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A review of the Chinese species of *Pseudopodabrus* (Coleoptera: Cantharidae)

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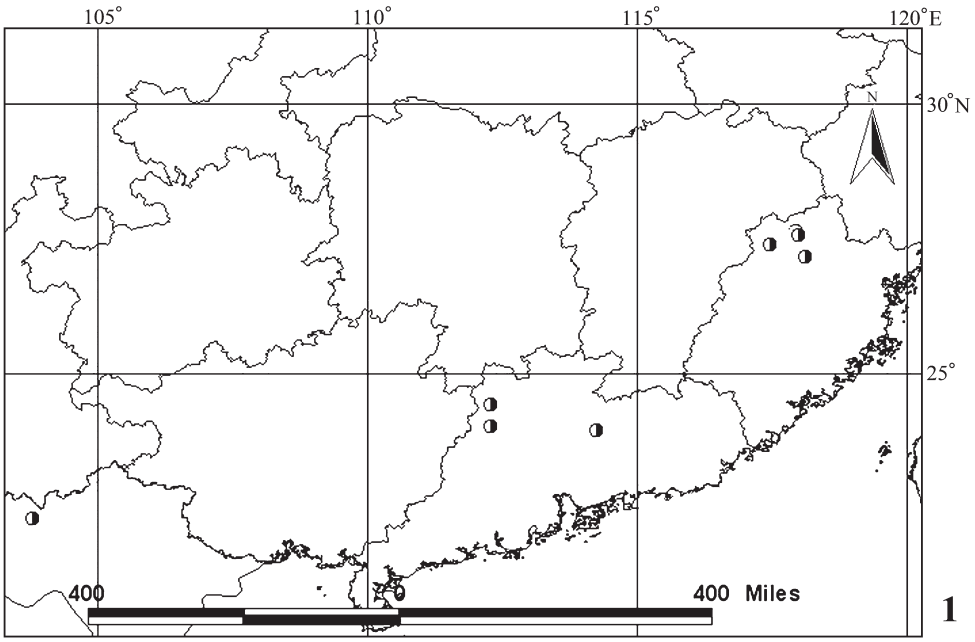
Abstract. A new species of *Pseudopodabrus* Pic, 1906, *P. foveatus* sp. nov. (China: Yunnan), is described and illustrated. Another five species of this genus are recorded from China for the first time: *P. brancuccii* Wittmer, 1983 (Yunnan), *P. impressiceps* Pic, 1906 (Fujian, Guangdong), *P. kabakovi* Wittmer, 1983 (Yunnan), *P. malickyi* Wittmer, 1995 (Yunnan) and *P. sulcatus* Wittmer, 1983 (Yunnan). *Pseudopodabrus malickyi* is also recorded from Laos for the first time. *Pseudopodabrus tuberculatus* Wittmer, 1983 is excluded from the Chinese fauna. Two poorly known species, *P. impressiceps* and *P. atriceps* (Pic, 1922), are redescribed. Aedeagi of the redescribed and newly described species are illustrated, male heads of the redescribed and newly recorded species are photographed, all Chinese species are diagnosed and their distributions are summarized. Updated distribution maps are provided for all known species of *Pseudopodabrus*.

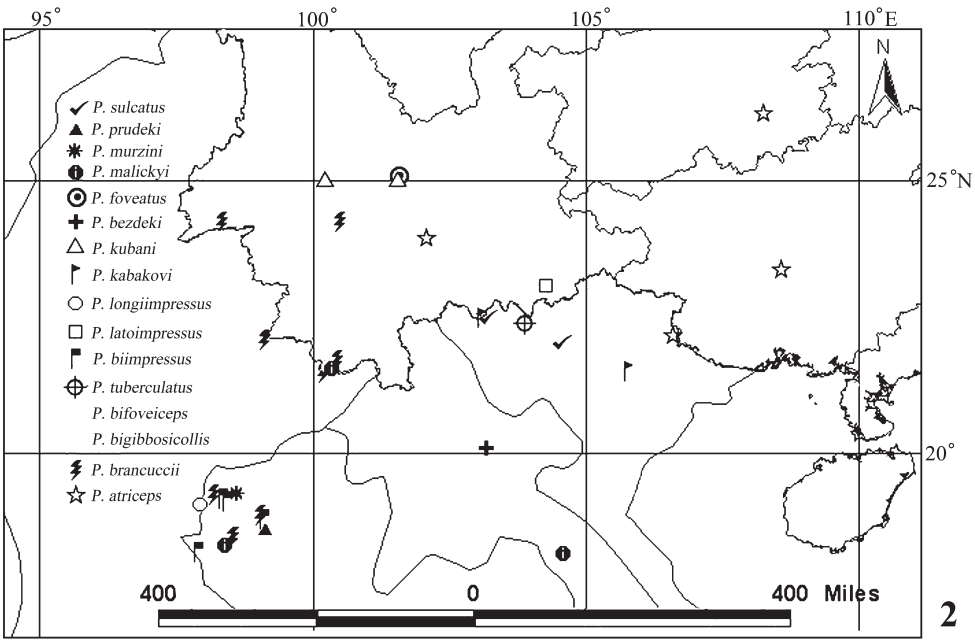
Key words. Coleoptera, Cantharidae, *Pseudopodabrus*, taxonomy, new species, new records, China, Laos, Thailand, Vietnam, Oriental Region

Introduction

The genus *Pseudopodabrus* Pic, 1906 was proposed by Pic (1906) for *P. impressiceps* Pic, 1906 as the type species by original designation. Subsequently, additional species were described and the taxonomy of the genus was clarified by Pic (1922, 1923, 1925, 1929), Wittmer (1983, 1989, 1995), Švihla (2004) and Yang et al. (2009). Until now, the genus contained 16 species inhabiting the Oriental Region.

Recently, we had a chance to visit the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia and examine the types of *Pseudopodabrus* species described





Figs. 1–2. Distribution of *Pseudopodabrus* Pic, 1906. 1 − *P. impressiceps* Pic, 1906; 2 – remaining species of *Pseudopodabrus*.

by Wittmer (1983) and deposited there. As a result, we discovered that the specimens from the Chinese province of Yunnan identified as *P. tuberculatus* Wittmer, 1983 in our last study (Yang et al. 2009) actually belong to an undescribed species. *Pseudopodabrus tuberculatus* needs to therefore be excluded from the Chinese fauna, and the new species *P. foveatus* sp. nov. is described here. Additional five species are also recorded from China for the first time based on the material cited below and examined by us. The number of Chinese species of *Pseudopodabrus* therefore increases to 9 and the distribution of the species seems to be broader than suggested previously by Kazantsev & Brancucci (2007). The genus *Pseudopodabrus* is shown to contain 17 species in total with a distribution restricted to the Indo-Chinese subregion of the Oriental Region (Figs. 1–2).

Material and methods

The aedeagi were dissected under a stereoscopic microscope, cleared in 10% KOH solution for several minutes, then placed in a droplet of glycerol and examined under a compound light microscope. Photographs of the type specimens were taken with a Leica DFC320 microscope, multiple layers were stacked using CombineZM software. Line drawings were made with the aid of camera lucida attached to a Leica MZ12.5 stereomicroscope. Distribution maps were prepared using the geographic information system software ARCVIEW 3.2, based on the authors' database of the specimens examined for this study and those mentioned in the literature. Body length is measured from the anterior margin of the clypeus to the elytral apex, body width is measured across the humeral part of elytra.

Complete label data are listed for type specimens, using square brackets "[ ]" for our remarks and comments, [p] indicating that the following data are printed and [h] that they are handwritten. Quotation marks are used to separate data from different labels and a backslash "\" to separate data from different lines of the same label.

The material is preserved in the following collections:

AKCE	A. Kopetz private collection, Erfurt-Kerspleben, Germany;
AWCW	A. Weigel private collection, Wernburg, Germany.
HBUM	Hebei University Museum, Baoding, China;
IZAS	Institute of Zoology, Chinese Academy of Sciences, Beijing, China;
MNHN	Muséum national d'Histoire naturelle, Paris, France;
NHMB	Naturhistorisches Museum Basel, Switzerland;
SYSU	Sun Yat-Sen University, Guangzhou, China;
ZIN	Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia.

Taxonomy

Pseudopodabrus atriceps (Pic, 1922)

(Figs. 3, 9–11)

Podabrus atriceps Pic, 1922: 4.

Pseudopodabrus atriceps: Wittmer (1983: 110, 113); Kazantsev & Brancucci (2007: 261); Yang et al. (2009: 42).

Type material examined. Lectotype: 1 ♂ (MNHN): [h]"Yunnan \ Fou", [h]"Podabrus \ atriceps Pic", [h]"Pseudopodabrus \ atriceps \ (Pic) \ det. W. Wittmer", [p] "LECTOTYPUS". Paralectotypes: 3 ♀♀ (MNHN): [h]"Yunnan \ Fou", [p] "PARALECTOTYPUS".

Additional material examined. CHINA: Yunnan: 1♂ 1♀ (MNHN): Yunnan Fou [Kunming], without date and collector. **Guizhou:** 37 spec. (NHMB): Leigongshan, Xijiang, 1200−1900m, 29.v−2.vi.1997, leg. Bolm. **Guangxi:** 1 ♂ (NHMB): Longzhou, Daqingshan, 600−700m, 26.iv.1963, leg. Chun-Guang Wang (NHMB); 4 ♂♂ 3 ♀♀ (HBUM): Wuming, Damingshan, 1230−1423m, 20.v.2011, leg. Hao-Yu Liu; 9 ♂♂ 7 ♀♀ (HBUM): same locality, 600−900m, 25.v.2011, leg. Hao-Yu Liu; 2 ♂♂ 3 ♀♀ (HBUM): same locality, 1100m, 27.v.2011, leg. Hao-Yu Liu; 2 ♂♂ 2 ♀♀ (IZAS): same locality, 1230m, 21.v.2011, leg. Xiao-Yan Hu; 1♂ 1♀ (IZAS): same locality, 1100m, 27.v.2011, leg. Hong-Xia Xu.

Redescription. ***Male.*** Body black, prothorax and procoxae, trochanters and femora orange, apices of profemora slightly darkened.

Head (Fig. 3) subquadrate, with a large and shallow inverse-trapezoid fovea on posterior part and a pair of conjoint depressions in middle of vertex, the depressions having distinct anterior margins and a longitudinal ridge between them, inner surface mat, remaining parts of head shiny, finely and sparsely punctate; eyes strongly protruding, head width across eyes distinctly wider than anterior margin of pronotum; terminal maxillary palpomere elongate, widest near apex and arcuate at apical third of inner margin; antennae filiform, extending to apical one-third length of elytra when reclined, antennomere II about twice as long as wide, antennomere III about one-third longer than II, antennomere VII longest, antennomere XI slightly longer than X and acute at apex.

Pronotum subquadrate, distinctly longer than wide, widest near base, anterior margin arcuate, lateral margins diverging posteriad and slightly sinuate, posterior margin nearly straight, anterior angles rounded, posterior angles nearly rectangular, disc distinctly convex at posterolateral parts, surface finely and sparsely punctate.

Elytra about 4 times longer than wide, 5 times longer than pronotum, elytra in humeral part distinctly wider than posterior margin of pronotum; lateral margins of elytra nearly parallel-sided, surface slightly more coarsely and densely punctate than on pronotum.

Legs with all tarsal claws bifid, each with lower projection as long as upper one.

Aedeagus (Figs. 9−11): conjoint dorsal plate of parameres distinctly narrowed apically, slightly shorter than ventral process of each paramere, with a straight apical margin, emargination between conjoint dorsal plate and ventral process wide, ventral process of each paramere distinctly narrowed basally in dorsal view.

Female. Similar to male, but head without any fovea, slightly depressed on posterior part of vertex, eyes slightly protruding, antennae shorter and extending to middle of elytra when reclined, antennomeres II about 3 times as long as wide, procoxae and trochanters dark brown or black, profemora entirely black, all tarsal claws bifid, with lower projections slightly shorter than upper ones.

Body length: 6.0−7.5 mm; width: 1.2−1.6 mm.

Differential diagnosis. This species differs from other species of *Pseudopodabrus* in having the male head with a shallow inverse-trapezoid fovea on the posterior part (Fig. 3).

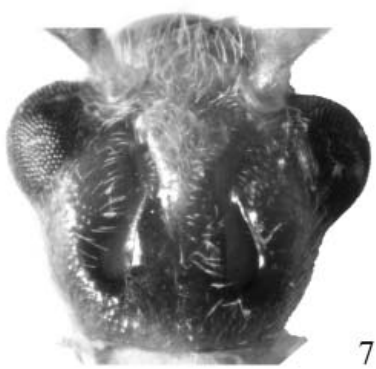
Distribution. China (Guangxi, Guizhou, Yunnan). Newly recorded for Guangxi and Guizhou provinces.

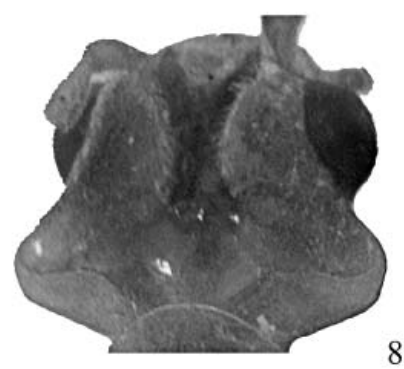
Pseudopodabrus brancuccii Wittmer, 1983

(Fig. 4)

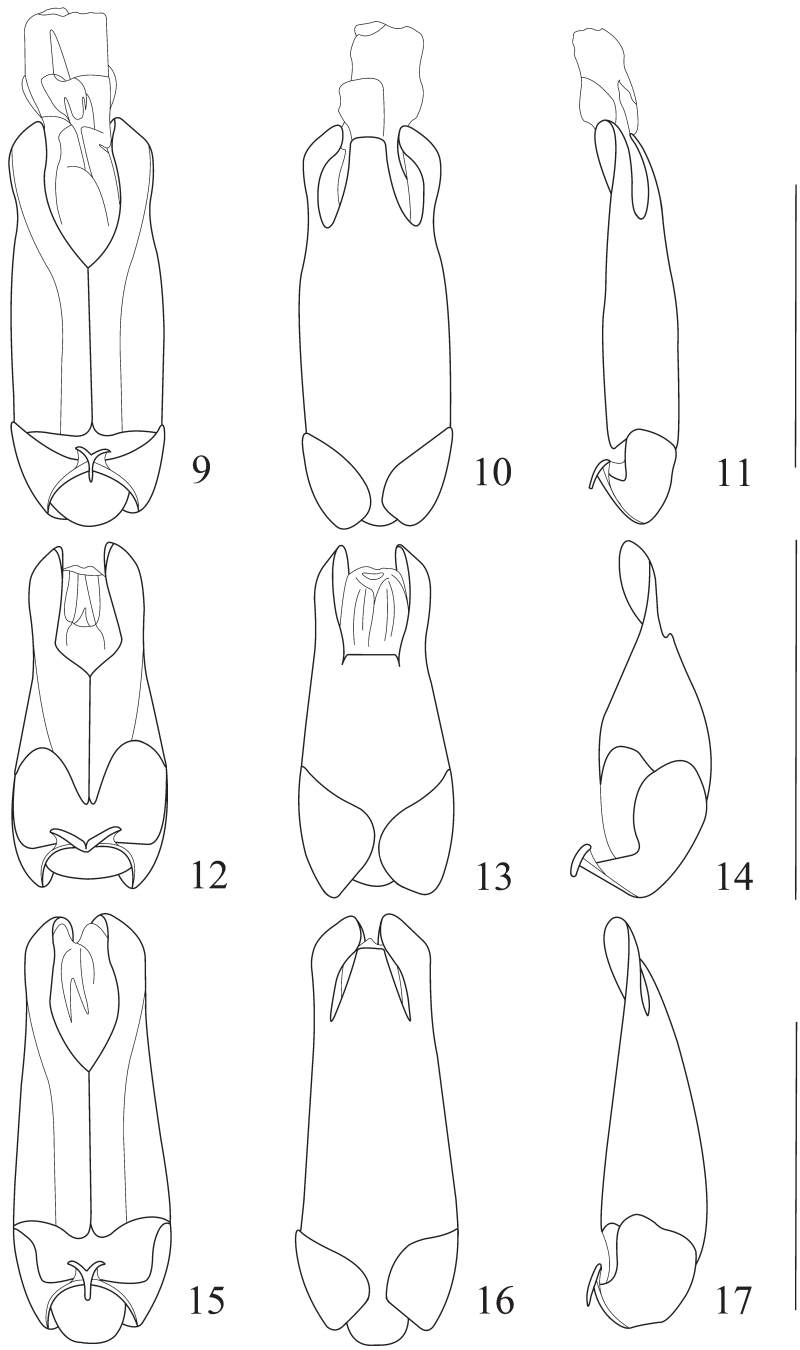
Pseudopodabrus brancuccii Wittmer, 1983: 110, 114, Fig. 5.
Pseudopodabrus brancuccii: Yang et al. (2009: 43).

Type material examined. Holotype: 1 ♂ (NHMB): [p]"Mt. Doi Pui, 1400− \ 1500m, Chiang Mai, \ N. THAILAND \ 2-V-1982 \ T. Shimomura leg.", [h]"Pseudopodabrus \ brancuccii \ Wittm. \ det. W. Wittmer", [h]"385",





Figs. 3–8. Male heads of *Pseudopodabrus*, dorsal view. 3 − *P. atriceps* (Pic, 1922); 4 − *P. brancuccii* Wittmer, 1983; 5 − *P. impressiceps* Pic, 1906; 6 − *P. kabakovi* Wittmer, 1983; 7 − *P. malickyi* Wittmer, 1995; 8 − *P. sulcatus* Wittmer, 1983.



Figs. 9−17. Aedeagi of *Pseudopodabrus*. 9−11 − *P. atriceps* (Pic, 1922); 12−14 − *P. foveatus* sp. nov.; 15−17 − *P. impressiceps* Pic, 1906. 9, 12, 15 − ventral view; 10, 13, 16 − dorsal view; 11, 14, 17 − lateral view. Scale bars = 1 mm.

[p]"HOLOTYPUS", [p]"CANTHARIDAE \ CANTH00001304". Paratypes: 1 ♂ 1 ♀ (MNHN): [p]"Mt. Doi Pui, 1400− \ 1500m, Chiang Mai, \ N. THAILAND \ 6-V-1982 \ T. Shimomura leg.", [h]"Pseudopodabrus \ brancuccii \ Wittm. \ det. W. Wittmer", [p]"PARATYPUS".

Additional material examined. THAILAND: Chiang Mai: 26 spec. (NHMB): Chiang Mai, Mt. Doi Pui, 1400−1500m, 28.iv−13.v.1982, leg. T. Shimomura; 14 spec. (NHMB): Chiang Mai distr., Doi-Pui vill., 1600m, 18°49'N, 98°54'E, 2.−6.v.1996, leg. J. Horák. **Mae Hong Son:** 1 ♂ (NHMB): Ban Huai Po, 1600−2000m, 17.−23.v.1991, leg. J. Horák; 12 spec. (NHMB): Doipui mt., 1600m, 18°49′N, 98°54′E, 2.−6.v.1996, leg. Vit Kubáň; 1 ♂, 1 ♀ (NHMB): Soppong, 1550 m, 19°27′N, 98°20′E, 10.−13.v.1993, leg. Vit Kubáň. **CHINA: Yunnan:** 1 ♂ (IZAS): Xishuangbanna, Meng'a, 1050−1080m, 11.v.1958, leg. Shu-Yong Wang; 1 ♂ (IZAS): Xishuangbanna, Menghun, 1200−1400m, 22.v.1958, leg. Yi-Ran Zhang; 1 ♂ (IZAS): Luxi, 1350m, 10.v.1955, leg. Bing-Rong Ou; 1 ♂ (IZAS): Jingdong, N. Mountain, 31.v.1956, leg. B. Popov; 2 ♂♂, 2 ♀♀ (AKCE, AWCW): Xishuangbanna, 45km SW Jinghong, vic. Bangzhang vill., 16-1700m, 21°44.37′N, 100°27.02′E, 3.−5.v.2009, leg. A. Weigel.

Differential diagnosis. This species can easily be distinguished from other members of the genus by the head bearing a tube-shaped fovea in the center of the vertex in males (Fig. 4).
Distribution. China: Yunnan (new record), Thailand.

Pseudopodabrus foveatus Y. Yang & X. Yang, sp. nov.

(Figs. 12−14)

Pseudopodabrus kubani: Wittmer (1995: 124, ex parte).
Pseudopodabrus tuberculatus: Yang et al. (2009: 45, Fig. 2; misidentification).

Type locality. China, Yunnan, Yipinglang, 1800−2000 m a.s.l., 25°04′N, 101°55′E.

Type material. Holotype: ♂ (NHMB): [p]"YUNNAN, 1800−2000m \ 25.04N, 101.55E \ YIPINGLANG,17.−20.6. \ Vit Kubáň leg., 1994", [p]"CANTHARIDAE \ CANTH00001098". Paratypes: 1 ♂ (NHMB): same data, [p]"CANTHARIDAE \ CANTH00000828"; 1 ♀ (NHMB): same data, [p]"CANTHARIDAE \ CANTH00002493"; 1 ♀ (NHMB): same data, [p]"CANTHARIDAE \ CANTH00000405"; 1 ♂ (NHMB): [h]"Yunnan \ 17−20.vi", [p]"CANTHARIDAE \ CANTH00002390".

Description. ***Male.*** Head orange, apices of mandibles dark brown, antennae black, antennomeres I and II orange, prothorax and scutellum orange, elytra black, legs orange, metatibiae darkened at apices, tarsi black, mesoventrite orange, metaventrite and abdomen black, last abdominal ventrite pale yellow.

Head rounded, with a pair of shallow oblong foveae behind antennal sockets, foveae approach each other posteriad but still well separated, foveal margins indistinctly delimited, posterior margins nearly in middle of vertex, inner surfaces of foveae smooth, remaining parts of head finely and densely punctate; eyes slightly protruding, head across eyes slightly wider than anterior margin of pronotum; terminal maxillary palpomere elongate, widest at midlength and arcuate at apical half of inner margin; antennae filiform, extending to midlength of elytra when reclined, antennomere II slightly thickened distally, about twice as long as wide at apex, antennomere III nearly as long as II, antennomere VII longest, antennomere XI slightly longer than X and acute at apex.

Pronotum subquadrate, about as long as wide, widest near base, anterior margin arcuate, lateral margins diverging posteriad and slightly sinuate, posterior margin nearly straight, anterior angles rounded, posterior angles nearly rectangular, disc slightly convex at posterolateral parts, surface finely and slightly more sparsely punctate than head.

Elytra about 4 times longer than wide, 4 times longer than pronotum, elytra in humeral part slightly wider than posterior margin of pronotum, lateral margins of elytra nearly parallel-sided, surface slightly more coarsely and more densely punctate than on pronotum.

Legs with all tarsal claws bifid, each with lower projection as long as upper one.

Aedeagus (Figs. 12−14): conjoint dorsal plate of parameres reduced and distinctly shorter than ventral process of each paramere, with a straight apical margin, emargination between conjoint dorsal plate and ventral process very shallow, ventral process of each paramere slightly turned inwards at apices in ventral view and slightly widened basally in dorsal view.

Female. Similar to male, but head without foveae on vertex, antennae shorter and extending to basal one-third length of elytra, antennomere II slightly longer than III, antennomere IV longest, pronotum wider than long, elytra with lateral margins slightly diverging posteriad, tarsal claws bifid with lower projections slightly shorter than upper ones.

Variation in type series. In some specimens, antennomere III is orange, scutellum darkened, elytra brown basally, meso- and metatibiae darkened at apices. Body length: 6.0−6.5 mm; width: 1.2−1.5 mm.

Differential diagnosis. This species resembles *P. tuberculatus* Wittmer, 1983 in body coloration (with the head and prothorax orange and the elytra black), but differs from it by having the head with a pair of shallow and oblong foveae which approach each other posteriad (in *P. tuberculatus*, the head bears a pair of deep and rounded foveae which do not approach each other posteriad).

Etymology. The species name is derived from the Latin *fovea* (a pit), referring to a pair of foveae on the male head of this species.

Distribution. China: Yunnan. Known only from the type locality.

Remarks. The above type specimens were designated as the paratypes of *P. kubani* by Wittmer (1995), but shown not to be conspecific with the latter species by Yang et al. (2009) who misidentified them as *P. tuberculatus* Wittmer, 1983. In this study, we have examined the holotype of *P. tuberculatus* deposited in ZIN (label data: [p] "ВЬЕТНАМ, горы W [= Vietnam, W. Mts.] \ ХА-ТИНЬ, КИМ-КУОНГ [= Cha-tin, Kum-kuong] \ 31.3.1963г, Кабаков [= O. N. Kabakov]", [h] "Pseudopodabrus \ tuberculatus \ Wittm. \ det. W. Wittmer", [h] "391", [p] "HOLOTYPUS"), and our previous misidentification could be clarified here. The Chinese specimens are therefore described here as a new species *P. foveatus* sp. nov. For this reason, *P. tuberculatus* has to be excluded from Chinese fauna at the moment.

***Pseudopodabrus impressiceps* Pic, 1906**

(Figs. 5, 15−17)

Pseudopodabrus impressiceps Pic, 1906: 81.
Pseudopodabrus impressiceps: Delkeskamp (1977: 33); Wittmer (1983: 110, 113); Yang et al. (2009: 42).

Type material examined. Holotype: 1 ♂ (MNHN): [p]"Tonkin \ Montes Mauson \ April, Mai 2−3000' \ H. Fruhsturfer", [h]"Pseudopodabrus \ impressiceps \ Pic", [h]"Pseudopodabrus \ impressiceps \ Pic \ det. W. Wittmer", [p]"53", [h]"type", [p]"TYPE".

Additional material examined. CHINA: Fujian: 1 ♂ 3 ♀♀ (IZAS): Chongan, Xingcun, Sangang, 740−900m, 17.v.1960, leg. Yi-Ran Zhang; 1 ♀ (IZAS): same locality, 740−900m, 17.v.1960, leg. Cheng-Lin Ma; 1 ♂ (IZAS): same locality, 720m, 17.v.1960, leg. Sheng-Qiao Jiang; 1 ♂ (IZAS): same locality, 720−800m, 20.v.1960, leg. Fu-Ji Pu; 1 ♀ (IZAS): same locality, 720−800m, 20.v.1960, leg. Sheng-Qiao Jiang; 1 ♂ (IZAS): same locality, 720m, 21.v.1960, leg. Sheng-Qiao Jiang; 1 ♀ (IZAS): same locality, 720m, 21.v.1960, leg. Fu-Ji Pu; 1 ♂ (IZAS): same locality, 740m, 14.v.1960, leg. Yi-Ran Zhang; 1 ♂ (IZAS): same locality, 740m, 15.v.1960, leg. Yi-Ran Zhang; 1 ♀ (IZAS): same locality, 740−780m, 16.v.1960, leg. Cheng-Lin Ma; 1 ♂ (IZAS): same locality, 740m, 19.v.1960, leg.

Yong Zuo; 1 ♂ (IZAS): same locality, 750m, 26.v.1960, leg. Sheng-Qiao Jiang; 2 ♀♀ (IZAS): Chongan, Xingcun, Guadun, 950−1210m, 22.v.1960, leg. Cheng-Lin Ma; 1 ♂ 1 ♀ (IZAS): same locality, 950−1210m, 22.v.1960, leg. Yong Zuo; 1 ♂ 1 ♀ (IZAS): same locality, 950−1210m, 11.v.1960, leg. Cheng-Lin Ma; 1 ♀ (IZAS): Chongan, Xingcun, Tongmuguan, 900−1150m, 19.v.1960, leg. Cheng-Lin Ma; 1 ♀ (IZAS): Chongan, Xingcun, Longdu, 580−650m, 21.v.1960, leg. Cheng-Lin Ma; 1 ♀ (IZAS): Jianyang, Huangkeng, Aotou, 800−1050m, 26.iv.1960, leg. Yi-Ran Zhang; 1 ♀ (IZAS): same locality, 720−950m, 30.iv.1960, leg. Cheng-Lin Ma; 1 ♂ (IZAS): Jianyang, Huangkeng, Dazhulan, 900−1000m, 28.v.1960, leg. Sheng-Qiao Jiang; 1 ♂ (IZAS): same locality, 900−1170m, 28.v.1960, leg. Yong Zuo; 1 ♀ (IZAS): same locality, 900−1170m, 2.v.1960, leg. Cheng-Lin Ma; 20 spec. (NHMB): Fukien, Kuatun [Fujian, Guadun], 2.−30.v.1946, Tschung Sen.; 26 spec. (NHMB): same locality, 4.v.−8.vi.1946. **Guangdong:** 1 ♂ (SYSU): Kau-Lin San [Jiulian Shan], 700−900m, Lien-Ping Distr. [Lianping], 21.iv.1940, J.L. Gressitt & P.K. To; 1 ♂ (SYSU): same data, 19.iv.1940; 1 ♀ (SYSU): same data, 17.iv.1940; 2 ♂♂ (SYSU): same data, 20.iv.1940; 1 ♂ (SYSU): Lianzhou, Yaoan, Tianxin Forestry Centre, 15.−19.iii.2003, leg. Bing-Lan Zhang.

Redescription. ***Male.*** Body black, prothorax and procoxae, trochanters and femora orange.

Head (Fig. 5) subquadrate, with a large and deep inverse-trapezoid fovea on posterior part of vertex, before it each side with a small and deep subrounded fovea, also a narrow and deep groove around posterior margin of eye, a pair of shallow but conjoint foveae in middle of vertex, with a longitudinal ridge between them, anterior margins sharply delimited, posterior margins indistinctly delimited, inner surfaces of all foveae smooth, remaining parts of head finely and sparsely punctate; eyes strongly protruding, head across eyes distinctly wider than anterior margin of pronotum; terminal maxillary palpomere elongate, widest near apex and arcuate at apical one-third length of inner margin; antennae filiform, extending to apical one-third length of elytra when reclined, antennomeres II about twice as long as wide, antennomere III about one-third longer than II, antennomere VII longest, antennomere XI slightly longer than X and acute at apex.

Pronotum subquadrate, distinctly longer than wide, widest near base, anterior margin arcuate, lateral margins diverging posteriad and slightly sinuate, posterior margin nearly straight, anterior angles rounded, posterior angles nearly rectangular, disc distinctly convex at posterolateral parts, surface finely and sparsely punctate.

Elytra about 4 times longer than wide, 5 times longer than pronotum, elytra in humeral part distinctly wider than posterior margin of pronotum, lateral margins of elytra nearly parallel, surface slightly more coarsely and densely punctate than on pronotum.

Legs with all tarsal claws bifid, each with lower projection as long as upper one.

Aedeagus (Figs. 15−17): conjoint dorsal plate of parameres narrowed apically, slightly shorter than ventral process of each paramere, with a straight apical margin, emargination between conjoint dorsal plate and ventral process narrow, ventral process of each paramere slightly narrowed basally in dorsal view.

Female. Similar to male, but head without any fovea or groove, slightly depressed on posterior part of vertex, surface of dorsum mat, eyes slightly protruding, antennae shorter, reaching midlength of elytra, antennomere II about 3 times longer than wide, profemora entirely black, tarsal claws bifid with lower projections slightly shorter than upper ones.

Body length: 6.0−8.0 mm; width: 1.2−1.6 mm.

Differential diagnosis. This species could be easily distinguished from all other *Pseudopodabrus* by the characteristic head having a single large and deep inverse-trapezoidal fovea posteriorly, two small and deep rounded foveae laterally and a pair of shallow but conjoint

foveae medially, as well as having a narrow and deep groove around posterior margin of eye in males (Fig. 5).
Distribution. China (new record): Fujian, Guangdong, Vietnam.

Pseudopodabrus kabakovi Wittmer, 1983

(Fig. 6)

Pseudopodabrus kabakovi Wittmer, 1983: 110, 112, Fig. 3.
Pseudopodabrus kabakovi: Yang et al. (2009: 42).

Type material examined. Holotype: 1 ♂ (ZIN): [p] "ВЬЕТНАМ, курорт [= Vietnam, health resort] \ ТАМ-ДАО [= Tam-Dao], 900m \ 1.7.1962г, Кабаков [= O. N. Kabakov]", [h] "Pseudopodabrus \ kabakovi \ Wittm. \ det. W. Wittmer", [h] "389", [p] "HOLOTYPUS".
Additional material examined. VIETNAM: Vinh Phu: 2 ♂♂ (NHMB): Tam Dao, 3.−11.vi.1985, leg. V. Švihla; 5 spec. (NHMB): same data, Strnad Jan; 3 ♂♂ (NHMB): Tam Dao, 2.−11.v.1985, leg. V. Kubáň. **CHINA: Yunnan:** 1 ♂ (IZAS): Jinping, Changpotou, 1000 m, 22.v.1956, leg. Ke-Ren Huang.

Differential diagnosis. This species could be distinguished from all other *Pseudopodabrus* by having the head with a pair of waterdrop-shaped foveae on the vertex in males (Fig. 6).
Distribution. China (new record): Yunnan; Vietnam.

Pseudopodabrus kubani Wittmer, 1995

Pseudopodabrus kubani Wittmer, 1995: 124, Figs. 19, 20.
Pseudopodabrus semicircularis Wittmer, 1995: 125, Figs. 21, 22. Synonymized by Yang et al. (2009: 44, Figs. 3, 4).

Type material examined. *Pseudopodabrus kubani*: Holotype: 1 ♂ (NHMB): [p] "YUNNAN, 2000m \ 25.03N,101.55E \ YIPINGLANG, 8−10/6. \ Vit Kubáň leg., 1993", [h] "Pseudopodabrus \ kubani \ Wittm. \ det. W. Wittmer", [h] "866", [p] "HOLOTYPUS", [p] "CANTHARIDAE \ CANTH00001401".

Pseudopodabrus semicircularis: Holotype: 1 ♂ (NHMB): [p] "YUNNAN, 1800-2000m \ 25.04N, 101.55E \ YIPINGLANG, 17-20.6. \ Vit Kubáň leg.,1994", [h] "P. \ semicircularis \ Wittm. \ det. W. Wittmer", [h] "932", [p] "HOLOTYPUS", [p] "CANTHARIDAE \ CANTH00000636".
Additional material examined. CHINA: Yunnan: 1 ♂ (NHMB): Weishan Mt., 1800−2500 m, 25°01′N, 100°21′E, 22.−25.vi.1992, leg. Vit Kubáň.

Differential diagnosis. This species could be distinguished from the remaining *Pseudopodabrus* by having the head with a pair of short and narrow grooves on the anterior part of the vertex which approach each other posteriad but are still separated, the region behind the grooves is distinctly convex at the center of the vertex in males (see Wittmer 1995: Figs. 19–20, and Yang et al. 2009: Fig. 3).
Distribution. China (Yunnan).

Pseudopodabrus latoimpressus Wittmer, 1995

Pseudopodabrus latoimpressus Wittmer, 1995: 127, Figs. 23, 24.
Pseudopodabrus latoimpressus: Kazantsev & Brancucci (2007: 261); Yang et al. (2009: 42).

Type material examined. Holotype, 1 ♂ (NHMB): [p] "YUNNAN, 1500−1600m \ 23.04N, 104.25E \ MAGUAN, 25−26.6.1994 \ Vit Kubáň leg.", [h] "latoimpressus", [h]"931", [p] "HOLOTYPUS", [p] "CANTHARIDAE \ CANTH00000339". Paratype: 1 ♂ (NHMB): same data, [p] "PARATYPUS", [p] "CANTHARIDAE \ CANTH00001837".

Differential diagnosis. This species can be distinguished from other *Pseudopodabrus* by having the head with a subquadrate fovea occupying nearly the whole vertex in males (see Wittmer 1995: Figs. 23, 24).
Distribution. China (Yunnan).

Pseudopodabrus malickyi Wittmer, 1995

(Fig. 7)

Pseudopodabrus malickyi Wittmer, 1995: 123, Figs. 17, 18.
Pseudopodabrus malickyi: Yang et al. (2009: 43).

Type material examined. Holotype: 1 ♂ (NHMB): [p] "Thailand, 3.−10.7.89 \ Doi Inthanon Lichtfalle \ Bang Khun Klang, 1200m \ 98°32'E, 18°32'N \ Chantaramongkol & Malicky", [h] "P. \ malickyi \ Wittm. \ det. W. Wittmer", [h] "758", [p] "HOLOTYPUS", [p] "CANTHARIDAE \ CANTH00001161".
Additional material examined. CHINA: Yunnan: 4 ♂♂ (IZAS): Menghai, 1200−1600m, 20.vi.1958, leg. Fu-Ji Pu. **LAOS: Khammouan:** 2 ♂♂ 1 ♀ (AKCE): Baan Nahin, 160m, 18°12.226′N 104°31.423′E, 5.iii.2009, leg. T. Ihle.

Differential diagnosis. This species can be easily distinguished from other *Pseudopodabrus* by having the head with a pair of unparallel grooves on the vertex in males, the grooves approach each other anteriorly but are separated posteriorly (Fig. 7).
Distribution. China (new record): Yunnan, Thailand, Laos (new record).

Pseudopodabrus sulcatus Wittmer, 1983

(Fig. 8)

Pseudopodabrus sulcatus Wittmer, 1983: 109, 110, Figs. 1, 2.
Pseudopodabrus sulcatus: Yang et al. (2009: 42).

Type material examined. Holotype: 1 ♂ (ZIN): [p] "ВЬЕТНАМ, ВЕРХ. Р \ НАМ-МА уДонг-пао [= Vietnam, Nam-ma, Dong Pao] \ 1100m \ 28.5.1963г, Кабаков [= 28.v.1963, Kabakov]", [h] "Pseudopodabrus \ sulcatus \ Wittm. \ det. W. Wittmer", [p] "HOLOTYPUS". Paratype: 1 ♂ (NHMB): same data as holotype, [p] "PARATYPUS", [p]" CANTHARIDAE\CANTH00001103".
Additional material examined. CHINA: Yunnan: 1 ♂ (NHMB): Jinping, Changbotou, 1200 m, 23.v.1956, leg. Ke-Ren Huang.

Differential diagnosis. This species can be easily distinguished from other *Pseudopodabrus* by having the head with a Y-shaped groove on the anterior portion of the vertex which distinctly widened and deeply concave behind eyes (Fig. 8), and the subtriangular pronotum in males.
Distribution. China (new record): Yunnan, Vietnam.

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