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A Revision of *Porocallus* Sharp. New Synonyms and New Species (Insecta: Coleoptera: Staphylinidae: Aleocharinae: Oxypodini)

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Abstract. A revision of types and additional material yielded the following synonymies: *Porocallus* Sharp, 1888 = *Platysmarthrusa* Pace, 1999 **syn. n.** = *Ischyradelia* Pace, 1999 **syn. n.**; *Porocallus insignis* Sharp, 1888 = *Platysmarthrusa chinensis* Pace, 1999 **syn. n.** Two new species are described and illustrated: *Porocallus hlavaci* **sp. n.** and *P. ligo* **sp. n.** *Porocallus tianmuensis* (Pace) **comb. n.** (previously in *Ischyradelia*) is briefly redescribed. New records of *P. insignis* from China and a key to the four species of the genus are presented. The distribution of the genus is mapped.

Key words. Eastern Palaearctic region - China, taxonomy, description, new records, distribution, key to species

1. INTRODUCTION

In a recent paper on the systematics of *Porocallus* Sharp, 1888 one species was recognized: the type species *P. insignis* Sharp, 1888 (ASSING 2001). The species is very widespread in the Eastern Palaearctic region, its distribution ranging from China to Japan. Based on additional material, which has become available in the meantime, and on a study of type material, three new synonymies are proposed and two new species are described. An additional undescribed species from Hubei is not named, as it is represented only by a single female; the external characters distinguishing it from other species of the genus are not pronounced and the spermatheca is not very distinctive.

2. MATERIALS

The material treated in this paper is deposited in the following collections:

- MHNG Muséum d'Histoire Naturelle, Genève
(G. Cuccodoro)
- NHMW Naturhistorisches Museum Wien (H. Schilhammer)
- cAss author's private collection

3. *POROCALLUS* SHARP, 1888

Porocallus Sharp, 1888 (SHARP 1888: 286f).

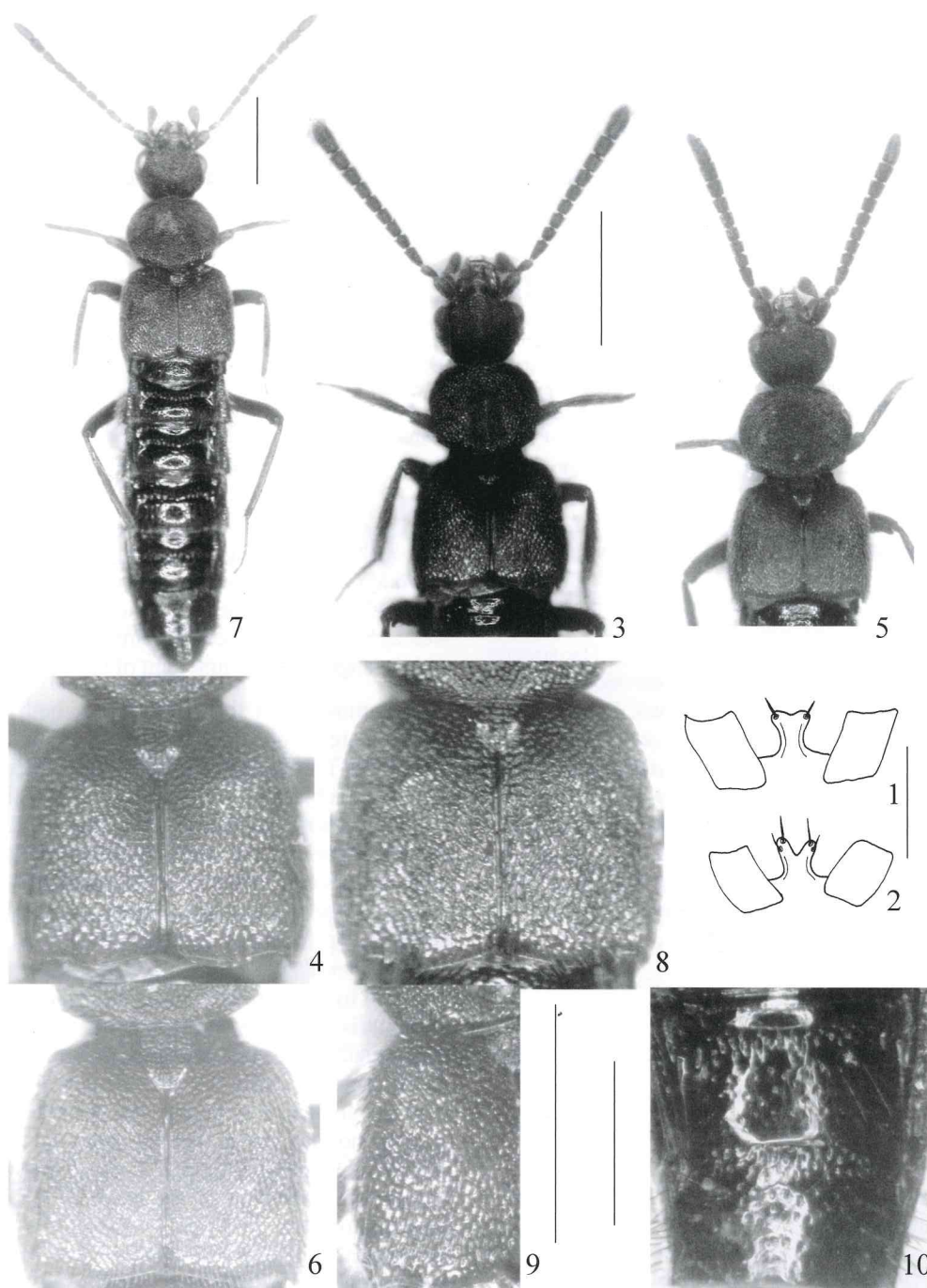
Platysmarthrusa Pace, 1999 (PACE 1999: 107f) **syn. n.**

Ischyradelia Pace, 1999 (PACE 1999: 108) **syn. n.**

Comments: When PACE (1999) described *Platysmarthrusa*, he did not compare it with *Porocallus*, a genus at that time known only from Japan. The type species of both genera are conspecific (see below), so that *Platysmarthrusa* is consequently a junior synonym of

Porocallus. According to the original description of *Ischyradelia*, this taxon is distinguished from *Platysmarthrusa* by the shape and chaetotaxy of the ligula, as well as by the stouter second joint of the maxillary palpus and the slightly larger first joint of the labial palpus.

An examination of the holotypes of both type species and of material of *P. insignis* from various localities revealed the following: The shape and chaetotaxy of the ligula are subject to considerable intraspecific variation (Figs. 1-2), so that differences seen in the ligulae of just two specimens do not justify a distinction at the generic level (in this case not even at the species level). The difference in the shape of the second joint of the maxillary palpus is clearly based on an artefact: in the holotype of the *Platysmarthrusa chinensis*, it is much wider than illustrated by PACE (1999: 109); the impression of a slender joint is caused by the fact that it is turned on the slide, so that, when viewed from above, it is not seen at its widest aspect. Finally, the first joint of the labial palpus is in fact slightly less oblong, but this extent of variation is quite normal within genera; there are numerous examples of Staphylinidae with a much more pronounced intraspecific variation of the shape of the labial palpi. Most importantly, however, *Porocallus* is characterized by numerous highly conspicuous and very distinctive apomorphic characters states, all of them shared also by the holotype of *Ischyradelia tianmuensis*: especially the long, massive, and densely pubescent antennae, the conspicuous triangular flattened third joint of the maxillary palpi, the coarse and extremely dense puncturation of the forebody, and finally also the similar morphology of the primary and secondary sexual characters (see PACE 1999: 109-110). In addition, the facies is most similar (especially the shape of head and pronotum, the morphology of the abdomen), so that there is no doubt that *Ischyradelia tianmuensis* is in fact a species of *Porocallus* and that consequently *Ischyradelia* is a synonym of that name.



Figs. 1-10. *Porocallus insignis* Sharp (1-4), *P. hlavaci* sp. n. (5-6), *P. ligo* sp. n. (7-8), and *P. tianmuensis* (Pace) (9-10): ligulae of specimen from the Russian Far East (1) and of holotype of *Platysmarthrusa chinensis* Pace (2); forebody (3, 5); habitus (7); elytra (4, 6, 8, 9); abdominal segments VI and VII in dorsal view (10). Scale bars: 3-9: 1.0 mm; 10: 0.5 mm; 1-2: 0.08 mm.

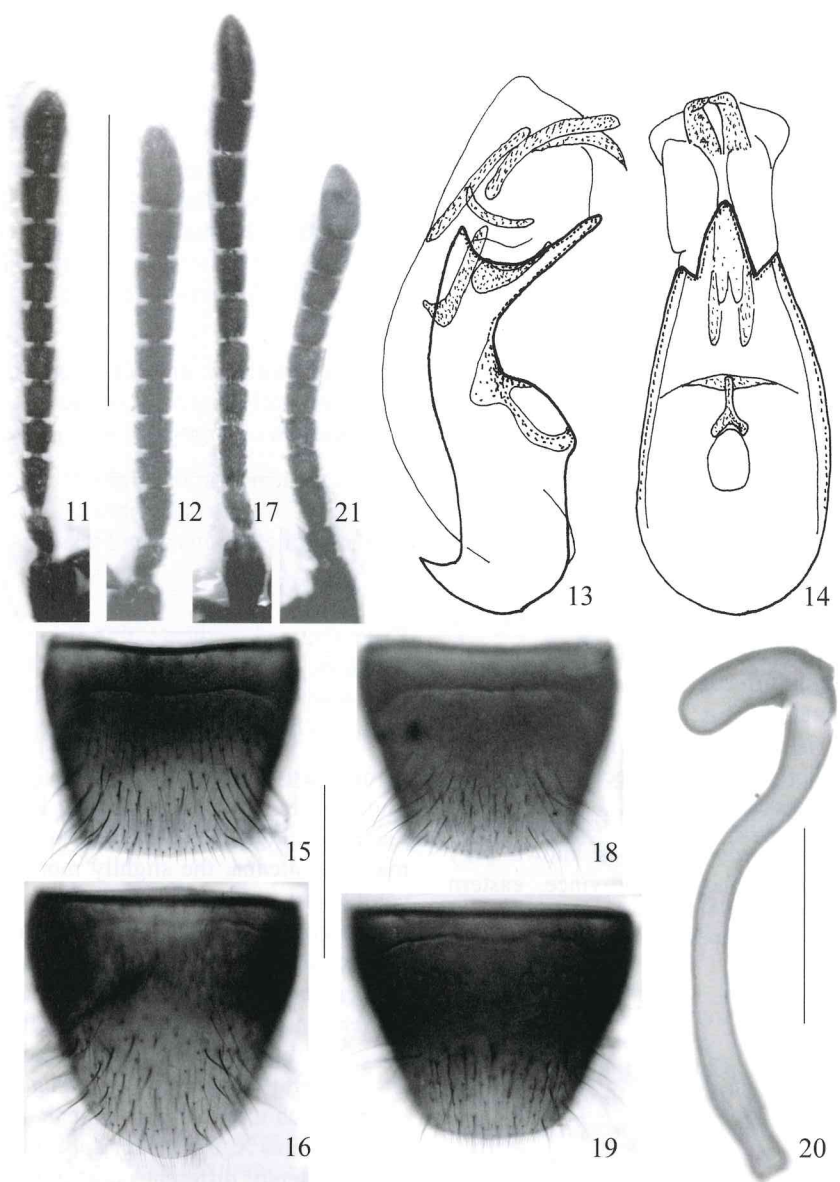
3.1. *Porocallus insignis* Sharp, 1888
(Figs. 1 - 4, 11, Map 1)

Porocallus insignis Sharp, 1888 (SHARP 1888: 287).

Platysmarthrusa chinensis Pace, 1999 (PACE 1999: 108)
syn. n.

Types examined: *P. insignis*: see ASSING (2001).

P. chinensis: Holotype ♂: China Beijing, Songshan [ca. 80 km NW Beijing city centre], 15.V.1993, G. de Rougemont / Holotypus *Platysmarthrusa chinensis* m., det. R. Pace 1995 / *Platysmarthrusa chinensis* gen. n. sp. n. det. R. Pace 1995 / *Porocallus insignis* Sharp det. V. Assing 2003 (MHNG).



Figs. 11-21. *Porocallus insignis* Sharp (11), *P. hlavaci* sp. n. (12-16), *P. ligo* sp. n. (17-20), and *P. tianmuensis* (Pace) (21): antenna (11, 12, 17, 21); median lobe of aedeagus in lateral and in ventral view (13, 14); male tergite VIII (8); male sternite VIII (16); female tergite VIII (18); female sternite VIII (19); spermatheca (20). Scale bars: 11, 12, 17, 21: 1.0 mm; 13-16, 18-19: 0.5 mm; 20: 0.2 mm.

Comments: A comparison of the holotype of *P. chinensis* with *P. insignis* from various regions revealed no differences suggesting that it should represent a distinct species. Consequently, *P. chinensis* is here placed in the synonymy of *P. insignis*. For illustrations of the aedeagi of a male from Japan and of the holotype of *P. chinensis*, see ASSING (2001, figs. 6-7) and PACE (1999, figs. 2-3), respectively. The type locality of *P. chinensis* is situated within the known range of *P. insignis*.

The forebody, elytra, ligula, and antenna of this species are illustrated in Figures 1-4 and 11.

Additional material examined:

China: 1♂, Jiangxi prov., Wuyi Shan Nat. Res., Huangganshan, 1800-2050 m, 5.VI.2001, leg. Hlaváč & Cooter (cAss).

Distribution: In China, *Porocallus insignis* was previously known from only two localities, one in Shaanxi (Qin Ling Shan) and one in Sichuan (Qingcheng Shan) (ASSING 2001). It is now known also from two localities in eastern China (Map 1). The specimen from Songshan was collected from moss and litter on the bank of a stream (Guillaume de Rougemont, Londinières, pers. comm. 2003).

3.2. *Porocallus tianmuensis* (Pace, 1999) comb. n.

(Figs. 9-10, 21, Map 1)

Ischyradelia tianmuensis Pace, 1999 (PACE 1999: 108 ff).

Type examined: Holotype ♂: China: Zhejiang Prov., Lin'an County, 1000 m, W. Tianmu Shan N. R. 18.V.1996, J. Cooter / Holotypus *Ischyradelia tianmuensis* m., det. R. Pace 1996 / *Ischyradelia tianmuensis* gen. n. sp. n. det. R. Pace 1996 / *Porocallus tianmuensis* (Pace) det. V. Assing 2003 (MHNG).

Diagnosis: The species is somewhat similar to *P. insignis*, but readily distinguished by the following characters:

Antenna shorter; antennomeres III - X of similar length and approximately as wide as long (Fig. 21). Head, pronotum, and elytra with relatively long, dense, erect pubescence; this pubescence visible especially at lateral margins of pronotum and elytra (Fig. 9). Elytra with very coarse and somewhat granulose puncturation (Fig. 9). Abdomen with very long and dense setae both on dorsal, lateral, and ventral surfaces; tergite VII with relatively coarse puncturation (Fig. 10). Aedeagus with weakly pronounced crista apicalis and with apex of ventral process of characteristic shape especially in lateral view (see PACE 1999, figs. 8-9).

Distribution: *Porocallus tianmuensis* is known only from the type locality in Zhejiang province, eastern China (Map 1).

3.3. *Porocallus hlavaci* sp. n.

(Figs. 5-6, 12-16, Map 1)

Type material: Holotype ♂: China: Fujian prov., Wuyi Shan Nat. Res., Sangan env. (900m), 30.v.-12.vi.2001, Hlaváč & Cooter lgt. / Holotypus ♂ *Porocallus hlavaci* sp. n. det. V. Assing 2003 (cAss).

Description: 5.3 mm. Forebody as in Fig. 5. Head and pronotum blackish; elytra castaneous with the sides weakly infuscated and the scutellum blackish; abdomen blackish brown with the posterior margins of the segments narrowly lighter; legs castaneous; antennae dark brown.

Head about 1.15 times as wide as long (length measured from anterior margin of clypeus); eyes large and prominent; puncturation dense, coarse, and granulose; pubescence short and depressed, barely noticeable (Fig. 5). Antennae relatively short and massive; antennomere II short; IV - VI weakly transverse; X weakly oblong, and XI almost as long as the combined length of IX + X (Fig. 12).

Pronotum 1.22 times as wide as long and 1.25 times as wide as head; puncturation similar to that of head; pu-

bescence depressed and short, but slightly longer than that of head (Fig. 5).

Elytra at suture almost as long as pronotum (Fig. 5); puncturation ill-defined, irregular and confluent everywhere (Fig. 6). Hind wings fully developed. Legs relatively short; metatibia of holotype 0.98 mm; metatarsus very short, only slightly more than half the length of metatibia; metatarsomere I longer than the combined length of II - IV, but shorter than the combined length of II - V.

Abdomen without distinct microsculpture and, especially anteriorly, not very sparse fine puncturation; posterior margin of tergite VII with palisade fringe.

♂: posterior margin of tergite VIII weakly convex (Fig. 15), that of sternite VIII obtusely pointed (Fig. 16); median lobe of aedeagus as in Figs. 13 - 14.

♀: unknown.

Etymology: I dedicate this species to Peter Hlaváč (Košice), who, together with Jon Cooter, discovered it and to whom I am grateful for the generous gift of the holotype.

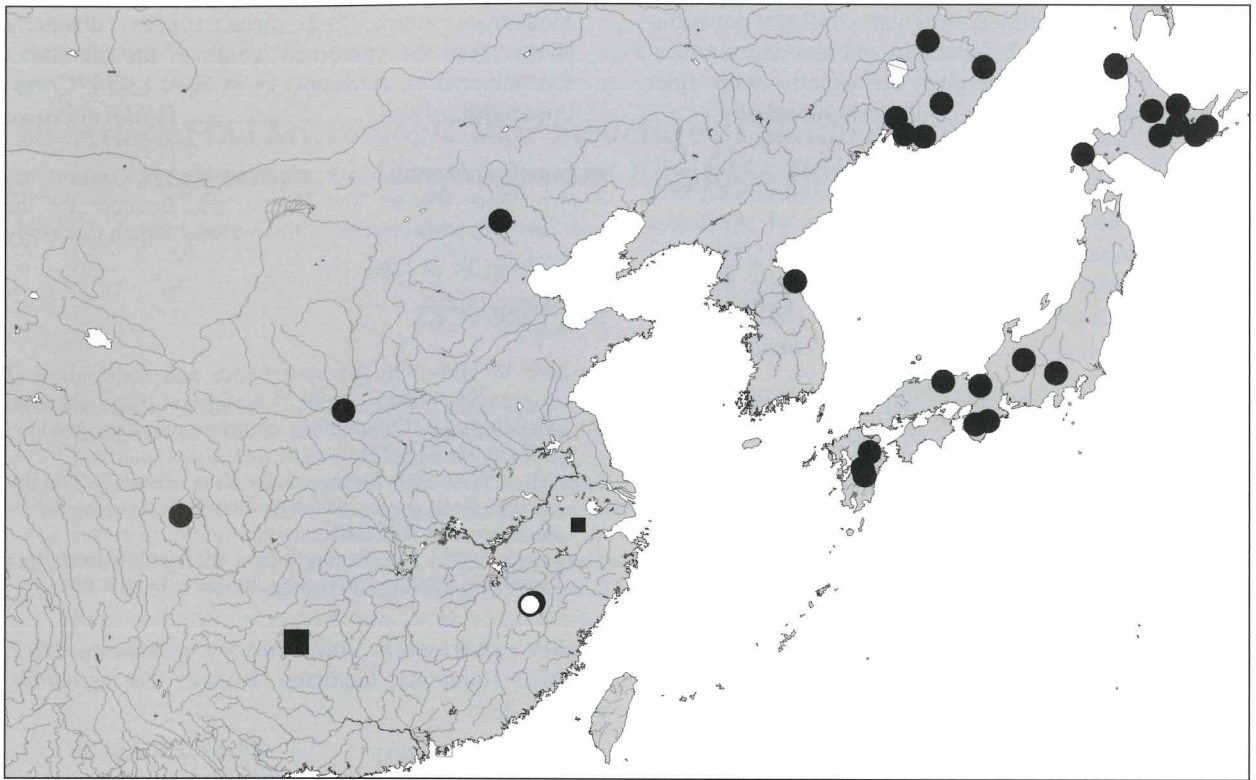
Comparative notes: From *P. insignis*, which, too, was found in the Wuyi Shan Nature Reserve, *P. hlavaci* is readily distinguished especially by the shorter and more massive antenna, the slightly more finely punctate and completely matt appearance of the head and pronotum, the irregular, confluent, and ill-defined puncturation, the matt elytra, the shorter metatibia and metatarsus, the more numerous and longer setae at the sides of the abdomen, and by the morphology of the aedeagus, especially the different shape of the apex of the ventral process in lateral view. From *P. tianmuensis*, it is separated by the much more massive antenna with slightly oblong antennomeres X, the matter appearance of the forebody, the completely different puncturation of the elytra, the shorter metatibia and metatarsus, and by the morphology of the median lobe of the aedeagus. For distinction from the similar *P. ligo* see the following section.

Distribution: The new species is currently known only from one locality in the Wuyi Shan, Fujian Sheng, in southeastern China (Map 1).

3.4. *Porocallus ligo* sp. n. (Figs. 7 - 8, 17 - 20, Map 1)

Type material: Holotype ♀: China: Guizhou, Leishan Co., SE Kaili, NE Leishan, Leigong Shan, E-slope, 26°23.39'N 108°13.33'E / 2.5 km E of pass, 19.6.2001, ca. 1800 m, leg. Schillhammer (14) / Holotypus ♀ *Porocallus ligo* sp. n. det. V. Assing 2003 (NHMW).

Description: 6.6 mm. Facies as in Fig. 7. Coloration as in *P. hlavaci*, but antennae reddish brown.



Map 1. Known distribution of the genus *Porocallus* Sharp: *P. insignis* Sharp (filled circles), *P. hlavaci* sp. n. (open circle), *P. ligo* sp. n. (large square), and *P. tianmuensis* (Pace) (small square).

Head about 1.12 times as wide as long (length measured from anterior margin of clypeus); eyes large and prominent; puncturation dense, coarse, and granulose; pubescence short and depressed, barely noticeable. Antennae relatively long and slender; antennomeres IV-X all clearly oblong; XI shorter than the combined length of IX+X (Fig. 17).

Pronotum about 1.25 times as wide as long and 1.25 times as wide as head (Fig. 7); puncturation similar to that of head; pubescence depressed and short, but longer than that of head.

Elytra at suture almost as long as pronotum; puncturation ill-defined, irregular and confluent everywhere (Fig. 8). Hind wings fully developed. Legs slender; metatibia of holotype 1.18 mm; metatarsus relatively long and slender; metatarsomere I almost as long as the combined length of II - V.

Abdomen shining; posterior margin of tergite VII with palisade fringe.

♂: unknown.

♀: posterior margins of tergite and sternite VIII weakly convex (Figs. 18 - 19); spermatheca with slender capsule (Fig. 20).

Etymology: The name (Lat.) is a noun in apposition and refers to the hoe-like shape of the spermatheca.

Comparative notes: This species is readily distinguished from all its congeners by the slender antennae and by the shape of the spermatheca, from *P. insignis* and *P. tianmuensis* also by the completely matt forebody and by the irregular confluent puncturation of the elytra.

Distribution: *Porocallus ligo* is known from only one locality, the Leigong Shan in Guizhou Sheng, southern China (Map 1), where the holotype was found at an altitude of 1800 m. Its ovaries contained two mature eggs.

4. KEY TO THE SPECIES OF *POROCALLUS*

1. Antenna short and not conspicuously massive, antennomere X about as wide as long (Fig. 21). Elytra with very coarse and dense puncturation (Fig. 9). Forebody with conspicuously dense and (sub-)erect pubescence. Abdominal tergite VII with relatively coarse puncturation (Fig. 10). Aedeagus and spermatheca as figured by PACE (1999: 110). China: Zhejiang (Map 1).....*P. tianmuensis* (Pace)
- Antennae longer and/or conspicuously massive; antennomere X longer than wide. Elytra either with well-defined finer puncturation with shining intersti-

- ces, or with ill-defined, irregular, confluent puncturation. Forebody with depressed and less dense pubescence. Abdominal tergite VII usually with finer puncturation. Aedeagus of different morphology..... 2
2. Elytra with well-defined puncturation and with shining interstices (Fig. 4); head and pronotum with very weak shine (Fig. 3). Antenna as in Fig. 11. Aedeagus and spermatheca as figured by ASSING (2001, fig. 17). Widespread species known from Japan, the Russian Far East, North Korea, and China (Map 1). *P. insignis* Sharp
 - Elytra with ill-defined confluent puncturation; head and pronotum completely matt. Antenna either distinctly shorter and more massive, or longer and more slender. Species known only from southern China... 3
 3. Antennae long and slender, antennomeres IV-X all longer than wide (Fig. 17). Elytra with very subdued shine and with coarser puncturation (Fig. 8). Metatibia and metatarsus long and slender; first metatarsomere almost as long as the combined length of the remaining four tarsomeres. Spermatheca as in Fig. 20. China: Gouizhou (Map 1). *P. ligo* sp. n.
 - Antennae short and massive, antennomeres IV-X as wide as long or weakly transverse (Fig. 12). Elytra without shine and with finer puncturation (Fig. 6).

Metatarsus short; first metatarsomere distinctly shorter than the combined length of the remaining four tarsomeres. Aedeagus as in Figs. 13-14. China: Fujian (Map 1)..... *P. hlavaci* sp. n.

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