs. Basal metatarsomere as long as combined length of other metatarsomeres. Penultimate tarsomeres distinctly bilobate. Claws simple. Posterolateral margins of mesepisterna with tuft of very long setae, building sharp "spine", visible from under humeral area of each elytron. Pygidium completely covered by elytra, broadly triangular in females (Fig. 7). Visible sternite V obtuse angulate in the middle of apical margin (Fig. 8). Ovipositor as in figure 9.

Dimorphism. Male unknown.

Variability. Paratypes vary in density of punctures on head and pronotum. One paratype is generally paler, with femora and tibiae almost not darkened, only three terminal antennomeres being darker than other.

Differential diagnosis. No other members of *Papuanthicus* similarly coloured, with pronotum being orange-brown and elytra bearing pale transverse band in postbasal impression.

Etymology. Named after the Moluccas (Maluku in Indonesian), an archipelago between Sulawesi and New Guinea, where this new species was first collected.

Distribution. Only known from Halmahera Island (locus typicus) and tiny Hiri Islands near of Ternate on the North of Moluccan archipelago.

***Pseudoleptaleus aruensis* sp. nov.**

(Figs 10-12)

Type material. Holotype (♀): Malaise trap primary forest & / INDONESIA: Aru Islands, Trangan, 1 km S. of Popjetur, 6°48'S 134°4'E, 23.vii-4.viii.1994, 90 m, A.H. Kirk-Spriggs. / A.H. Kirk-Spriggs Maluku Tenggara Coll. NMW.Z. 1994.061, (NMW). Paratypes (1 ♀): same labels as in the holotype, (NMW); (1 ♀, 1 ♂): Malaise trap primary forest & / INDONESIA: Aru Islands, Trangan, 1 km S. of Popjetur, 6°48'S 134°4'E, 8-11.viii.1994, 90 m, A. H. Kirk-Spriggs. / A. H. Kirk-Spriggs Maluku Tenggara Coll. NMW.Z. 1994.061, (DTC & NMW).

Description. Measurements of the holotype. Total body length 2.85 mm, maximum width in median area of elytra 0.95 mm; head 0.67 mm long, through eyes 0.62 mm broad, pronotum 0.58 mm long, maximum width 0.40 mm, minimum width 0.25 mm, elytra 1.50 mm long, 0.95 mm together broad.

Colouration. Dorsum black, anterior portion of the head, head base and pronotal base orange. Elytra with narrow pale transverse band in postbasal impression. Antennomeres 2-6 yellow, 7-11 and basal antennomere brown to black-brown. Maxillary palps yellowish-brown. Legs dark brown, basal half of mesotibiae yellow to whitish. Pro- and metatrochanters reddish to reddish brown. Underside of head orange to orange-brown, mesosternum dark reddish-brown, rest of the underside black to dark brown.

Head circular, strongly shiny, dorsally flattened, ventrally globose. Eyes subtriangular, large, weakly prominent, finely faceted. Base is evenly broadly rounded behind the eyes. In middle of vertex with small but distinct notch. Frontoclypeal suture distinct, straight. Punctures very rough and coarse on frons and between insertions of antennae, remaining large but becoming very sparse from the middle of ocular length and getting almost invisible on vertex. Pubescence dark, fine and suberect, very sparse. On underside of the head with group of numerous long and slightly curved setae. Antennae long and slender, reaching slightly over the base of elytra. Basal antennomere elongated, longer than second and third antennomeres combined. Second antennomere shortened, cylindrical, not or weakly widened distally. Third

antennomere on 1/4 longer than precedent. Antennomeres 3-6 nearly of same proportions. Antennomeres 8-10 shortened and strongly widened distally. Penultimate antennomere as broad as long. Terminal antennomere asymmetrically-conical, slightly longer than precedent. Terminal maxillary palpomere elongate securiform.

Pronotum glossy and shiny, with broad anterior and basal collars. Anterior portion strongly risen dorsally, sloping postmedially. Area of lateral constriction is deep, saddle-like (in lateral view; Fig. 11). Dorsal surface of pronotum between the lateral constriction and the base is flat, glossy and impunctate; lateral surface very densely and finely longitudinally strigose. Anterior margin (on the anterior part of pronotal hump) medially with group of large, deep and dense punctures covered with dense blackish and sometimes curved setae. Rest of the hump's surface very finely and sparsely punctured and covered with sparse suberect whitish hairs and some very long erect tactile setae.

Scutellum elongate, rounded apically, shiny. Elytra with deep postbasal transverse impression, strongly globose dorsally behind of them, rounded on sides, shiny. With one triangular hump between the base and postbasal transverse impression on each elytron. Punctures are large but flat, sparse in basal half of elytra; intervals glossy and shiny, 2-4x larger than punctures here. In apical half punctures becoming denser; intervals finely microstrigose here, 2-3x larger than punctures. In postbasal impression, punctures are minute but very dense, with intervals much smaller than punctures. Pubescence dense, yellowish, suberect and directed posteriorly in apical half, sparse and erect in basal half. In postbasal transverse impression very densely, appressed pubescent; hairs are whitish, directed anteriorly to obliquely laterally on disc, extending posteriorly along suture. On sides this dense whitish pubescence is reaching epipleura, hairs are directed dorso-posteriorly. On disc with several long and erect tactile setae. Pubescence is dark between the base and postbasal impression, omoplates covered with strong suberect hairs and 1-3 very long erect tactile setae. Row of white to silverfish pubescence along the outer margin of humeral area on each elytron. Sutural striae narrow, developed in apical half of elytra only. Hind wings fully developed.

Legs long and slender, covered with sparse whitish setae. All femora and tibiae with distinct microsculpture, but shiny. Metatibiae widened distally. Basal metatarsomere longer than combined length of other metatarsomeres. Penultimate tarsomeres quite long, distinctly bilobate. Claws simple. Pygidium free, not covered by elytra, broadly rounded in males. Visible sternite V broadly rounded apically in males. Aedeagus narrowly prolonged apically, pointed (Fig. 12).

Dimorphism. Visible sternite V broadly angulate apically in females. Metatibiae stronger widened in males than in females, with a row of strong erect setae in basal half of inner margin, growing on a row of pore punctures.

Variability. One paratype specimen generally lighter, main pattern of dorsal surface of elytra being brown and elytra densely punctuate in basal half, than in the holotype. Two paratypes generally larger - 2.95 and 3.05 mm long.

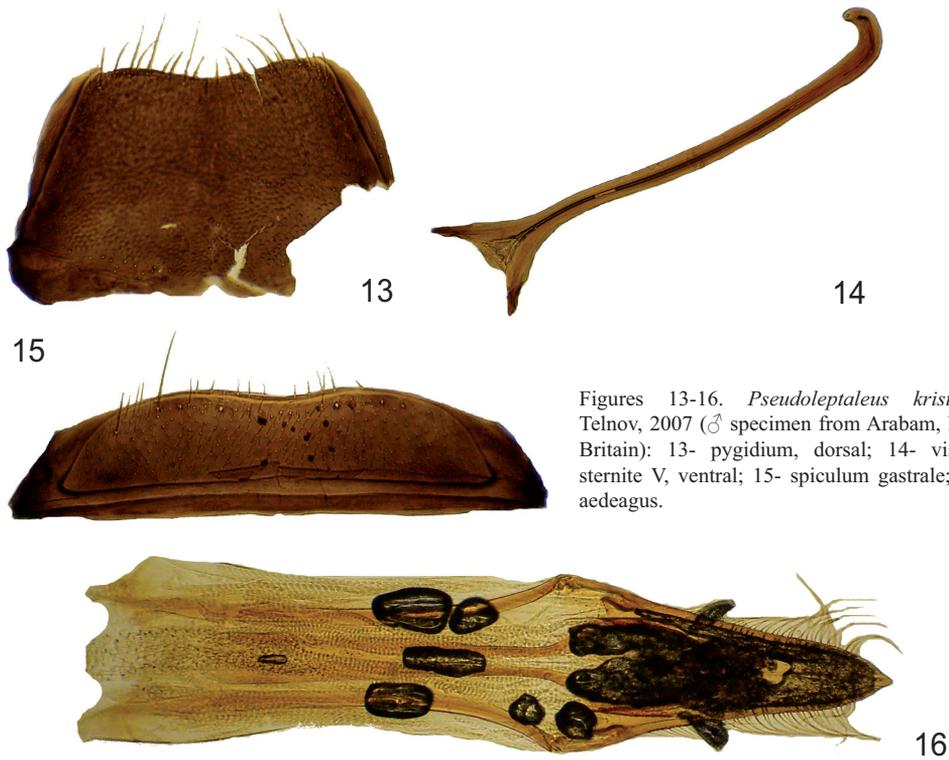
Differential diagnosis. Similar to *Pseudoleptaleus formicomorphus* Telnov, 2007 (Papua New Guinea), but differs primarily by the shape of aedeagus, the presence of row of long erect



Figures 10-12. *Pseudoleptaleus aruensis* sp. nov. (Paratypus ♂): 10- habitus, dorsal; 11- shape of the body, lateral; 12- aedeagus.

setae on male metatibiae and is generally darker. By the colouration and shape of pronotum and elytra this species resembles *albicinctus* species-group of Neotropical *Acanthinus*, but can be recognized by the generic characters of *Pseudoleptaleus*, as also by notched vertex, differently punctured elytra, mesosternal setae not visible from above anterior to elytral humeri.

Etymology. Named after Aru Islands, an archipelago near the SW coast of New Guinea, where this species have been first collected.



Figures 13-16. *Pseudoleptaleus kristinae* Telnov, 2007 (♂ specimen from Arabam, New Britain): 13- pygidium, dorsal; 14- visible sternite V, ventral; 15- spiculum gastrale; 16- aedeagus.

Distribution. Known only from the type locality, Trangan Island on the South of Aru archipelago.

ADDITIONAL INFORMATION ON INSUFFICIENTLY KNOWN SPECIES OF ANTHICIDAE FROM THE INDO-AUSTRALIAN TRANSITION ZONE

Anthicinae
Anthicini

***Anthicus monstrosicornis* Marseul, 1876**

2 specimens (BMNH): Vert.Series 10m.actinic code: 14.ii.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area, 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen (BMNH): Vert.Series 10m actinic 18.ii.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen (BMNH): SULAWESI TENGAH: Nr.Morowali, Ranu River Area, 27.i.-20.iv.1980 / M.J.D.Brendell B.M.1980-280 / At light; in clearing; 1 specimen (BMNH): At MV light / SULAWESI TENGAH: Nr.Morowali, Ranu River Area, 27.i.-20.iv.1980 / M.J.D.Brendell B.M.1980-280.

Widely distributed species in SE Asia.

***Anthicus insolitus* Pic, 1901**

Type material. Holotype (♀) (MSNG): Bali X Beccari 187[printed]4[handwritten] / Typus [printed, text red, red border] / *A. insolitus* n sp. [handwritten].

Other material studied. 12 specimens (OUMNH): Celeb Wallace / Coll (1830-73) W W Saunders Ex coll. H.E. Cox id.1916 Mrs. Cox; 4 specimens (BMNH): At light / SULAWESI TENGAH: Nr.Morowali, Ranu River Area, 27.i.-20.iv.1980 / M.J.D.Brendell B.M.1980-280; 1 specimen (BMNH): INDONESIA: SULAWESI UTARA, Dumoga-Bone N.P. March 1985. / Rothamsted light trap, site 2, 220m. H.Barlow / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10.

Previously only known from the type. First record for Sulawesi.

***Hirticollis busignyi busignyi* (Pic, 1901)**

12 specimens (MSNG): Celebes Makassar.73 O.Beccari / *A. Busignyi* Pic cf var / Museo Civ. Genova.

First record for Sulawesi, previously known from Lesser Sunda Islands (Sumbawa) and the Philippines (Luzon).

***Hirticollis puncticeps* (Pic, 1901) comb. nov.**

Anthicus puncticeps Pic, 1901: 799.

Type material. Holotype (♂) (MSNG): Celebes [printed] Makassar I-74 [handwritten] O.Beccari [printed] [black border] / Typus [printed, text red, red border] / *puncticeps* Pic [handwritten, black border] / *A. puncticeps* Pic n sp. [handwritten] / Museo Civ. Genova [printed, label orange].

New combination is based on extremely long and erect pubescence on the dorsal surface and on legs.

***Nitorus bifidus* (Krekich-Strassoldo, 1929)**

1 specimen (BMNH): SULAWESI UTARA, Dumoga-Bone N.P., February 1985. / Rothamsted light trap, site 1, 200m. H.Barlow / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10; 1 specimen (BMNH): INDONESIA: SULAWESI UTARA, Dumoga-Bone N.P., February 1985. / Rothamsted light trap, site 2, 220, H.Barlow / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10; 1 specimen (BMNH): INDONESIA : SULAWESI UTARA, Dumoga-Bone N.P., October 1985. / At light / 'Edwards' Camp Lowland forest 664 m.

First record for Sulawesi. Previously known from the Philippines (Mindanao, Negros, Palawan).

***Omonadus formicarius formicarius* (Goeze, 1777)**

4 specimens (BMNH): INDONESIA: SULAWESI UTARA, Dumoga-Bone N.P., April 1985. / Rothamsted light trap, site 1, 200m. H.Barlow / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10.

Cosmopolitan species, but only occasionally reported from in Wallacea.

***Omonadus patruelis* (LaFerté-Sénéctère, 1849)**

3 specimens (OUMNH): Celeb Wallace / Coll.(1830-73) WW Saunders Ex coll.H.E. Cox. dd.1916 Mrs.Cox; 1 specimen (NME): W-PAPUA Raja Ampat Prov. Salawati Isl. or., Kalobo 01°03'15"S, 131°04'32"E 24.-28.I.2004 leg. A.Skale; 1 specimen (NME): INDONESIA N-Sulawesi, 1 km S Sawangan, Sawangan River River [sic!] Park Resort , 250-300m, 01°22'51"N, 124°56'56"E, 08.i.2006, leg. A. Skale; 1 specimen (NME): INDONESIA N-Sulawesi Doloduo village, 150 m, 0°31'03"N, 123°57'24"E, 31.i.-2.ii.2006, leg. A. Skale, LF.

Widely distributed in SE Asia. First record for Raja Ampat Islands.

***Papuanthicus dilutus* (Pic, 1901) comb. nov.**

Anthicus dilutus Pic, 1901: 798.

Type material. Holotypus (♀) (MSNG): Celebes Macassar I. 74 O.Beccari [printed, black border] / Typus [printed, text red, red border] / *dilutus* Pic [handwritten, black border] / *A. dilutus* Pic n sp. [handwritten] / Museo Civ. Genova [printed].

New combination is based on presence of tuft of long setae on posterolateral margins of mesepisterna, visible from under humeral area of each elytron.

***Pseudoleptaleus kristinae* Telnov, 2007**

1 ♂ (NME): PNG: E New Britain Prov., 30 km SW Kokopo, vic. Arabam, 04°35'75"S, 152°06'84"E, 200 m, 21.ii.-04.iii.2000, leg. A. Weigel.

First record since the original description; first known male specimen. Pygidium subquadrate, shallowly excavated apically in males (Fig. 13). Visible sternite V short and very narrow, very shallowly excavated in the middle of apical margin in males (Fig. 14). Spiculum gastrale as in figure 15. Aedeagus as in figure 16.

Formicomini

***Anthelephila beccarii* (Pic, 1901)**

Type material. 2 syntypes (MSNG): Celebes Kandari O.Beccari [printed, black border] / Typus [printed, text red, red border] / *Beccarii* Pic [handwritten, black border] / F. Beccarii Pic n sp. [handwritten] / Museo Civ. Genova [printed, label orange].

Additional material. 40 specimens (BMNH): At light / SULAWESI TENGAH: Nr.Morowali, Ranu River Area., 27.i.-20.iv.1980 / M.J.D.Brendell B.M.1980-280; 1 specimen (BMNH): SULAWESI TENGAH: Nr.Morowali, Ranu River Area., 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281 / Vert.Series 1m. actinic code: 6.II.80; 2 specimens (BMNH): Vert. Series 20m. actinic code: 10.iii.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area., 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen (BMNH): SULAWESI TENGAH: Nr.Morowali, Ranu River Area., 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281 / Vert.Series 10 m. actinic code: 16.ii.80; 1 specimen (BMNH): 30 m, Actinic, 17.ii.80; 1 specimen (BMNH): SULAWESI TENGAH: Nr.Morowali, Ranu River Area.,

27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281 / Vert.Series 30 m. actinic, 19.ii.80; 1 specimen (BMNH): SULAWESI TENGAH: Nr.Morowali, Ranu River Area., 27.i.-20. iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281 / Vert.Series 20 m. actinic code: 22.ii.80; 1 specimen (BMNH): INDONESIA : SULAWESI UTARA, Dumoga-Bone N.P. / Sites 10 & 11, 664 m, 19-25.ii.85 Tumpah Transect J.D.Holloway / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10; 1 specimen (BMNH): SULAWESI TENGAH: Nr.Morowali, Ranu River Area., 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281 / Vert.Series, 30 m.actinic code: 27.ii.80; 2 specimens (BMNH): Vert.Series 10 m actinic code: 4.iii.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area., 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen (BMNH): Vert.Series 20 m. actinic code: 7.iii.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area., 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen (BMNH): SULAWESI TENGAH: Nr.Morowali, Ranu River Area., 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281 / Vert.Series 30 m. actinic code: 8.iii.80; 9 specimens (BMNH): Fog 11, 230 m, 10.iii.85 BMNH Plot A / INDONESIA: SULAWESI UTARA, March 1985. / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10; 4 specimens (BMNH): Vert.Series, 20 m. actinic code: 11.iii.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area., 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen (BMNH): Vert.Series, 10 m. actinic code: 12.iii.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area., 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen (BMNH): SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20. iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281 / Vert.Series, 20 m. actinic code: 14.iii.80; 19 specimens (BMNH): Vert.Series, 30 m.actinic code: 15.iii.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area., 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 4 specimens (BMNH): Vert.Series 30 m. actinic code: 16.iii.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 6 specimens (BMNH): INDONESIA: SULAWESI UTARA, Dumoga-Bone N.P., April 1985. Rothamsted light trap, site 1, 200 m. H.Barlow / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10; 1 specimen (BMNH): INDONESIA: SULAWESI UTARA, Dumoga-Bone N.P., 26.iv-28.v.1985. / 'Edwards' Camp Lowland forest 664 m / Malaise trap / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10; 2 specimens (BMNH): INDONESIA: SULAWESI UTARA, Dumoga-Bone N.P., June 1985. / 'Edwards' Camp Lowland forest 664 m. 26.iv-7.vi / Malaise trap / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10; 1 specimen (BMNH): INDONESIA: SULAWESI UTARA: Dumoga-Bone N.P. 9-16 May 1985. / Yellow pan trap / Lowland forest ca 200 m. / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10 / 112.5 [rosa paper]; 4 specimens (BMNH): INDONESIA: SULAWESI UTARA, Dumoga-Bone N.P. 15-22.v.1985. / Plot A,ca 200 m Lowland forest / Malaise trap up tree / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10; 1 specimen (BMNH): Fog 15 400 m, 19.vii.85 BMNH Plot C / INDONESIA : SULAWESI UTARA, Dumoga-Bone N.P., July 1985. / R.Ent.Soc. Lond. PROJECT WALLACE B.M. 1985-10; 3 specimens (NMW): Light trap sample forest / Forest trail 'Rentice I' / SULAWESI UTARA: Dumoga-Bone N.P., Toraut 0°34'N,123°54'E, 302 m, 23.vii.1985. A.H.Kirk-Spriggs. / NMW Indonesia Expedition 1985 (Project Wallace) NMW.Z.1985.078; 1 specimen (BMNH): Light trap sample forest / Forest trail 'Rentice I' / SULAWESI UTARA: Dumoga-Bone N.P., Toraut 0°34'N,123°54'E, 232 m, 1-3.ix.1985.

A.H.Kirk-Spriggs. / NMW Indonesia Expedition 1985 (Project Wallace) NMW.Z.1985.078; 2 specimens (BMNH): INDONESIA: SULAWESI UTARA, Dumoga-Bone N.P. November 1985. / 'Hog's Back' Camp Lowland forest 492 m. / Malaise trap / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10; 2 specimens (BMNH): INDONESIA: SULAWESI UTARA, G.Mogogonipa, summit, 100 m, 25.xi.1985. / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10; 1 specimen [NME], INDONESIA Sulawesi bor. 1 km S Sawangan, Fluβtal b. River Park resort 250-300 m, 01°22'51"N, 124°56'56"E, 01.-03.ii.2004, leg. A. Skale.

***Anthelephila biroi biroi* (Pic, 1902)**

1 specimen (NMW): INDONESIA Maluku Tenggara [sic!] Saparua, 21.iv.1990 C.J. Lomer, on clove / C.J. Lomer coll. NMW.Z. 1997.018.

First record for Lease Islands and Saparua.

Note on collecting locality: The correct name of administrative regency for Saparua is Maluku Tengah (central Moluccas) and not Maluku Tenggara (referring to Kei & Aru Islands and not to the central Moluccas).

***Anthelephila imperatrix* LaFerté-Sénéctère, 1849**

9 specimens (DTC): INDONESIA E, Prov. Raja Ampat, Misool SW, distr. Misool Utara, Aduwey (Adua) vill., 01°58'50"S, 129°55'41"E, 30.iii.2009, gardens, in rotten grass, leg. D. Telnov.

First record for Raja Ampat Islands.

Notoxinae

***Mecynotarsus piger* Motschulsky, 1863**

1 specimen (BMNH): INDONESIA: SULAWESI UTARA, Dumoga-Bone N.P. February 1985. / Rothamsted light trap, site 1, 200 m. H.Barlow / R.Ent.Soc.Lond. PROJECT WALLACE B.M. 1985-10; 4 specimens (BMNH): Vert.Series 20 m.actinic code: 14.ii.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area., 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen (BMNH): SULAWESI TENGAH: Nr.Morowali, Ranu River Area., 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281 / Vert.Series 1m.actinic 18.ii.80; 1 specimen (BMNH): Vert.Series 20 m.actinic code: 21.ii.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 2 specimens (BMNH): SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281 / Vert.Series 30 m.actinic code: 22.ii.80; 2 specimens (BMNH): Vert.Series 20 m.actinic code: 24.ii.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen (BMNH): Vert.Series 30 m.actinic code: 28.ii.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen (BMNH): Vert. Series 20 m.actinic code: 4.iii.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 5 specimens (BMNH): Vert.Series 20 m.actinic code: 6.iii.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.

iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 4 specimens (BMNH): Vert.Series 20 m.actinic code: 11.iii.80 / SULAWESI TENGAH: Nr.Morowali, Ranu River Area. 27.i.-20.iv.1980 / S.L.Sutton C.J.Rees B.M.1980-281; 1 specimen (NME): INDONESIA N-Sulawesi 1km W Toraut, Dumoga Bone NP. 200-300 m, 0°34'17"N, 123°54'19"E, 1.-2.ii.2006, leg. A. Skale.

KEY TO SPECIES OF *PAPUANTHICUS*

The first key to species of *Papuanthicus* was presented recently by Telnov (2006); all the descriptions of two new species and a new combination made in the present publication require to supplement the existing key as follows.

- 1 Elytra black, brown or metallic blue, with or without pale transverse band in postbasal transverse impression. Punctures of forebody not very dense non crateriform 3
 - Elytra yellowish with or without dark markings 2
- 2 Elytra yellowish with dark markings. Forebody orange-brown, very densely punctured *P. frustrator* sp. nov.
 - Dorsal surface uniformly yellowish, without dark markings. Punctures somewhat more sparse and less rough on forebody *P. dilutus* (Pic, 1901)
- 3 Elytra uniformly black, brown or metallic blue, without pale transverse band in postbasal transverse impression 4
 - Elytra distinctly bilocourous - black with pale transverse band in postbasal transverse impression (and very indistinct, almost invisible postmedian pale transverse band) *P. moluccensis* sp. nov.
- 4 Elytra brown or black, without blue metallic shine 5
 - Elytra with distinct blue metallic shine 6
- 5 Dorsal body black. Elytral pubescence very short. Aedeagus slightly thickened on apex *P. aemulus* Telnov, 2006
 - Dorsal body brown to dark brown. Elytral pubescence long. Aedeagus not thickened on apex *P. nitens* (Uhmann, 1995)
- 6 Also forebody dorsally blue metallic shiny *P. niger* (Uhmann, 1995)
 - Forebody black, not blue metallic shiny 7
- 7 Ratio of pronotal length to width on anterior lobe is 1.26. Ratio of elytral length to combined width is 1.76. Antennomeres 8-10 distinctly widened, antennomere 10 distinctly broader than long, antennomere 7 distinctly widened distally, broadly triangular. Antennomeres 5-6 distally thickened. Elytral pubescence directed obliquely laterally in the area of postbasal transverse impression *P. papuanus* Telnov, 2006
 - Ratio of pronotal length to width on anterior lobe is 1.16. Ratio of elytral length to combined width is 1.86. Antennomeres 8-10 distinctly widened, antennomere 10 broader than long, antennomere 7 weakly widened distally. Antennomeres 5-6 distally not or almost not thickened. Elytral pubescence directed posteriorly in the area of postbasal transverse impression, with only few hairs directed slightly obliquely laterally *P. glaber* (Uhmann, 1995)

KEY TO SPECIES OF *PSEUDOLEPTALEUS*

The first key to the species of *Pseudoleptaleus* was presented recently by Telnov (2007); the description of a new species in the present publication requires an adaptation of the existing key as follows.

- 1 Pronotum with very high, triangular hump before the base *P. formicabilis* Telnov, 2007
 - Pronotum without high hump before the base, flat or slightly globose in prebasal area 2
- 2 Dorsal body darker - black or very dark brown 3
 - Dorsal body comparatively paler - at least in part brown to reddish 6
- 3 All femora uniformly dark brown *P. limbourgi* Telnov, 2007
 - At least mesofemora bicoloured: basally yellowish, terminally darkened 4
- 4 All femora distinctly bicoloured: yellow in basal half, black in terminal half *P. kristinae* Telnov, 2007
 - Only mesofemora bicoloured 5

- 5 Eyes very large, occupying almost whole head sides, not leaving distinct tempora. Head triangular - narrowed frontally, broadly rounded basally. Head base not notched in the middle *P. asmatius* Telnov, 2007
- Eyes smaller, nor occupying whole head sides. Head circular, not narrowed frontally. Head base is notched in the middle *P. aruensis* sp. nov.
- 6 Anterior lobe of pronotum dorsally not gibbose, slightly convex. Disc of pronotum without saddle-like depression before the base, nearly flat in lateral view. Omoplates distinct but low, not covered by setae *P. gibbipennis* Pic, 1900
- Anterior lobe of pronotum dorsally gibbose. Disc of pronotum with shallow saddle-like depression before the base in lateral view. Omoplates gibbose, each covered with a group of long and dense setae 6
- 6 Metatibiae thickened - stronger in males, less strong in females, in males with a row of erect setae in basal half of inner margin. Aedeagus strongly narrowed and prolonged apically, pointed. Head base notched in the middle *P. aruensis* sp. nov.
- Metatibiae not thickened and without row of long setae in basal half of inner margin. Aedeagus rounded or broadly prolonged apically. Head base notched or simple 7
- 7 Head completely round at base. Head base notched in the middle. Ratio of maximum width of the head (including eyes) to maximum width of pronotum is nearly 1.5 or more. Elytra sometimes not clearly bicolorous *P. formicomorphus* Telnov, 2007
- Head slightly conical elongate behind eyes. Elytra distinctly bicolorous in light specimens: orange in basal third, black on the rest of dorsal surface. Head base not notched. Ratio of maximum width of the head (including eyes) to maximum width of pronotum is nearly 1.2 *P. electilis* (Lea, 1922)

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