

New species and synonymy in genus *Pygoplatys* Dallas, 1851 (Heteroptera, Tessaratomidae)

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Summary.— With twenty-five described species, the genus *Pygoplatys* Dallas stands amongst the most speciose genera in the family Tessaratomidae. The present paper describes three new species from Borneo and Philippines Islands, *P. kerzhneri* n.sp., *P. pluotae* n.sp. and *P. rideri* n.sp., and proposes the synonymy of *P. cribratus* (Walker, 1868) nov. syn. with *P. firmatus* (Walker, 1868).

Résumé.— Avec vingt-cinq espèces décrites, le genre *Pygoplatys* Dallas est l'un des plus importants dans la famille des Tessaratomidae. Le présent article apporte la description de trois nouvelles espèces de Bornéo et des Philippines, *P. kerzhneri* n.sp., *P. pluotae* n.sp. et *P. rideri* n.sp., et confirme la synonymie de *P. cribratus* (Walker, 1868) nov. syn avec *P. firmatus* (Walker, 1868), soupçonnée par l'auteur lui-même.

Resumen.— Con veinte y cinco especies descritas, el genero *Pygoplatys* Dallas es uno de los más importantes de la familia de los Tessaratomidae. Este artículo describe tres especies nuevas de Borneo y Filipinas: *P. kerzhneri*, *P. pluotae* y *P. rideri* y confirma la sinonimia de *P. cribratus* (Walker, 1868) nov. syn. con *P. firmatus* (Walker, 1868) ya sospechada por el autor.

Key Words.— Tessaratomidae, Tessaratominae, *Pygoplatys*, *Odontoteuchus*, *kerzhneri*, *pluotae*, *rideri*, *cribratus*, *firmatus*

There are approximately 240 species in the family Tessaratomidae, some of which are the largest species in the superfamily Pentatomoidea. Except for a few species (in the genus *Piezosternum* Amyot & Serville) they are denizens of the Ancient World and Australasia. They reach their greatest diversity in the Indonesian and Philippine Archipelagoes. Surprisingly, with a very few exceptions, none of the genera of the family has been revised since long ago. A recent catalog (ROLSTON *et al.*, 1994) however serves as a good starting point to undertake this study. The nomenclature is far from being stabilized and numerous species have not been studied since their original description. The present paper is the first of a series which ultimately aims to revise all genera of the family. The choice to begin with the genus *Pygoplatys* derives from the collaboration concerning a new *Pygoplatys* species (MAGNIEN *et al.*, 2008), pest of Damar gardens in South-West Sumatra. Examination of specimens from different museums and private collections has led to the conclusion that three more new species

were still unknown to science in this genus, and that two of the species described by WALKER (1868) actually refer to the same species.

Pygoplatys includes species ranging in size from small (12 mm) to large (30 mm and above). They all share a trapeziform shape, with the posterior apex rounded in male specimens. It is toothed in female specimens, each laterotergite 7 has one tooth, each laterotergite 8 has two teeth, and 9th tergite has four teeth, thus making a row of ten teeth, almost in line. The only exception is the female of *P. validus* (see MAGNIEN *et al.*, 2008), the ten teeth being not in line due to the strong concavity of the body apex. This row of ten teeth at the apex of the abdomen is a unique feature among the Tessaratomini. The male genitalia are characterized by a phallus with two pairs of conjunctival processes, the ejaculatory reservoir which is strongly curved at the base, S-shaped in the middle, and strongly tapering at the apex. The external genitalia of females are characterized by laterosternites IX completely fused. The sclerotized rings are lacking or indistinct. Maternal care has been observed in seven different species of the genus (MAGNIEN *et al.*, 2008).

The genus has been divided into two subgenera (STÅL, 1871), as follows:

P. (Pygoplatys) Dallas, 1851: head in front of eyes moderately sinuose, juga apically converging, never armed with a tooth or a distinct angle at base.

P. (Odontoteuchus) Stål, 1871: juga armed with a tooth or at least a distinct angle at base, strongly sinuose, apically parallel.

Material and methods

Specimens studied in this paper came from the following institutions and collections: BMNH, BPBM, DAR, PHM, and ZSMC.

Pygophore and female abdomen were dissected after clearing in cold potassium hydroxide for several days. The phallus was inflated with the use of forceps. Examination of genitalia was conducted in glycerol using a semi-covered cavity slide as described in DOESBURG (2004). Chlorazol black has been used for better contrast of membranous processes of phallus and spermathecal duct.

Abbreviations:

BMNH	Natural History Museum, London, UK.
BPBM	Bernice P. Bishop Museum, Honolulu, Hawai'i, USA.
DAR	David A Rider Collection, North Dakota State University.
ISNB	Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium.
MNHN	Muséum National d'Histoire Naturelle, Paris, France.
NHRS	Naturhistoriska Riksmuseet, Stockholm, Sweden.
PHM	Philippe Magnien Collection, Paris.
RMBR	Raffles Museum of Biodiversity Research, Singapore.
RMNH	Nationaal Natuurhistorisch Museum, Leiden, The Netherlands.

UPLB Museum of Natural History, University of the Philippines Los Baños, Laguna, Philippines.

ZSMC Zoologische Staatssammlung, München, Germany.

***Pygoplatus* (s. str.) *kerzneri* n. sp.**

HOLOTYPE ♂: April 2005, Kenigau, Sabah (Borneo) Malaysia (type will be deposited in MNHN).

Description.— Habitus: Plate I D (male).

General hue fuscous, head paler at apices of juga, antennae somewhat paler. Pronotum: bicoloured, shiny fuscous on disk, posterior margin of humeral processes and between calli and distal margin, tawny on anterior margin of humeral processes and calli. Scutellum: same hue as pronotal disk. Hemelytron: of somewhat paler hue, matte. Laterotergites: pitch brown, with tawny spots at internal and external posterior angles, somewhat reddish on posterior edge; venter: tawny, shiny, spiracles black; coxae and legs of the background hue.

Head: juga slightly concave, rounded at the apex, clypeus shorter than and completely enclosed by juga; 1st segment of antennae nearly reaching apex of juga; 2nd and 3rd segments cylindrical and subequal in length, last segment fusiform and subequal to the two preceding segments; pilosity dense, length of hairs about one third of diameter of segment; rostrum short, slightly surpassing anterior coxae.

Pronotum: humeral processes extending well beyond the margins of abdomen, with margins subparallel, slightly projected forward, truncated at almost right angle, with blunt angles extending anteriorly beyond distal margin of pronotum, nearly reaching anterior margin of eyes; pronotal width including humeral processes equaling 83 % of habitus length; calli smooth, moderately marked; lateral margins thinly wrinkled; punctation strong and irregular on disk; sternal process long, its blunt apex reaching the anterior margin of fore coxae; distal end of femora with a spine on either side of tibia insertion; first segment of tarsi inflated, with brush of adhesive hairs on the ventral surface, segments two and three cylindroconical, the second very short.

Scutellum: punctation similar to pronotum; triangular, with apex lanceolate and grooved.

Hemelytron: punctation thin and regular, light-tawny veins distinct, clearly contrasting with background; membrane with four basal cells, veins strong, subparallel.

Apex of abdomen rounded; hind margin of pygophore in line with hind margins of seventh segment.

Genitalia (cf. fig. 1 à 3): pygophore (fig. 1) widening posteriorly, hind margin polygonal, with very shallow medial V-shaped indentation; opening with a tooth on each side, just anterior to sensorial lobe of paramere. Paramere (fig.2) triangularly blade-shaped, regularly curved medially, sensorial lobe relatively small, with very long setae. Phallosoma (fig 3) fitted with two sclerotized plates, dorsally protruding: conjunctiva fitted with two pairs of processes, one sclerotized in antero-ventral position, stylet shaped like a shark tooth, and the other membranous in postero-dorsal position, as is the rule in this genus; vesica very long, ejaculatory reservoir strongly curved at base, S-shaped in middle, and strongly tapering at apex, fitted with a sclerotized beak-shape process at base, and a small spine, oriented posteriorly, on exterior part of the S.

Measurements: length: 21,2 mm – width including humeral processes: 17,7 mm – length of antennae: 7,9 mm

Derivatio nominis. This species is dedicated to one of our masters in heteropterology, who shows the greatest competences and capacities of work as well as the greatest availability to his colleagues, my friend Izya Kerzhner.

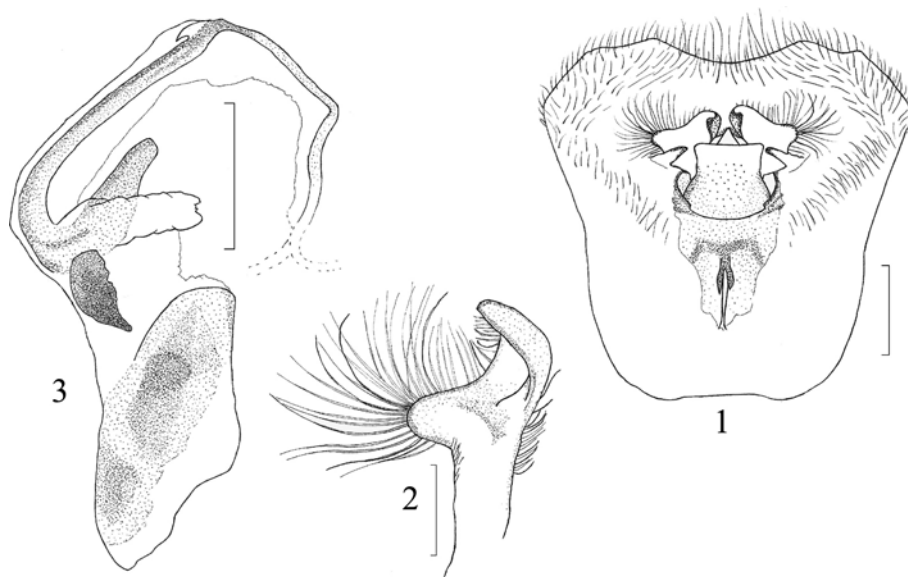


Fig 1-3.— Male genitalia of *P. kerzhneri* n.sp.: 1.— Pygophore; 2.— Right paramere; 3.— Penis (lateral view). Scales fig 1 & 3: 1 mm, fig 2: 0,5 mm.

Distribution: Malaysia, Sabah province (Borneo)

Host plant unknown.

Discussion. *Pygoplatys kerzhneri* n. sp. belongs in the nominal subgenus and with a group of species characterized by well developed humeral processes, with are bluntly truncate. This group includes *P. validus* Dallas, *P. tenangau* Magnien *et al.* and *P. merinjakensis* Distant. The latter, known only from the type female, is a curious and very stout species, cannot be mistaken with any other species.

Pygoplatys kerzhneri n. sp. differs from the others two species by the unique shape of its ejaculatory reservoir, the beak-shaped process near the base and the posteriorly oriented spine at the end of the S-shape. It can be further separated from *P. tenangau* by the position of the pale stripe on the pronotum, which extend behind the calli, whereas it includes the calli in *P. tenangau*. It can be further separated from *P. validus* by the smaller size, 20 mm versus 30 mm, the shape of the humeral processes which are somewhat larger and more projected anteriorly in *P. validus*, and the contrast of colour between the veins and the forewing background, which are concolorous in specimens of *P. validus*.

***Pygoplatys (Odonteuchus) pluotae* n. sp.**

HOLOTYPE ♂: 2005, Mont Apo, alt about 1200 m, Mindanao, Philippines, R. Cabale coll. (type will be deposited in MNHN). **Paratypes**: 1 ♂, 1 ♀, same origin (BPBM), 1 ♂, 1 ♀, id (BMNH), 1 ♂, 1 ♀, id (IRSNB), 1 ♂, 1 ♀, id (MNHN), 1 ♂, 1 ♀, id (NHRS), 1 ♂, 1 ♀, id (RMBR), 1 ♂, 1 ♀, id (RMNH), 1 ♂, 1 ♀, id (UPLB), 1 ♂, 1 ♀, id (ZSMC), 1 ♂, 1 ♀, id (DAR); 37 ♂♂, 23 ♀♀, id (PHM); 14 ♂♂, 15 ♀♀, May 2007, Mount Balocau, Leyte Island, Philippines, R. Cabale coll., (PHM); 1 ♀, July 5th 1958, Mazawan (trail to Mt. Malindang), 1290 m, Amboanga del Norte, Mindanao, Philippines, H. E. Milliron leg., (BPBM)

Description.— Habitus: Plate II A (male), B (female).

Pitch brown, slightly paler at apices of juga; antennae pitch brown, distal half of 4th segment reddish-brown; pronotum and scutellum shiny; hemelytron of slightly paler hue, uniform on the corium, shiny, membrane yellowish; connexivum brown; ventrum tawny, shiny, sides darker; coxae and legs of the same hue; spiracles black.

Head: juga narrow, margins parallel, leaving antenniferous tubercles uncovered, fitted with a tooth at the proximal margin in front of each eye, rounded at the apex, clypeus much shorter and completely enclosed in juga; second and third segments of antennae subequal in length, 4th segment longer than the 2nd by 25 to 50 %; pilosity dense, length of the hairs about one fourth of segmental diameter; rostrum short, slightly surpassing anterior coxae.

Pronotum: humeral processes extending beyond lateral margins of abdomen, their margins sub-parallel, slightly curved anteriorly, and obliquely truncated, anterior angle blunter than posterior, extending anteriorly beyond anterior margin of pronotum, reaching to about middle of eye; width of pronotum, including humeral processes, slightly more than 70 % of total length of habitus in males, slightly less in females. Calli smooth, moderately marked; lateral margins thinly wrinkled; punctation coarse and irregular on disk; sternal process long, with apex blunt, reaching fore margin of anterior coxae; distal apex of femora fitted with spines either side of tibiae insertion; first segment of tarsi inflated, with a brush of adhesive hairs on the ventral surface, segments two and three cylindroconical, second segment very short.

Scutellum: punctation similar to pronotum, triangular with apex lanceolate.

Hemelytron: punctation fine and regular; membrane with four basal cells, veins strong, parallel.

Abdomen. Male: posterior margin of pygophore, in normal position, only slightly surpassing the posterior margin of the seventh segment; female: 7th laterotergites extending posteriorly more or less surpassing abdominal apex, 8th laterotergites weakly concave; venter finely granulated.

Genitalia (cf. fig 4–7). ♂: pygophore (fig 4) widening posteriorly, posterior margin slightly concave; opening with a tooth on each side, slightly curved medially, located just anterior to sensorial lobe of paramere. Paramere (fig. 5) triangularly blade-shaped, evenly curved medially, sensorial lobe relatively small, with very long setae; phallosoma (fig 6) fitted with two sclerotized plates, dorsally protruding; conjunctiva fitted with two pairs of processes, as is the rule in this genus, one sclerotized in antero-ventral position, stylet bifurcated and nearly symmetrical (6a), and the other membranous in postero-dorsal position; vesica very long, ejaculatory reservoir strongly curved at base, S-shaped in middle, and strongly tapering at apex. ♀: (fig 7); external genitalia as in the other species of genus (see MAGNIEN *et al.*, 2008). Spermatheca (fig. 13): apical receptacle ovoid connected to the intermediate part (pumping region) by a long distinctly tubular neck curved at right angle; intermediate part with proximal flange very reduced, distal normal;

spermathecal duct bipartite: posterior part wide and folded, lanceolate, anterior part long and thin, little more than half as long as posterior part.

Measurements. (mean(min-max)): **male:** length: 18,9 mm (17,6-20,9) – width including humeral processes: 12,5 mm (11,3-14,9) – maximum width of abdomen: 11,2 mm (10,4-12,5) – length of antennae: 8,53 mm (8,28-9,04) – ratio length of the 4th antenna segment to the length of the 3rd: 1,34 (1,26-1,48). **Female:** length: 21,6 mm (20,3-23,7) – width including humeral processes: 12,5 mm (11,3-14,9) – maximum width of abdomen: 12,7 mm (11,9-13,8) – length of antennae: 8,58 mm (8,04-9,15) – ratio length of 4th antenna segment to length of 3rd: 1,29 (1,23-1,36)

Derivatio nominis: this species is dedicated to my friend Dominique Pluot-Sigwalt, who has been helping me for the last fifteen years with her precious advices concerning my studies about Heteroptera, and has helped me access the collections of MNHN and other European museums.

Distribution: Mindanao and Leyte Islands, Philippines.

Host plant unknown.

Discussion: see discussion below under *P. rideri* n. sp.

***Pygoplatys (Odonteuchus) rideri* n.sp.**

HOLOTYPE ♂: Philippines Islands, Camarines Sur, Mount Iriga 500-600 m, 17-IV-1962; H. M. Torre Villas, Collector (BPBM). **Paratypes:** 2 ♂♂, same origin, 14 & 21-IV-1962 (BPBM); 1 ♂, Philippines Islands, Camarines Sur, Mount Izarog 500-600 m, 24-IV & 8/12-V-1963, H. M. Torre Villas, Collector (DAR), 1 ♂, id (PHM). 1 ♀, 19-IV-1962, Camarines Sur, Mt Iriga, Philippines 500-600 m; H. M. Torre Villas, Collector (BPBM). 5 ♀♀, 20-IV/22-V-1962, Camarines Sur, Mt Izarog, Philippines, 700-1600 m; H. M. Torre Villas, Collector (BPBM), 1 ♀, id (MNHN), 1 ♀, id (DAR), 1 ♀, id (PHM).

Other specimens: 1 ♂, 1 ♀: Philippines Islands, Mountain province, Ifugao Mayoyao, 1000-1500 m, 30-VI-1966; H. M. Torre Villas, Collector (BPBM); 1 ♀, Insel Masbate, Aroroy, Philippines, leg. G. Böttcher; *Pygoplatys alces* Taeuber *i. l.* (ZSMC); 1 ♀, Insel Masbate, Aroroy, Philippines, leg. G. Böttcher; Taeuber coll. B. M. 1949-474 (BMNH); 1 ♀, Philippines Isl., Basilan I., Maloong, vend. M. E. Walsh; Taeuber coll. B. M. 1949-474 (BMNH); 2 ♂♂ without data (one coming from the Distant coll.) (BMNH).

Note. I did not include in the paratypes the specimens from the Mountain province, Masbate and Basilan Island, nor the specimens from the BMNH lacking data. This is due partly to the poor condition of some of the specimens and partly to the fact that they show some differences with the series from Camarines Sur. The most evident of which is in the coloration, those specimens being uniform tawny, whereas typical *P. rideri* specimens are bicoloured. This could result from immaturity, but the odds are not in favour of this hypothesis, considering the number of specimens. Furthermore, other small discrepancies can be found, for example, the head and the lanceolate apex of the scutellum being shorter in the specimens from Masbate than those of the typical series. On the other hand, no significant difference can be found in the genitalia. Subspecific status could have been considered, if it was not for the fact that two of the specimens came from the North of the typical region, and other from the South. This seems to

defeat the possibility of geographic isolation, and consequently, the subspecies status. More specimens from these localities are needed to solve this problem, and in the meantime, it does not seem useful to give them a particular status.

Description.— Habitus: Plate II: C (male), D (female).

Bicoloured, overall shiny pitch brown, except hemelytron which are nearly entirely light brown, reddish-brown on inner part of corium; head somewhat paler at apices of juga, distal half of 4th antennae segment reddish-brown; membrane of hemelytron yellowish; ventral side pitch brown, shiny; coxae, trochanters and apex of sternal process of paler hue, reddish, spiracles black; legs pitch brown, tarsi lighter, yellowish-brown.

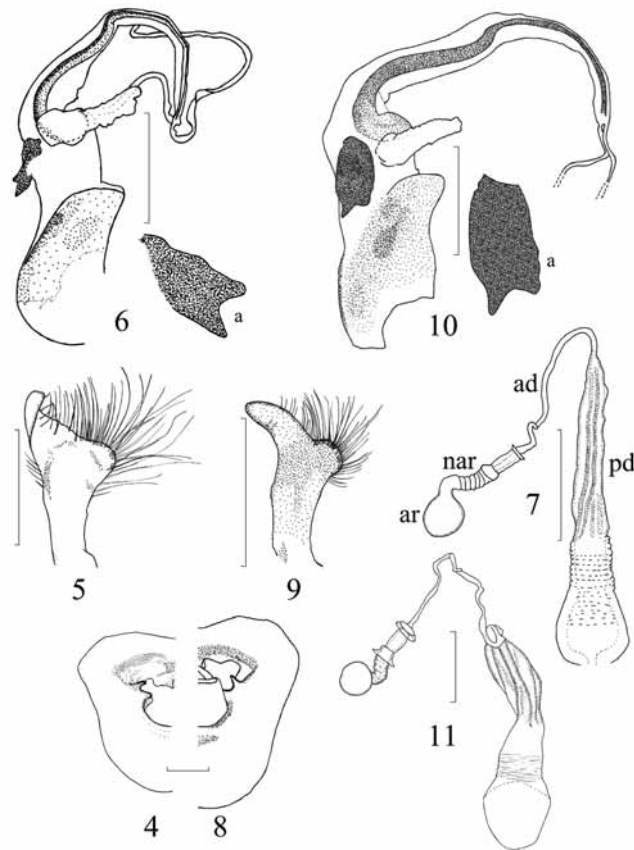
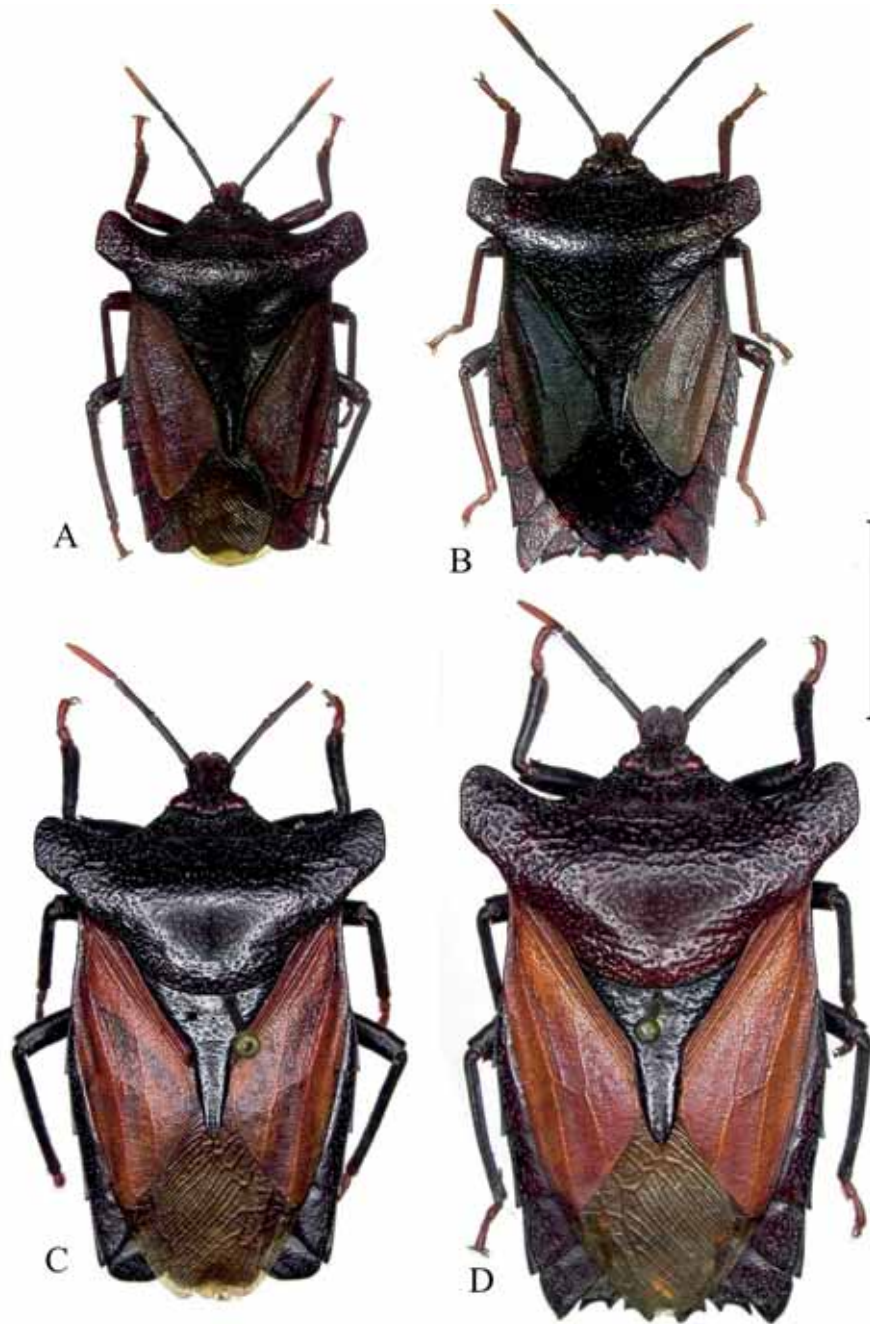


Fig 4-7.— Genitalia of *P. pluatæ* n.sp.: 4.— pygophore (anal tube and paramere removed); 5.— right paramere; 6.— penis (lateral view); 6a.— ventral sclerotized processus; 7.— spermatheca (ad: anterior part of the spermathecal duct; ar: apical receptacle; nar: neck of apical receptacle; pd: posterior part of the spermathecal duct). Scales: 1 mm

Fig 8-11.— Genitalia of *P. rideri* n.sp.: 8.— pygophore; 9.— right paramere; 10.— penis (side view); 10a.— ventral sclerotized processus; 11.— spermatheca. Scale: 1 mm.



Plates II.—*P. pluotae* n. sp. : A— male (type) ; B— female. *P. rideri* n. sp. : C— male (type) ; D— female. scale: 10 mm.

Head: juga narrow, wider and rounded at apices, each with a tooth just in front of each eye, antenniferous tubercles visible from above, clypeus shorter than and completely enclosed in the juga; 1st antenna segment not reaching apices of juga, 2nd and 3rd segments cylindrical, 3rd somewhat shorter than the 2nd, 4th fusiform and not more than 10 % longer than 2nd; pilosity dense, length of hairs about one fourth of segmental diameter; rostrum short, slightly surpassing anterior coxae.

Pronotum: humeral processes extending well beyond lateral margins of abdomen, their margins subparallel, slightly projected anteriorly, obliquely truncated, extending slightly beyond anterior margin of pronotum, reaching to about middle of eyes; width of pronotum, humeral processes included, about 65 % of habitus length; anterior calli smooth, slightly marked; lateral margins transversally wrinkled; punctation on disk rough and irregular; sternal process long, apex blunt, surpassing the anterior margin of fore coxae; distal apices of femora fitted with a spine on either side of tibia insertion; first segment of tarsi swollen, with a brush of adhesive hairs on the ventral surface, second and third segments cylindro-conical, second very short.

Scutellum triangular with a lanceolate, grooved apex.

Hemelytron: punctation fine and regular; membrane with four basal cells, veins strong, parallel.

Abdomen: male: posterior margin of pygophore in normal position somewhat surpassing the posterior margins of 7th segment; female: 7th laterotergites extending posteriorly, in line with the teeth of the 9th, the 8th with two distinct teeth, shorter; ventral side finely granulated.

Genitalia (cf. fig 8 – 11). ♂: pygophore (fig. 8) widening posteriorly, posterior margin polygonal, with a very shallow V-shaped medial indentation, opening with a straight tooth just anterior to sensorial lobe of paramer on each side; apophysis of paramere (fig 9) regularly curved inwards, not triangular, sensorial lobe small, fitted with very long setae. Phallosoma (fig 10) fitted with two sclerotized plates dorsally protruding, conjunctiva fitted with two pairs of processes, one sclerotized in antero-ventral position, stylet dissymmetrically bifurcated (10a), and the other membranous in postero-dorsal position; vesica very long, ejaculatory reservoir strongly curved at base, S-shaped in the middle, and strongly tapering at the apex. ♀: (fig 7): external genitalia as in the other species of genus (see MAGNIEN *et al.*, 2008). Spermatheca (fig. 13): apical receptacle ovoid connected to the intermediate part (pumping region) by long distinctly tubular neck curved at right angle; intermediate part with proximal and distal flanges; spermathecal duct bipartite: posterior part wide and folded, lanceolate, anterior part long and thin, about as long as posterior part.

Measurements. (mean (min - max)): **male:** length: 26,8 mm (25,4-28,5) – width including humeral processes: 16,9 mm (16,5-17,4) – length of antennae: 10,0 mm (9,6-10,3). **Female:** length: 30,2 mm (27,2-31,8) – width including humeral processes: 18,6 mm (16,1-20,0) – length of antennae: 10,2 mm (9,6-10,6).

Derivatio nominis: this species is dedicated to our colleague David Rider, who is doing a tremendous job to improve the knowledge about Pentatomoidea, by his own work as well as by the help he gives other researchers, and who gave me the opportunity to discover this new species.

Distribution: from the specimens studied it appears that this species occurs throughout most of the Philippines, from Luzon to Mindanao Islands.

Host plant unknown.

Discussion. Regarding the two new species in the subgenus *Odontoteuchus*, they are quite easy to separate from all other species by the unique shape of their humeral processes in the subgenus. The characters which can be used to separate the two new species are as follows: *pluotae* n. sp. is rather stout and small, *rideri* n. sp. slender and

large; *pluotae* n. sp. is nearly unicolourous dark, *rideri* n. sp. is bicolorous. The fourth segment of the antennae is much longer than the second for *pluotae* n. sp., but they are subequal for *rideri* n. sp.. The denticulation on the apex of female abdomen in *pluotae* n. sp. is reduced, the corresponding denticulation in *rideri* n. sp. is longer. The male genitalia also varies between the two species, the tooth on each side of the aperture of the pygophore is straight in *rideri* n. sp.; it is curved in *pluotae* n. sp.. The sensorial lobe of the paramer is much more protruding in *rideri* n. sp. than in *pluotae* n. sp., the shape of the apophysis is different (fig. 5, 9). The shape of the sclerotized ventral processes of the conjunctiva are also somewhat different, being less symmetric in *rideri* n. sp. than in *pluotae* n. sp.. Concerning the female genitalia, the main differences lie in the intermediate part (pump region) of the spermatheca, the proximal flange is very reduced in *pluotae* n. sp., while in *rideri* n. sp the anterior and posterior flange are nearly the same size. Also the relative length of anterior part versus posterior part of ductus varies; they are about equal in *rideri* n. sp., and the anterior part is much shorter in *pluotae* n. sp.

***Pygoplatys* (s. str.) *firmitus* (Walker, 1868)**

Piezosternum firmitus Walker, 1868

Pygoplatys trucidus Walker, 1868 (syn. by Distant, 1900)

Piezosternum ?firmitum: Atkinson, 1889

Pygoplatys firmitus: Distant, 1893; Lethierry & Severin, 1893; Distant, 1900; Distant, 1903.

Pygoplatys (*Pygoplatys*) *firmitus*: Kirkaldy, 1909

Pygoplatys cribatus (Walker, 1868), **new synonymy.**

Material examined

Type of *P. firmitum* Walker, 1868: pinned with 4 labels – Type [printed, round with green circle]/ MALCA [round, handwriting]/ Saunders. 65.13.[printed]/ PIEZOSTERNUM FIRMATUM. [printed] (BMHN).

Type of *P. cribatum* Walker, 1868: pinned with 4 labels – Type [printed, round with green circle]/ MALCA [round, handwriting]/ Saunders. 65.13.[printed]/ 6. PIEZOSTERNUM CRIBATUM. [printed] (BMHN)

Diagnosis: testaceous with a reddish tinge on the disk of hemelytron, elongate-oval, paler beneath. Head minutely punctured. Rostrum extending somewhat beyond the fore coxae. Antennae piceous. Thorax thinly and roughly punctured. Calli distinct, smoother than the disk, lateral margins finely striated. Humeral processes projecting anteriorly, more robust for the male, thinner for the female, pointed, coarsely punctured at apex, pronotum including processes wider than abdomen by about 80 %. Posterior margin of pronotum rounded, covering proximal part of the scutellum. Scutellum triangular with apex lanceolate, grooved; sternal process reaching the anterior coxae. Hemelytron with a finer punctation than scutellum, membrane pale ochraceous. Seventh laterotergite narrowly rounded in males, acute in female, distinctly surpassing the teeth of segment eight.

The genitalia have not been examined.

Measurements: length of habitus: ♂ 15 mm, ♀ 14 mm

Host plant unknown.

Distribution: Malaysia (indication of Moluccas in ROLSTON *et al.* (1994) results from a misinterpretation of Malacca, old name for Malaysia).

Discussion. In his conclusion for the diagnosis of *P. cribatus*, which follows that of *P. firmatus* in his catalog, WALKER (1868) wrote: "it may prove to be the female of *P. firmatum*: the horns of the thorax are more inclined forward and the scutellum smaller.". He was mistaken in his statement, but perhaps not as he had thought. In fact, the examination of the type specimens as well as the description, in which Walker wrote about the abdomen of *firmatus*: "hind angles of the apical segment forming two spines, which extend a little beyond the eight intermediate spines" and about that of *cribatus*: "hind angles of the apical segment rounded" clearly demonstrate that the type of *firmatus* is a female and that of *cribatus* a male. The two specimens share the same origin, a donation from Saunders, entered under the number 6513 by the BMHN, and the same provenance label, "MALCA" in handwriting, which should be an abbreviation for Malacca, according to Walker.

Save for the sexual dimorphism, important in this genus, few differences can be found in the diagnose. Subtle changes in the use of adverbs, slipping from "hardly" for the first to "slightly" for the second give no usable criteria. Only two points really emerge from the descriptions, a difference in the relative length of segments two and three of the antennae, and the shape of humeral processes and scutellum: "the horns of the thorax [of *P. firmatus*] are more inclined forward and the scutellum is smaller.". He also wrote about differences in hue, the male being darker than the female, but this maybe due to sexual dimorphism, individual variation or immaturity of the type of *firmatus*.

The difference between the ratio of the length of antennal segments two and three is distinctive, but small, and, in a family with great variability in this character, which can reach 20 % in some cases, it has no real significance. I cannot find any differences in the shape of the scutellum, so it leaves only the shape of humeral processes, which are in fact somewhat different. Once again, Walker was wrong in his assertion, the humeral processes of *cribatus* being in fact slightly more projected anteriorly than those of *firmatus*. It may also be noted that the processes of the male are clearly more robust than those of the female, which continuously taper from base to apex, whereas they only taper in the last third for the male. However, the study of numerous specimens of other species also shows great individual variation in this character, for example, the extension of humeral processes in *P. tenangau* Magnien *et al.* can differ of about 20 %, and some specimens have completely transverse processes, whereas the majority have them projecting anteriorly. This character does not seem sufficient to establish a specific distinction. Close examination of the two types did not give any other clue that those discussed hereabove, and, eventually, there is no indication that they belong to different species. Consequently, they should be regarded as the male and female of the same species:

P. cribratus (Walker, 1868), nov. syn = *P. firmatus* (Walker, 1868).

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