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# Contribution to knowledge of the tribe Gastrallini (Coleoptera: Bostrichoidea: Ptinidae) - III. New species of the genus *Gastrallus*, with review of Oriental species

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#### Taxonomy, new species, Coleoptera, Ptinidae, Anobiinae, Gastrallus, Oriental region

Abstract. Gastrallus Jacquelin du Val, 1862 is represented in Oriental region by 42 species, from these are 31 new species for science - G. abbreviatus sp. n., G. asgardi sp. n., G. assamensis sp. n., G. brunneus sp. n., G. chantaburensis sp. n., G. natalkae sp. n., G. natalkae sp. n., G. natalkae sp. n., G. nikolkae sp. n., G. pacholatkoi sp. n., G. parvus sp. n., G. prudeki sp. n., G. rolciki sp. n., G. rufus sp. n., G. sausai sp. n., G. siamensis sp. n., G. svihlai sp. n., G. svobodaorum sp. n., G. thailandicus sp. n., G. vulgaris sp. n. and G. whitei sp. n. Species G. immarginatus (P. W. J. Müller, 1821) is wrongly reported from Ceylon, according to my opinion it is mistake in identification.

#### INTRODUCTION

Basic global information about tribus Gastrallini White, 1982 (with key of all four genera) and Palaearctic and Afrotropical species of the genus *Gastrallus* Jacquelin du Val, 1860 have been given by Zahradník (2007, 2008). 24 species from Palaearctical region and 32 species from Oriental region had been known. Additional species are living in other regions of world, especially in Oriental region. I submitted global data about Oriental species in this paper with description of 31 new species. Occurrence of *G. immarginatus* (P. W. J. Müller, 1821) on Ceylon is probably mistake regarding to considerable uniformity of specimens in genus *Gastrallus*.

#### MATERIAL AND METHODS

There are 11 species described from Oriental region (three of them are known from Palaearctic region and one from Afrotropical region, too). I studied all the original descriptions (Español 1963, 1983; Fairmaire 1875; Lesne 1902; Pic 1914, 1929, 1936, 1937; Reitter 1913) and part of the species of this genus. I studied more than 200 specimens from genus *Gastrallus* coming from expeditions of collectors from Czech Republic and Slovakia.

Unfortunately I do not know where G. birmanicus Pic, 1937; G. testaceus Pic, 1936 and

*G. cucullatus* Lesne, 1902 are deposited. They have not been found in Pic's and Lesne's collection in Museum National d'Histoire Naturelle in Paris, so it was not possible to draw their aedeagi. But I have species from Ceylon, which corresponded to original description, so I assume that it is *G. cucullatus* Lesne, 1902 (other species of *Gastrallus* is not indicated from this island). I present drawing of aedeagus of *G. cucullatus* according to non-type material. There is possibility that it is not *G. cucullatus* but new species; for definitive answer it is necessary to find type of *G. cucullatus*.

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G. immarginatus-group

G. Immarginatus-group	
abbreviatus sp. n. (Figs. 1, 41)	Thailand
assamensis sp. n. (Figs. 2, 42)	India
tuberculatus Pic, 1914: 10 (Fig. 3)	*Laos, Vietnam; Palaearctic
	region (see Zahradník
	2007)
G. laevigatus-group	
abyssinicus Español, 1963: 196 (Fig. 4)	India, Afrotropical region
$\mathbf{r}$	(see Zahradník 2008)
asgardi sp. n. (Figs 5, 43)	Thailand
<i>birmanicus</i> Pic, 1937: 124	Burma
bremeri Español, 1983: 78 (Fig. 6)	Thailand
brunneus sp. n. (Figs 7, 44)	Thailand
chantaburensis sp. n. (Figs 8, 45)	Thailand
chiangmaiensis sp. n. (Figs 9, 46)	Thailand
cucullatus Lesne, 1902: 478 (Fig. 10)	Ceylon
haucki sp. n. (Figs 11, 47)	India
havai sp. n. (Figs 12, 48)	Thailand
<i>horaki</i> sp. n. (Figs 13, 49)	Thailand
indicus Reitter, 1913: 16 (Fig. 14)	Burma; Palearctic region
	(see Zahradník 2007)
<i>jendeki</i> sp. n. (Figs 15, 50)	Laos
jurciceki sp. n. (Figs 16, 51)	Thailand
<i>kejvali</i> sp. n. (Figs 17, 52)	India
laosensis sp. n. (Figs 18, 53, 72)	Laos
laticollis Pic, 1929: 7 (Fig. 19)	Singapore
<i>latus</i> sp. n. (Figs 20, 54)	Thailand
<i>ludmilae</i> sp. n. (Figs 21, 55)	Malaysia
<i>mareceki</i> sp. n. (Figs 22, 56)	Thailand
<i>minor</i> sp. n. (Figs 23, 57)	Thailand
natalkae sp. n. (Figs 24, 58)	Thailand
nikolkae sp. n. (Figs 25, 59)	Thailand
pacholatkoi sp. n. (Figs 26, 60)	Laos
<i>parvus</i> sp. n. (Figs 27, 61)	Malaysia
plicaticollis Pic, 1937: (Fig. 28)	India Theilend
<i>prudeki</i> sp. n. (Figs 29, 62)	Thailand

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pubens Fairmaire, 1875: 515 (Fig. 30)

*insulcatus* Pic, 1937: 124 *pusillus* Español, 1983: 80 (Fig. 31) *rolciki* sp. n. (Figs 32, 63) *rufus* sp. n. (Figs 33, 64) *sausai* sp. n. (Figs 34, 65) *siamensis* sp. n. (Figs 35, 66) *svihlai* sp. n. (Figs 36, 67) *svobodaorum* sp. n. (Figs 37, 68) *testaceus* Pic, 1936: 55 *thailandicus* sp. n. (Figs 38, 69) *vulgaris* sp. n. (Figs 39, 70) *whitei* sp. n. (Figs 40, 71)

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India; Palaearctic and Afrotropical region (see Zahradník 2007, 2008)

Thailand India Thailand Laos Thailand Thailand Malaysia Thailand Thailand Thailand

Country with asterisk (\*) - newly published find.

### DESCRIPTION OF NEW SPECIES

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# Gastrallus abbreviatus sp. n.

(Figs 1, 41)

**Type material.** Holotype ( $\mathcal{O}$ ): Thailand, Nan prov., Ban Huay Kon env., 27.v.-10.vi.2002, P. Průdek & M. Obořil lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 2.0 mm, greatest width 0.75 mm. Ratio length:width of elytra 1.9. Brown, pubescence whitish silvery, short, very dense, recumbent. Antennae, palpi and legs bright brown.

Head evenly convex, matt, very densely and coarsely punctured, diameter of puncture small, punctures almost touch one another. Eyes large, slightly globular. Frons the same width as eye from dorsal view. Clypeus with long and dense pubescence, more clearly visible than on other parts of head. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third almost twice longer than wide, the fourth and the sixth approximately as wide as long, slightly serrated, the fifth and the seventh ones shorter and narrower, non-serrated. The last three (from eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both slightly triangular, the tenth twice longer than wide, taper.

Pronotum slightly transverse (length 0.6 mm, width 0.7 mm), strongly convex, widest shortly before base (at 4/5), with small bump anteriorly in the middle, top of bump with short transverse ledge. Lateral margin visible only shortly before base, in place of lateral contraction (dorsal view). Base of pronotum twice slightly emarginated (Fig. 41). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture

twice to three times smaller than distance between punctures, the second is fine and very dense. Scutellum transversally rectangular.

Elytra without distinct shoulders, matt, with two types of punctures - the first type coarse and very sparse, irregular, diameter of puncture minimally twice as distance between punctures, the second type fine and very dense, with three very fine lateral striae (visible from lateral view).

The first visible sternite twice wider than the third, the second three times wider than the third. The fourth of the same width as the third, the fifth slightly wider than the fourth and third. The first sternite with round and short hook.

Aedeagus see Fig. 1. Female: Unknown

**Differential diagnosis.** This species is very similar to other species from *G. immarginatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

**Name derivation.** Derived from Latin word abbreviatus = abbreviated, according to abbreviated (practically invisible) parameters of aedeagus.

#### Gastrallus assamensis sp. n. (Figs 2, 42)

**Type material.** Holotype (♂): India NE., Assam state, 5 km N of Umrongso, 25°27' N, 92°43' E, 700 m, 17.-25.v.1999, J. Rolčík lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 2.0 mm, greatest width 0.85 mm. Ratio length:width of elytra 1.8. Brown, pubescence whitish silvery, short, dense, recumbent. Palpi and legs bright brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons 1.7 times narrower than width of eye from dorsal view. Clypeus with long and dense pubescence, more clearly visible than on other part of head. Antennae missing.

Pronotum slightly transverse (length 0.6 mm, width 0.7 mm), strongly convex, almost parallel in the second half (here, it is widest), with small bump anteriorly in the middle, top of bump with short transverse ledge. Lateral margin invisible (dorsal view). Base of pronotum almost broad (Fig. 42). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum large, trapezoidal, slightly wider than long.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with two lateral striae, other striae are not clear and not achieving end of elytra.

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The first and the second visible sternite wide, approximately twice wider than the third. The fourth as wide as the third, the fifth slightly wider than the fourth and the third. The first sternite with sharp and long hook.

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Aedeagus see Fig. 2. Female: Unknown.

**Differential diagnosis.** This species is very similar to other species from *G. immarginatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

Name derivation. Derived from name of Assam state.

# Gastrallus asgardi sp. n.

(Figs 5, 43)

**Type material.** Holotype ( $\mathcal{C}$ ): Thailand NW, Chiang Mai distr., Dol Pui vill. 18°49' N, 98°54' E, 1600 m, 2.-6.v.1996, J. Horák lgt. Allotype ( $\mathcal{Q}$ ): the same data as holotype. Paratype: (1  $\mathcal{Q}$ ): the same data as holotype. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.9 mm, greatest width 0.7 mm. Ratio length:width of elytra 1.9. Brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs bright brown.

Head evenly convex, matt, with poorly visible double punctuation - the first is coarse and very sparse, only sporadic, the second is fine and dense. Eyes large, rounded and almost flat. Frons slightly wider than width of eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third twice longer than wide, from the fourth to the sixth approximately of the same width as length, slightly serrated, and the seventh small, almost rounded. The last three (the eighth to the tenth) enlarged, the eighth and the ninth ones almost twice longer than wide, both slightly triangular, the tenth three times longer than wide, taper.

Pronotum slightly transverse (length 0.45 mm, width 0.65 mm), strongly convex, widest at the base, without bump anteriorly in the middle. Lateral margin invisible (dorsal view). Base of pronotum twice slightly emarginated (Fig. 43). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum square.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with three very fine lateral striae (visible from lateral view).

The first visible sternite twice wider than the third, the second three times wider than the third. The fourth of the same width as the third, the fifth slightly wider than the fourth and the third. The first sternite with round and short hook.

Aedeagus see Fig. 5.

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Female (allotype): Body slightly smaller than in male (length 1.7 mm, width 0.65 mm), the eighth and tenth antennomeres shorter, without other visible dimorphism.

Variability. Body length 1.7-2.2 mm, width 0.65-1.0 mm. Coarse punctures on elytra sometimes more distinct.

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**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

Name derivation. Derived from race Asgard in iconic sci-fi series Star Gate SG-1.

### Gastrallus brunneus sp. n. (Figs 7, 44)

**Type material.** Holotype ( $\mathcal{C}$ ): Thailand bor., Chiang Dao env., 21.v.-4.vi.1995, M. Snížek lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.75 mm, greatest width 0.85 mm. Ratio length:width of elytra 1.7. Brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs bright brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons slightly wider than width of eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third almost twice longer than wide, the fourth and the sixth approximately as wide as long, slightly serrated, the fifth and the seventh shorter and narrower, non-serrated. The last three (the eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both slightly triangular, the tenth twice longer than wide, taper.

Pronotum slightly transverse (length 0.55 mm, width 0.65 mm), strongly convex, without bump anteriorly in the middle. Sides of the pronotum from the first third to base parallel, closely of base slightly extended and widest. Lateral margin invisible (dorsal view). Base of pronotum twice slightly emarginated (Fig. 44). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum almost square, slightly transverse.

Elytra without distinct shoulders, matt, with double puncture - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with three very fine lateral striae.

The first and the second visible sternite wide, approximately twice wider than the third. The fourth as wide as the third, the fifth slightly wider than the fourth and the third. The first sternite with sharp and long hook.

Aedeagus see Fig. 7.

Female: Unknown.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

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**Name derivation.** Derived from older Latin word brunneus = brown, according to colour of body.

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# Gastrallus chantaburensis sp. n. (Figs 8, 45)

**Type material.** Holotype ( $\Im$ ): Thailand E, Chantaburi distr., Khao Soi Dao, 5.-13.v.1998, M. Knížek lgt. Allotype ( $\Im$ ): the same data as holotype. Paratypes: (10  $\Im \Im$ , 10  $\Im \Im$ ): the same data as holotype; (1  $\Im$ ): Thailand NW, Ban Huai Po, 1600-2000 m, 8.-18.v.1992, J. Horák lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.55 mm, greatest width 0.6 mm. Ratio length:width of elytra 1.75. Brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs bright brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons slightly narrower than width of eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third twice longer than wide, from the fourth to the sixth approximately as wide as long and the seventh very small, almost rounded. The last three (from eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both slightly triangular, the tenth twice longer than wide, taper.

Pronotum slightly transverse (length 0.45 mm, width 0.55 mm), strongly convex, sides almost parallel, before base narrower, widest at two thirds, without bump anteriorly in the middle. Lateral margin visible only shortly before base (dorsal view). Base of pronotum twice slightly emarginated (Fig. 45). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum almost square.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with very fine striae, lateral striae more distinct.

The first and the second visible sternites wide, approximately twice wider than the third. The fourth as wide as the third, the fifth slightly wider than the fourth and the third. The first sternite with sharp and long hook.

Aedeagus see Fig. 8.

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Female (allotype): Body the same size as male, without visible dimorphism.

**Variability.** Body length 1.55-2.0 mm, width 0.6-0.75 mm. Colour of body sometimes darker, striae on elytra more or less visible, coarse punctures also sometimes more visible.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

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Name derivation. Derived from name of Thailand district Chantaburi.

# Gastrallus chiangmaiensis sp. n. (Figs 9, 46)

 $( \blacklozenge )$ 

**Type material.** Holotype ( $\eth$ ): Thailand NW, Chang Mai prov., Ban San Pakia, 25.iv.-7.v.1996, 1700 m, Sv. Bílý lgt. Allotype ( $\updownarrow$ ): the same data as holotype. Paratypes: ( $3 \And \eth, 13 \image \supsetneq$ ): the same data as holotype; ( $1 \And$ ): Thailand NW, Mae Hong Son prov., Ban Huai Po, 1600 m, 15.-19.v.1996, Sv. Bílý lgt.; ( $1 \And$ ): Thailand NW, Ban Huai Po, 1600-2000 m, 30.iv.-4.v.1991, J. Horák lgt.; ( $1 \And$ ): Thailand NW, Ban Huai Po, 1600-2000 m, 8.-18.v.1992, J. Horák lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 2.2 mm, greatest width 0.85 mm. Ratio length:width of elytra 1.75. Darkly brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs bright brown.

Head transversally slightly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Front 1.7 times narrower than width of eye from dorsal view. Clypeus with long and dense pubescence, more clearly visible than on other part of head. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second large and almost globular, the third only shortly longer than wide, from the fourth to the sixth approximately as wide as long, slightly serrated, the fifth and the seventh slightly smaller. The last three (from eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both trapezoidal, the tenth twice longer than wide, oblong, on the both ends taper.

Pronotum transverse (length 0.6 mm, width 0.8 mm), strongly convex, widest at two thirds, before base narrower, without bump anteriorly in the middle. Lateral margin visible only shortly before base (dorsal view). Base of pronotum twice slightly emarginated (Fig. 46). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum small, trapezoidal, slightly wider than long.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with three very fine lateral striae, coming only to one half of elytra.

The first and the second visible sternites wide, approximately twice wider than the third. The fourth as wide as the third, the fifth slightly wider than the fourth and the third. The first sternite with sharp and long hook.

Aedeagus see Fig. 9.

Female (allotype): Body of the same size as male, without visible dimorphism.

**Variability.** Body length 1.5-2.25 mm, width 0.75-0.85 mm. Colour of body sometimes brighter, striae on elytra more or less visible.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

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Name derivation. Derived from name of Thailand province Chiang Mai.

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### Gastrallus haucki sp. n. (Figs 11, 47)

 $( \blacklozenge )$ 

**Type material.** Holotype ( $\mathcal{C}$ ): India W., Goa, 25 km E of Ponda, Molem, 15°25' N, 74°16' E, 7.-22.v.2000, D. Hauck lgt. Allotype ( $\mathcal{Q}$ ): the same data as holotype. Paratypes: (2  $\mathcal{C}\mathcal{C}$ ), 2  $\mathcal{Q}\mathcal{Q}$ ): the same data as holotype; (2  $\mathcal{C}\mathcal{C}$ ): India S, Tamil Nadu st., Nilgiri hills, Kotagiri, Kunjappanai, 11°22' N, 76°56' E, 900 m, 22.v.1999, Z. Kejval & M. Trýzna lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.7 mm, greatest width 0.6 mm. Ratio length:width of elytra 1.8. Brown, pubescence yellowish, short, dense, recumbent. Antennae, palpi and legs bright brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Front slightly narrower than width of eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third twice longer than wide, from the fourth to the sixth approximately as wide as long and the seventh very small, almost rounded. The last three (from eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both slightly triangular, the tenth twice longer than wide, taper.

Pronotum slightly transverse (length 0.45 mm, width 0.6 mm), strongly convex, widest at two third, without bump anteriorly in the middle. Lateral margin visible only shortly before base (dorsal view). Base of pronotum twice slightly emarginated (Fig. 47). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum trapezoidal, slightly wider than long.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with very fine striae, lateral striae more distinct.

The first and second visible sternites wide, approximately twice wider than the third. The fourth as wide as the third, the fifth slightly wider than the fourth and the third. The first sternite with sharp and long hook.

Aedeagus see Fig. 11.

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Female (allotype): Body of the same size as in male, without visible dimorphism.

**Variability.** Body length 1.7-2.6 mm, width 0.6-1.0 mm. Colour of body sometimes darker, striae on elytra more or less visible.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

**Name derivation.** Dedicated to the collector of the type material and my friend David Hauck.

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### Gastrallus havai sp. n. (Figs 12, 48)

 $( \blacklozenge )$ 

**Type material.** Holotype ( $\mathcal{O}$ ): Thailand NW, Ban Huai Po, 1600-2000 m, 8.-18.v.1992, J. Horák lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.95 mm, greatest width 0.85 mm. Ratio length:width of elytra 1.6. Brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs bright brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons slightly wider than width of eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and very long, the second almost globular, the third twice longer than wide, from the fourth to the sixth approximately as wide as long and the seventh very small, almost rounded. The last three (from eighth to the tenth) enlarged, the eighth and the ninth twice longer than wide, both slightly triangular, the tenth twice longer than wide, taper (Fig. 48).

Pronotum almost square, only very slightly transverse (length 0.6 mm, width 0.65 mm), strongly convex, widest at one half, from there slightly narrower, without bump anteriorly in the middle. Lateral margin invisible only anteriorly (dorsal view). Base of pronotum twice emarginated (Fig. 48). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum almost square, slightly wider than long.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with three very fine lateral striae.

The first and the second visible sternites wide, approximately twice wider than the third. The fourth the same wide as the third, the fifth slightly wider than the fourth and the third. The first sternite with wide oblong and short hook.

Aedeagus see Fig. 12.

Female: Unknown.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

Name derivation. Dedicated to well-know specialist in Dermestidae and my friend Jiří Háva.

# Gastrallus horaki sp. n. (Figs 13, 49)

**Type material.** Holotype ( $\Im$ ): Thailand NW, Ban Si Lang, 1200 m, 1.-8.v.1992, J. Horák lgt. Allotype ( $\Im$ ): the same data as holotype. Paratypes: (1  $\Im$ , 1  $\Im$ ): the same data as holotype;

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 $(3 \ 3 \ 3)$ : Thailand NW, Ban Huai Po, 1600-2000 m, 8.-18.v.1992, J. Horák lgt. Deposited in author's collection.

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**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.4 mm, greatest width 0.6 mm. Ratio length:width of elytra 1.65. Darkly brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs bright brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Front 1.7 times narrower than width of eye from dorsal view. Antennae consist of ten antennomeres (the left antennae missing the last segment, the right antennae missing two last segments). The first antennomere relatively robust and long, the second almost globular, the third twice longer than wide, from the fourth to the sixth approximately as wide as long, the fifth and the seventh slightly serrated, and the seventh very small, almost rounded. The last two enlarged, the eighth and the ninth almost twice longer than wide, both slightly triangular. The tenth antennomere missing (but on other specimens - allotype and paratypes is also enlarged, twice longer than wide, taper).

Pronotum transverse (length 0.4 mm, width 0.5 mm), strongly convex, widest at two thirds, without bump anteriorly in the middle. Lateral margin visible only shortly before of base (dorsal view). Base of pronotum twice emarginated (Fig. 49). Surface of pronotum matt, with double punctation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum trapezoidal, slightly wider than long.

Elytra without distinct shoulders, matt, with double punctation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with very fine striae, lateral striae more distinct.

The first and the second visible sternites long, approximately twice wider than the third. The fourth as long as the third, the fifth slightly wider than the forth and the third. The first sternite with sharp and long hook.

Aedeagus see Fig. 13.

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Female (allotype): Body length 1.75 mm, greatest width 0.85 mm, without other visible dimorphism.

**Variability.** Body length 1.4-1.8 mm, width 0.6-0.9 mm. Colour of body sometimes brighter, striae on elytra more or less visible.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

**Name derivation.** Dedicated to the collector of the type material, well-know specialist in Mordellidae and my friend Jan Horák.

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# Gastrallus jendeki sp. n. (Figs 15, 50)

 $( \blacklozenge )$ 

**Type material.** Holotype ( $\Diamond$ ): Laos centr., 70 km NE Vientiane, Ban Phabat env., 18°16.1' N, 103°10.9' E, 150 m, 27.iv.-1.v.1997, E. Jendek & O. Šauša lgt. Paratype: (1  $\Diamond$ ): Laos centr., Bolikhampsai prov., Pakkading env., 18°19' N, 103°59' E, 20.-24.xi.2000, E. Jendek & P. Pacholátko lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.75 mm, greatest width 0.8 mm. Ratio length:width of elytra 1.7. Brown, pubescence yellowish silvery, short, sparse, recumbent. Palpi and legs bright brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons twice wider than diameter of eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, relatively large, the third twice longer than wide, from the fourth to the seventh slightly serrated, wider than long. The last three (from eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both slightly triangular, the tenth four times longer than wide.

Pronotum slightly transverse (length 0.5 mm, width 0.7 mm), strongly convex, widest at the base, without bump anteriorly in the middle (Fig. 50). Lateral margin invisible (dorsal view). Base of pronotum twice slightly emarginated. Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum almost square.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures or smallish, the second is fine and dense, with only three visible lateral striae.

The first and second visible sternites wide, approximately twice wider than the third. The fourth as wide as the third, the fifth slightly wider than the fourth and the third. The first sternite with sharp and wide hook.

Aedeagus see Fig. 15. Female: Unknown.

Variability. Body length 1.75-2.1 mm, width 0.8-0.85 mm.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

**Name derivation.** Dedicated to the collector of the type material and my friend Eduard Jendek.

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### Gastrallus jurciceki sp. n. (Figs 16, 51)

 $( \blacklozenge )$ 

**Type material.** Holotype ( $\mathcal{O}$ ): Thailand NE, Loei prov., Phu Kradung NP, 16°52' N, 101°49' E, 1000 m, 16.-17.v.1999, D. Hauck lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 2.2 mm, greatest width 0.9 mm. Ratio length:width of elytra 1.75. Dark brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Front of the same width as eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere robust and long, the second large and almost globular, the third, the fifth and the seventh approximately as wide as long, slightly serrated, the fourth and the sixth transverse, almost twice wider than long, serrated. The last three (from eighth to the tenth) strongly enlarged, the eighth and the ninth almost twice longer than wide, both triangular, the tenth twice longer than wide, taper.

Pronotum slightly transverse (length 0.7 mm, width 0.8 mm), strongly convex, sides almost parallel, but slightly widest shortly before of base, without bump anteriorly in the middle. Lateral margin visible only shortly before of base (dorsal view). Base of pronotum twice emarginated (Fig. 51). Surface of pronotum with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, matt. Scutellum transversally rectangular, 1.7 times wider than long.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with very fine striae, lateral striae more distinct.

The first and second visible sternites wide, approximately twice wider than the third. The fourth as wide as the third, the fifth slightly wider than the fourth and third. The first sternite with sharp and long hook.

Aedeagus see Fig. 16. Female: Unknown.

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**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

Name derivation. Dedicated to my friend, coleopterologist Josef Jurčíček.

Gastrallus kejvali sp. n. (Figs 17, 52)

**Type material.** Holotype ( $\mathcal{C}$ ): India S, Tamil Nadu st., Nilgiri hills, Kotagiri, Kunjappanai, 11°22' N, 76°56' E, 900 m, 22.v.1999, Z. Kejval & M. Trýzna lgt. Paratype: (1  $\mathcal{C}$ ): the same data as holotype. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.85 mm, greatest width 0.8 mm. Ratio length:width of elytra 1.85. Brown, pubescence whitish silvery, short, sparse, recumbent. Palpi and legs bright brown.

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Head evenly convex, matt, with double punctuation - the first coarse and dense, puncture almost touch, the second is fine and dense. Eyes large, slightly globular. Frons 0.6 times wider than diameter of eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third twice longer than wide, from the fourth to the sixth approximately slightly serrated, wider as long and the seventh very small (almost invisible). The last three (from eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both slightly triangular, the tenth three times longer than wide, taper.

Pronotum transverse (length 0.5 mm, width 0.65 mm), strongly convex, widest in the second third, on the base narrower, without bump anteriorly in the middle (Fig. 52). Lateral margin invisible (dorsal view). Base of pronotum twice slightly emarginated. Surface of pronotum matt, with double punctuation - the first coarse and dense, puncture almost touch, the second is fine and dense. Scutellum almost square.

Elytra without distinct shoulders, shinning-matt, with double puncture - the first is very good visible, coarse and dense, the second is fine and dense, with only two lateral striae and one other lateral stria achieves only the first third; other three striae only slightly indicated from lateral view.

The first and second visible sternites wide, approximately twice wider than the third. The fourth of the same width as the third, the fifth slightly wider than the fourth and third. The first sternite with sharp and wide hook.

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Aedeagus see Fig. 17. Female: Unknown.

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Variability. Body length 1.85-2.15 mm, width 0.8-0.9 mm.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae and very granulate surface of body. The most important is shape of aedeagus, which is stable and very different from other species.

**Name derivation.** Dedicated to the collector of the type material, well-know specialist in Anthicidae and my friend Zbyněk Kejval.

# Gastrallus laosensis sp. n. (Figs 18, 53, 72)

**Type material.** Holotype (♂): Laos, Hua Phan pr., Ban Saluei, Phiu Phan Mt., 2000 m, 26.iv.-11.v.2001, D. Hauck lgt. Deposited in author's collection.

Description. Male (holotype). Oblong oval, transversally very convex, body length 2.25

mm, greatest width 0.85 mm. Ratio length:width of elytra 1.8. Brown, pubescence whitish silvery, very short, sparse, recumbent. Palpi and legs bright brown.

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Head evenly convex, matt, with double puncture - the first is very good visible, coarse and sparse, the second is fine and dense. Eyes large, slightly globular. Frons 0.6 times wider than diameter of eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and longer, the second 1.5 times longer than wide, the third 1.5 times longer than wide, the fourth to the seventh very slightly transverse, the seventh slightly smaller. The last three (from eighth to the tenth) enlarged, the eighth approximately 3 times longer than wide, slightly triangular, the ninth approximately 4 times longer than wide and the tenth 6 times longer than wide (Fig. 72).

Pronotum very slightly transverse (length 0.6 mm, width 0.65 mm), strongly convex, widest closely before base, without bump anteriorly in the middle (Fig. 53). Lateral margin invisible (dorsal view). Base of pronotum slightly curved. Surface of pronotum matt, with double punctuation - the first is very good visible, coarse and dense, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum triangular.

Elytra without distinct shoulders, matt, with double punctuation - the first coarse and very sparse, the second is fine and dense, without visible striae.

The first and second visible sternites wide, approximately twice wider than the third. The fourth as wide as the third, the fifth slightly wider than the fourth and third. The first sternite with sharp and wide hook.

Aedeagus see Fig. 18. Female: Unknown.

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**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences on shape of pronotum. There are important differences in the last three segments of antennae, which are very slim and long against last three antennomeres of other species. The most important is shape of aedeagus, which is stable and very different from other species.

Name derivation. Derived from the name of country, place of distribution.

### Gastrallus latus sp. n. (Figs 20, 54)

**Type material.** Holotype (♂): Thailand NW, Chiang Mai prov., Ban San Pakia, 1700 m, 25.iv.-7.v.1996, Sv. Bílý lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.9 mm, greatest width 0.8 mm. Ratio length:width of elytra 1.7. Darkly brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs bright brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons 1.6 times narrower than width of eye from dorsal view.

Antennae consist from ten antennomeres. The first antennomere relatively robust and long, the second 1.8 times longer than wide, oblong, the third 1.5 times longer than wide, from the fourth to the sixth approximately the same wide as long and the seventh very small. The last three (from eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both slightly triangular, the tenth twice longer than wide, taper.

Pronotum transverse (length 0.5 mm, width 0.65 mm), strongly convex, widest shortly before base, without bump anteriorly in the middle. Lateral margin visible only shortly in front of base (dorsal view). Base of pronotum twice slightly emarginated (Fig. 54). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum rectangular, slightly wider than long.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with three fine lateral striae.

The first and the second visible sternites wide, approximately twice wider than the third, the first slightly wider than the second. The fourth as wide as the third, the fifth slightly wider than the fourth and the third. The first sternite with round and short hook.

Aedeagus see Fig. 20. Female: Unknown.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

**Name derivation.** Derived from Latin word latus = wide, according to visible width of body against more other species from this genus.

# Gastrallus ludmilae sp. n. (Figs 21, 55)

**Type material.** Holotype ( $\mathcal{O}$ ): Malaysia, Johor, Endau - Rompin NP, Pulau Jasin, 2,31° N, 103,2° E, D. Hauck lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.8 mm, greatest width 0.7 mm. Ratio length:width of elytra 1.8. Brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs bright brown.

Head evenly convex, matt, with double puncture - the first is coarse and sparse, diameter of puncture the same as distance between punctuation, the second is fine and dense. Eyes large, slightly globular. Frons slightly wider than width of eye from dorsal view. Antennae strongly destroyed, only first two segments present - the first robust and long, the second almost rounded.

Pronotum transverse (length 0.5 mm, width 0.7 mm), strongly convex, widest at two thirds, without bump anteriorly in the middle. Lateral margin visible only shortly before of

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base (dorsal view). Base of pronotum twice emarginated (Fig. 55). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum almost square.

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Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with three very fine lateral striae, the third lateral striae almost invisible, coming only on one half of elytra.

The first visible sternites twice wider than the third, the second 3 times wider than the third. The fourth as wide as the third, the fifth slightly wider than the fourth and third. The first sternite with wide, round and short hook.

Aedeagus see Fig. 21. Female: Unknown.

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**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

Name derivation. Dedicated to grandma of my children.

# Gastrallus mareceki sp. n.

(Figs 22, 56)

**Type material.** Holotype ( $\mathcal{C}$ ): Thailand NW, Ban Huai Po, 1600-2000 m, 30.iv.-4.v.1991, J. Horák lgt. Allotype ( $\mathcal{Q}$ ): the same data as holotype. Paratypes: ( $2 \mathcal{Q} \mathcal{Q}$ ): the same data as holotype. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.85 mm, greatest width 0.8 mm. Ratio length:width of elytra 1.7. Brown, pubescence whitish silvery, short, dense, recumbent. Antennae yellowish brown, palpi and legs brightly brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, rounded and flat. Frons as wide as eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third twice longer than wide, from the fourth to the sixth approximately as wide as long and the seventh very small, almost rounded. The last three (from eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both slightly triangular, the tenth twice longer than wide, taper.

Pronotum transverse (length 0.5 mm, width 0.65 mm), strongly convex, widest shortly before of base, without bump anteriorly in the middle. Lateral margin visible only shortly in front of base (dorsal view). Base of pronotum twice slightly emarginated (Fig. 56). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum rectangular, slightly wider than long.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with very fine striae, lateral striae more distinct, other striae abbreviated posteriorly, reaching only half of elytra.

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The first and second visible sternites wide, approximately twice wider than the third. The fourth as wide as the third, the fifth slightly wider than the fourth and the third. The first sternite with sharp and long hook.

Aedeagus see Fig. 22.

Female (allotype): Body length 1.75 mm, greatest width 0.75, the eight and the ninth antennomeres slightly slimmer, without other visible dimorphism.

**Variability.** Body length 1.6-2.2 mm, width 0.65-0.9 mm. Colour of body sometimes brighter, striae on elytra more or less visible.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

**Name derivation.** Dedicated to the brother of my wife, specialist in Czech and Slovak carabids, and my good friend Ivan Mareček.

#### Gastrallus minor sp. n. (Figs 23, 57)

**Type material.** Holotype ( $\mathcal{C}$ ): Thailand NE, Loei prov., Phu Kradung NP, 16,52° N, 101,49° E, 1000 m, 16.-17.v.1999, D. Hauck lgt. Allotype ( $\mathcal{Q}$ ): Laos, Hua Phan pr., Ban Saluei, Phiu Phan Mt., 2000 m, 26.iv.-11.v.2001, D. Hauck lgt. Paratype: (1  $\mathcal{C}$ ): Laos, Hua Phan pr., Ban Kangpabong env., Vieng Xai., 14-18.v.2001, D. Hauck lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.75 mm, greatest width 0.75 mm. Ratio length:width of elytra 1.7. Brown, pubescence whitishly silvery, short, dense, recumbent. Antennae, palpi and legs bright brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons as wide as eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third almost twice longer than wide, the fourth and the sixth approximately as wide as long, slightly serrated, the fifth and the seventh shorter and narrower, non-serrated. The last three (from eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both trapezoidal, the tenth twice longer than wide, taper.

Pronotum slightly transverse (length 0.45 mm, width 0.6 mm), strongly convex, widest at two thirds, without bump anteriorly in the middle. Lateral margin visible only shortly before of base (dorsal view). Base of pronotum twice slightly emarginated (Fig. 57). Surface of

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pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum rectangular, slightly wider than long.

 $( \blacklozenge )$ 

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with very fine striae, lateral striae more distinct.

The first and second visible sternites wide, approximately twice wider than the third. The fourth as wide as the third, the fifth slightly wider than the fourth and the third. The first sternite with sharp and long hook.

Aedeagus see Fig. 23.

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Female (allotype): Body length 2.0 mm, greatest width 0.9, darker, without other visible dimorphism.

**Variability.** Body length 1.55-2.0 mm, width 0.65-0.9 mm. Colour of body sometimes brighter, striae on elytra more or less visible.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

**Name derivation.** Derived from Latin word minor = little, according to small body of this species.

# Gastrallus natalkae sp. n. (Figs 24, 58)

**Type material.** Holotype ( $\mathcal{C}$ ): Thailand NW, Mae Hong Son prov., Ban Huai Po, 1600 m, 15.-19.v.1996, Sv. Bílý lgt. Allotype ( $\mathcal{Q}$ ): the same data as holotype. Paratypes: ( $3 \mathcal{Q} \mathcal{Q}$ ): the same data as holotype; ( $1 \mathcal{C}$ ): Thailand NW, Chiang Mai prov., Ban San Pakia, 1700 m, 25.iv.-7.v.1996, Sv. Bílý lgt.; ( $1 \mathcal{C}$ ): Thailand NE, Loei prov., Phu Kradung NP, 16,52°N, 101,49°E, 1000 m, 16.-17.v.1999, D. Hauck lgt. 1  $\mathcal{C}$  Thailand, Nan prov., Ban Huay Kon env., 27.v.-10.vi.2002. P. Průdek & M. Obořil lgt.; ( $3 \mathcal{C} \mathcal{C}$ ): Thailand NW, Ban Huai Po, 1600-2000 m, 8.-18.v.1992, J. Horák lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.8 mm, greatest width 0.75 mm. Ratio length:width of elytra 1.7. Brown, pubescence whitishly silvery, short, dense, recumbent. Antennae yellowish brown, palpi and legs brown.

Head slightly transversally convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons slightly narrower than width of eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third almost twice longer than wide, the fourth and the sixth approximately as wide as long, slightly serrated, the fifth and the seventh shorter

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and narrower, non-serrated. The last three (from eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both trapezoidal, the tenth twice longer than wide, taper.

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Pronotum transverse (length 0.5 mm, width 0.7 mm), strongly convex, widest at the base, without bump anteriorly in the middle. Lateral margin invisible (dorsal view). Base of pronotum twice slightly emarginated (Fig. 58). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum rectangular, slightly wider than long.

Elytra without distinct shoulders, matt, with double punctuation – the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with three fine lateral striae, the third coming only on the one half of elytra.

The first and second visible sternites long, approximately twice wider than the third. The fourth as long as the third, the fifth slightly wider than the fourth and third. The first sternite with wide, round and short hook.

Aedeagus see Fig. 24.

Female (allotype): length 2.05 mm, width 0.8 mm, darkly brown, without visible dimorphism.

**Variability.** Body length 1.75-2.1 mm, width 0.7-1.1 mm. Colour of body sometimes darker or brighter, striae on elytra more or less visible, coarse punctures more or less irregular.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

Name derivation. Dedicated to my granddaughter Natálka.

#### Gastrallus nikolkae sp. n. (Figs 25, 59)

**Type material.** Holotype ( $\mathcal{J}$ ): Thailand NE, Loei prov., Phu Kradung NP, 16,52° N, 101,49° E, 1000 m, 16.-17.v.1999, D. Hauck lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 2.45 mm, greatest width 0.95 mm. Ratio length:width of elytra 1.65. Darkly brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs brown.

Head transversally convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons slightly narrower than width of eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third twice longer than wide, from the fourth to the sixth approximately as wide as long, slightly serrated, and the seventh small, as wide as long. The

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last three (from eighth to the tenth) strongly enlarged, the eighth and the ninth almost twice longer than wide, the eight trapezoidal, the ninth slightly triangular, the tenth twice longer than wide, taper.

 $( \blacklozenge )$ 

Pronotum slightly transverse (length 0.7 mm, width 0.85 mm), strongly convex, widest at two thirds, before base narrower, without bump anteriorly in the middle. Lateral margin visible only the last third (dorsal view). Base of pronotum twice slightly emarginated (Fig. 59). Surface of pronotum with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, matt. Scutellum rectangular, transverse, almost twice wider than long.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with four lateral striae, the third coming only to one half of elytra and the fourth coming only to one third of elytra.

The first and the second visible sternites long, approximately twice wider than the third. The fourth as long as the third, the fifth slightly wider than the fourth and the third. The first sternite with sharp and long hook.

Aedeagus see Fig. 25. Female: Unknown.

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**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

Name derivation. Dedicated to my granddaughter Nikolka.

### Gastrallus pacholatkoi sp. n. (Figs 26, 60)

**Type material.** Holotype ( $\mathcal{C}$ ): Laos c., Khammouan pr., Ban Khoun Ngeun env., 4.-16. & 25.-30.xi.2000, E. Jendek & P. Pacholátko lgt.. Allotype ( $\mathcal{Q}$ ): the same data as holotype. Paratypes: ( $3 \mathcal{Q} \mathcal{Q}$ ): the same data as holotype. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.75 mm, greatest width 0.8 mm. Ratio length:width of elytra 1.45. Darkly brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs brighter brown.

Head transversally slightly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons slightly wider than eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third twice longer than wide, from the fourth to the sixth approximately as wide as long and the seventh very small, almost rounded. The last three (from eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both slightly triangular, the tenth twice longer than wide, taper.

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Pronotum slightly transverse (length 0.6 mm, width 0.7 mm), strongly convex, surface clearly irregular with large bump in middle of pronotum and two elevations on sides of this bump, but without small bump anteriorly in the middle. Pronotum widest at one half, sides distinctly twice emarginated, lateral margin visible from one half of pronotum (dorsal view). Base of pronotum twice emarginated (Fig. 60). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, matt. Scutellum rectangular, almost twice wider than long.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with three very fine lateral striae.

The first and second visible sternites wide, approximately twice wider than the third. The fourth as wide as the third, the fifth slightly wider than the fourth and third. The first sternite with wide, round and long hook.

Aedeagus see Fig. 26.

Female (allotype): length 2.0 mm, width 1.0 mm, without visible dimorphism.

**Variability.** Body length 1.55-2.05 mm, width 0.65-1.0 mm. Colour of body sometimes brighter, striae on elytra more or less visible, pubescence on elytra sometime in more or less visible rows.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species. According to shape of aedeagus very similar to *G. minor* sp.n. from which differs by shape of pronotum and *G. laosensis* sp.n. from which differs by shorter last three antennomeres.

**Name derivation.** Dedicated to the collector of the type material, specialist of Sericini (Scarabaeidae) and my friend Petr Pacholátko.

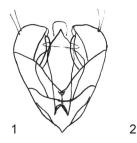
# Gastrallus parvus sp. n. (Figs 27, 61)

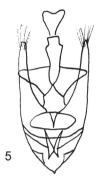
**Type material.** Holotype ( $\mathcal{C}$ ): Malaysia, Benom Mts., 15 km E of Kampong Dong, 3,53° N, 102,01° E, 700 m, 1.iv.1998, D. Hauck lgt. Allotype ( $\mathcal{Q}$ ): the same data as holotype. Paratype: (1  $\mathcal{Q}$ ): the same data as holotype. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.8 mm, greatest width 0.7 mm. Ratio length:width of elytra 1.75. Brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs bright brown.

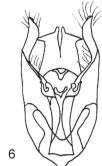
Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons 1.3 wider than width of eye from dorsal view. Antennae

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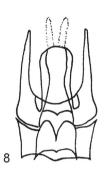


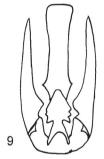




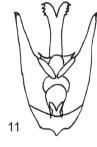












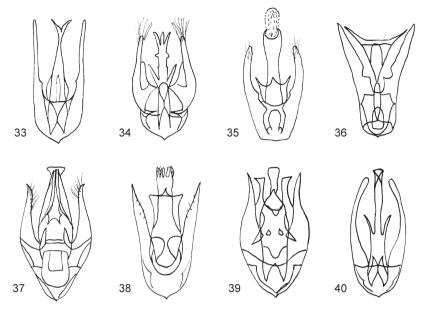












Figs 1-40. Aedeagus: 1- Gastrallus abbreviatus sp. n.; 2- G. assamensis sp. n.; 3- G. tuberculatus Pic, 1914; 4-G. abyssinicus Español, 1963; 5- G. asgardi sp. n.; 6- G. bremeri Español, 1983; 7- G. brunneus sp. n.; 8- G. chantaburensis sp. n.; 9- G. chiangmaiensis sp. n.; 10- G. cucullatus Lesne, 1902; 11- G. haucki sp. n.; 12- G. havai sp. n.; G. horaki sp. n.; 14- G. indicus Reitter, 1913; 15- G. jendeki sp. n.; 16- G. jurciceki sp. n.; 17- G. kejvali sp. n.; 18- G. laosensis sp. n.; 19- G. laticollis Pic, 1929; 20- G. latus sp. n.; 21- G. ludmilae sp. n.; 22- G. mareceki sp. n.; 23- G. minor sp. n.; 24- G. natalkae sp. n.; 25- G. nikolkae sp. n.; 26- G. pacholatkoi sp. n.; 27- G. parvus sp. n.; 28- G. plicaticollis Pic, 1937; 29- G. prudeki sp. n.; 30- G. pubens Fairmaire, 1875; 31- G. pusillus Español, 1983; 32- G. rolciki sp. n.; 33- G. rufus sp. n.; 34- G. sausai sp. n.; 35- G. siamensis sp. n.; 36- G. svihlai sp. n.; 37- G. svobodaorum sp. n.; 38- G. thailandicus sp. n.; 39- G. vulgaris sp. n.; 40- G. whitei sp. n.

consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third twice longer than wide, from the fourth to the sixth approximately as wide as long and the seventh very small, almost rounded. The last three (the eighth to the tenth) enlarged, the eighth and the ninth 1.5 times longer than wide, both triangular, the tenth also 1.5 times longer than wide, but taper.

Pronotum transverse (length 0.5 mm, width 0.65 mm), strongly convex, widest at two thirds, without bump anteriorly in the middle. Lateral margin visible only shortly before base (dorsal view). Base of pronotum twice slightly emarginated (Fig. 61). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum trapezoidal, slightly longer than wide.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with three very fine lateral striae, the second and the third finished before one half of elytra.

The first and the second visible sternites wide, approximately twice wider than the third. The fourth the same wide as the third, the fifth slightly wider than the fourth and the third. The first sternite with sharp and long hook.

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Aedeagus see Fig. 27.

Female (allotype): Body length 2.0 mm, width 0.8, without visible dimorphism.

**Variability.** Body length 1.8-2.0 mm, width 0.7-0.8 mm. Colour of body sometimes darker, striae on elytra more or less visible.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

Name derivation. Derived from Latin word parvus = small, according to size of body.

# Gastrallus prudeki sp. n. (Figs 29, 62)

**Type material.** Holotype ( $\mathcal{S}$ ): Thailand, Ranong prov., Ranong Hot Springs, 9,56° N, 98,4° E, 23.-27.ii.1996, P. Průdek lgt.. Allotype ( $\mathcal{Q}$ ): the same data as holotype. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.4 mm, greatest width 0.6 mm. Ratio length:width of elytra 1.95. Yellowish brown, pubescence yellowish, short, dense, recumbent. Antennae, palpi and legs also yellowish brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons slightly wider than eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third almost twice longer than wide, the fourth and the sixth approximately as wide as long, slightly serrated, the fifth and the seventh shorter and narrower, non-serrated. The last three (from eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both triangular, the tenth twice longer than wide, taper.

Pronotum slightly transverse (length 0.45 mm, width 0.55 mm), strongly convex, sides almost parallel, but slightly widest shortly before of base. Lateral margin invisible (dorsal view). Base of pronotum twice slightly emarginated (Fig. 62). Surface of pronotum matt with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, matt. Scutellum very small, almost square.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with only one very fine lateral striae.

The first and the second visible sternites wide, approximately twice wider than the third. The fourth the same wide as the third, the fifth slightly wider than the fourth and the third. The first sternite with sharp and long hook.

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Aedeagus see Fig. 29.

Female (allotype): Body length 2.0 mm, width 0.85, dark brown, without other visible dimorphism.

 $( \blacklozenge )$ 

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

**Name derivation.** Dedicated to the collector of the type material, coleopterologist - specialist in Clavicornia, and my friend Pavel Průdek.

### Gastrallus rolciki sp. n. (Figs 32, 63)

**Type material.** Holotype ( $\mathcal{J}$ ):India NE, Assam, 5 km N of Umrongso, 25°27' N, 90°43' E, 700 m, 17.-25.v.1999, J. Rolčík lgt. Paratype: (1  $\mathcal{J}$ ): the same date as holotype. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 2.0 mm, greatest width 0.9 mm. Ratio length:width of elytra 1.3. Brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs bright brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons 1.7 times wider than diameter of eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third slightly longer than wide, the fourth and the sixth serrated, slightly wider than long, the fifth smaller, as wide as long, the seventh smallest (almost invisible). The last three (from eighth to the tenth) enlarged, all approximately two times longer than wide, the eight and ninth slightly triangular, the tenth twice longer than wide, taper.

Pronotum very slightly transverse (length 0.7 mm, width 0.85 mm), strongly convex, widest shortly before the base, without bump anteriorly in the middle (Fig. 63). Lateral margin invisible (dorsal view). Base of pronotum slightly curved. Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum rectangular, slightly transverse.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with only very distinct two lateral striae and one other lateral stria achieves only the first third; other two striae only slightly indicated from lateral view.

The first and the second visible sternites long, approximately twice wider than the third. The fourth as long as the third, the fifth slightly wider than the fourth and the third. The first sternite with sharp and long hook.

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Aedeagus see Fig. 32. Female: Unknown.

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Variability. Body length 1.75-2.0 mm, width 0.7-0.9 mm.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

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**Name derivation.** Dedicated to the collector of the type material, coleopterologist - specialist of Cleridae, and my friend Jakub Rolčík.

# Gastrallus rufus sp. n. (Figs 33, 64)

**Type material.** Holotype ( $\mathcal{O}$ ): Thailand NW, Ban Huai Po, 1600-2000 m, 8.-18.v.1992, J. Horák lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.45 mm, greatest width 0.6 mm. Ratio length:width of elytra 1.75. Ginger brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs yellowish brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons slightly narrower than eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third twice longer than wide, from the fourth to the sixth approximately as wide as long and the seventh very small, almost rounded. The last three (from eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both slightly triangular, the tenth twice longer than wide, taper.

Pronotum transverse (length 0.4 mm, width 0.55 mm), strongly convex, widest at two thirds, without bump anteriorly in the middle. Lateral margin visible only shortly before base (dorsal view). Base of pronotum twice slightly emarginated (Fig. 64). Surface of pronotum with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, matt. Scutellum trapezoidal, slightly longer than wide.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with very fine striae, lateral striae more distinct.

The first and the second visible sternites long, approximately twice wider than the third. The fourth as long as the third, the fifth slightly wider than the fourth and the third. The first sternite with sharp and long hook.

Aedeagus see Fig. 33. Female: Unknown.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

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**Name derivation.** Derived from Latin word rufus = ginger or rufous, according to colour of body.

 $( \blacklozenge )$ 

# Gastrallus sausai sp. n. (Figs 34, 65)

**Type material.** Holotype ( $\mathcal{S}$ ): Laos c., Bolikhamsai, Ban Nape, Kaew Nua, 600 m, 18.iv.-1.v.1998, E. Jendek & O. Šauša lgt. Allotype ( $\mathcal{Q}$ ): the same data as holotype. Paratypes: (1  $\mathcal{Q}$ ): the same data as holotype. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 2.5 mm, greatest width 1.15 mm. Ratio length:width of elytra 1.5. Brown, pubescence whitish silvery, very short, dense, recumbent. Antennae, palpi and legs bright brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons as wide as wide of eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively long, the second almost globular, the third slightly longer than wide, from the fourth to the sixth approximately as wide as long, the seventh very small (almost invisible). The last three (from eighth to the tenth) enlarged, the eighth twice longer than wide, triangular, the ninth 2.5 times longer than wide, slightly triangular, the tenth 3 times longer than wide, taper.

Pronotum slightly transverse (length 0.8 mm, width 0.9 mm), strongly convex, widest shortly before the base, without bump anteriorly in the middle (Fig. 65). Lateral margin invisible (dorsal view). Base of pronotum twice slightly emarginated. Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum rectangular, slightly transverse.

Elytra without distinct shoulders, with double punctuation - the first is coarse and sparse, diameter of puncture approximately the same as distance between punctures, the second is fine and dense, with only slightly distinct three lateral striae, without distinct puncture.

The first and the second visible sternites wide, approximately twice wider than the third. The fourth as wide as the third, the fifth slightly wider than the fourth and third. The first sternite with short and wide hook.

Aedeagus see Fig. 34.

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Female (allotype): Body the same size as male, without visible dimorphism.

Variability. Body length 2.0-2.5 mm, width 0.9-1.15 mm.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

**Name derivation.** Dedicated to the collector of the type material, coleopterologist, and my friend Ondrej Šauša.

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# Gastrallus siamensis sp. n. (Figs 35, 66)

 $( \blacklozenge )$ 

**Type material.** Holotype ( $\mathcal{C}$ ): Thailand N, Nan prov., Doi Phu Kha NP, Headq., 19,13° N, 101,07° E, 22.-26.iv.1999, D. Hauck lgt. Allotype ( $\mathcal{Q}$ ): the same data as holotype. Paratype: (1  $\mathcal{Q}$ ): the same data as holotype. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.65 mm, greatest width 0.65 mm. Ratio length:width of elytra 1.8. Brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs brighter brown.

Head evenly convex, matt, with double puncture - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons 1.8 times narrower than width of eye from dorsal view. Antennae consist of ten antennomeres (right antenna missing, left antenna without only with eight antenommers). The first antennomere relatively robust and long, the second almost globular, the third twice longer than wide, from the fourth to the sixth approximately as wide as long and the seventh very small, almost rounded. The eighth antennomere enlarged, twice longer than wide, slightly triangular.

Pronotum slightly transverse (length 0.45 mm, width 0.55 mm), strongly convex, from anterior part to base slightly extensional, widest at the base, without bump anteriorly in the middle. Lateral margin invisible (dorsal view). Base of pronotum twice slightly emarginated (Fig. 66). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum almost square.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with very fine striae, the first two lateral striae more distinct.

The first and second visible sternites wide, approximately twice wider than the third. The fourth as wide as the third, the fifth slightly wider than the forth and the third. The first sternite with sharp and long hook.

Aedeagus see Fig. 35.

Female (allotype): Body length 1.75 mm, width 0.7 mm, without visible dimorphism.

Variability. Body length 1.55-1.75 mm, width 0.65-0.7 mm.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

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Name derivation. Derived from the older name of country, place of distribution.

### Gastrallus svihlai sp. n. (Figs 36, 67)

 $( \blacklozenge )$ 

**Type material.** Holotype ( $\mathcal{J}$ ): Thailand NW, Ban Huai Po, 1600-2000 m, 8.-18.v.1992, J. Horák lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 2.0 mm, greatest width 0.85 mm. Ratio length:width of elytra 1.8. Dark brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs yellowish brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons slightly narrower than width of eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third three times longer than wide, from the fourth to the seventh approximately the slightly wider than long, slightly serraterd. The last three (from eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both slightly trapezoidal, the tenth twice longer than wide, taper.

Pronotum slightly transverse (length 0.55 mm, width 0.7 mm), strongly convex, widest at two thirds, without bump anteriorly in the middle. Lateral margin visible only shortly before of base (dorsal view). Base of pronotum twice slightly emarginated (Fig. 67). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum almost square, slightly longer than wide.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with three very fine lateral striae.

The first and the second visible sternites wide, approximately twice wider than the third. The fourth the same wide as the third, the fifth slightly wider than the fourth and the third. The first sternite with wide, round and long hook.

Aedeagus see Fig. 36.

Female: Unknown.

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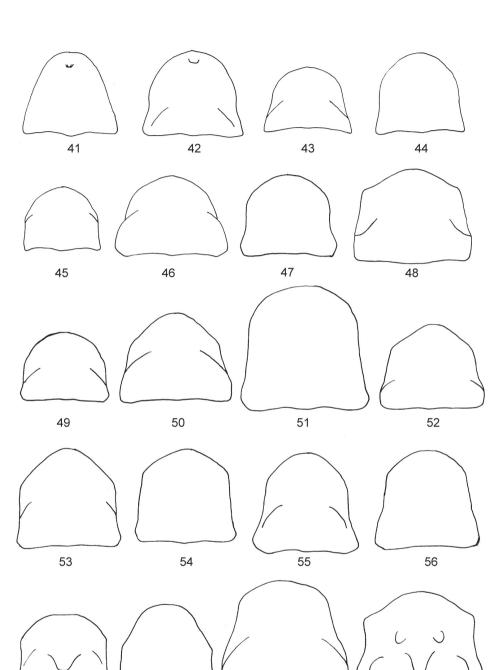
**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

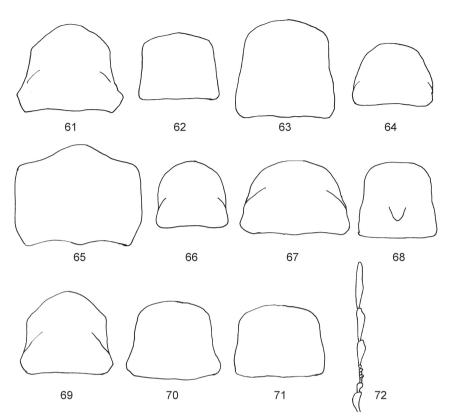
**Name derivation.** Dedicated to the well-know coleopterologist, specialist in Oedemeridae and my friend Vladimír Švihla.

Gastrallus svobodaorum sp. n. (Figs 37, 68)

**Type material.** Holotype ( $\Diamond$ ): Thailand NW, Ban Huai Po, 1600-2000 m, 8.-18.v.1992, J. Horák lgt. Deposited in author's collection.

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Figs 41-72. Pronotum: 41- Gastrallus abbreviatus sp. n.; 42- G. assamensis sp. n.; 43- G. asgardi sp. n.; 44- G. brunneus sp. n.; 45- G. chantaburensis sp. n.; 46- G. chiangmaiensis sp. n.; 47- G. haucki sp. n.; 48- G. havai sp. n.; 49- G. horaki sp. n.; 50- G. jendeki sp. n.; 51- G. jurciceki sp. n.; 52- G. kejvali sp. n.; 53- G. laosensis sp. n.; 54- G. latus sp. n.; 55- G. ludmilae sp. n.; 56- G. mareceki sp. n.; 57- G. minor sp. n.; 58- G. natalkae sp. n.; 59- G. nikolkae sp. n.; 60- G. pacholatkoi sp. n.; 61- G. parvus sp. n.; 62- G. prudeki sp. n.; 63- G. rolciki sp. n.; 64- G. rufus sp. n.; 65- G. sausai sp. n.; 66- G. siamensis sp. n.; 67- G. svihlai sp. n.; 68- G. svobodaorum sp. n.; 69- G. thailandicus sp. n.; 70- G. vulgaris sp. n.; 71- G. whitei sp. n.; 72- Antennae of Gastrallus laosensis sp. n.

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**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.75 mm, greatest width 0.7 mm. Ratio length:width of elytra 1.75. Dark brown, pubescence whitish silvery, short, dense, recumbent. Antennae yellowish brown, palpi and legs brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons of the same width as eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third twice longer than wide, from the fourth to the sixth slightly transverse and serrated and the seventh slim and small, 1.5 times longer than wide. Last three (from eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both slightly triangular, the tenth twice longer than wide, taper.

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Pronotum slightly transverse (length 0.55 mm, width 0.65 mm), strongly convex, widest at two thirds, without bump anteriorly in the middle. Lateral margin visible only shortly before of base (dorsal view). Base of pronotum twice slightly emarginated (Fig. 68). Surface of pronotum with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, matt. Scutellum rectangular, slightly transverse.

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Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with three fine lateral striae.

The first and second visible sternites wide, approximately twice wider than the third. The fourth as wide as the third, the fifth slightly wider than the fourth and the third. The first sternite with sharp and long hook.

Aedeagus see Fig. 37. Female: Unknown.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

Name derivation. Dedicated to my friends, married couple Zdeněk a Zorka Svobodovi.

#### Gastrallus thailandicus sp. n. (Figs 38, 69)

**Type material.** Holotype ( $\mathcal{J}$ ): Thailand N, Nan prov., Doi Phu Kha NP, Headq., 19,13° N, 101,07° E, 22.-26.iv.1999, D. Hauck lgt.. Allotype ( $\mathcal{Q}$ ): the same data as holotype. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.8 mm, greatest width 0.75 mm. Ratio length:width of elytra 1.6. Dark brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs bright brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons 1.8 times wider than width of eye from dorsal view. Antennae destroyed, only with basal antennomeres of left antenna.

Pronotum slightly transverse (length 0.5 mm, width 0.65 mm), strongly convex, widest at two thirds, without bump anteriorly in the middle. Lateral margin visible only shortly before base (dorsal view). Base of pronotum twice slightly emarginated (Fig. 69). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum transversally rectangular, slightly wider than long.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with only one very fine striae, almost invisible.

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The first and second visible sternites wide, approximately twice wider than the third. The fourth as wide as the third, the fifth slightly wider than the fourth and the third. The first sternite with sharp and long hook.

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Aedeagus see Fig. 38.

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Female (allotype): Body length 2.1 mm, width 0.9 mm, darker than holotype, without visible dimorphism. The first antennomere relatively robust and long, the second almost globular, the third almost twice longer than wide, the fourth and the sixth approximately as wide as long, slightly serrated, the fifth and the seventh shorter and narrower, non-serrated. The last three (the eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both slightly triangular, the tenth twice longer than wide, taper.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

Name derivation. Derived from the name of country, place of distribution.

# Gastrallus vulgaris sp. n. (Figs 39, 70)

**Type material.** Holotype ( $\mathcal{J}$ ): Thailand S, Pattani ds., Sal Bury, iv.1993, J. Horák lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 2.0 mm, greatest width 0.85 mm. Ratio length:width of elytra 1.8. Brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs bright brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons slightly narrower than width of eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third twice longer than wide, from the fourth to the sixth approximately as wide as long and the seventh very small, almost rounded. Last three (from eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both slightly triangular, the tenth twice longer than wide, taper.

Pronotum slightly transverse (length 0.6 mm, width 0.7 mm), strongly convex, widest at two thirds, without bump anteriorly in the middle. Lateral margin visible only shortly before base (dorsal view). Base of pronotum twice slightly emarginated (Fig. 70). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum trapezoidal, slightly longer than wide.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with three fine lateral striae, the second and the third coming only to two thirds of elytra.

The first and second visible sternites long, approximately twice wider than the third. The fourth the same long as the third, the fifth slightly wider than the fourth and the third. The first sternite with sharp and long hook.

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Aedeagus see Fig. 39. Female: unknown.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

Name derivation. Derived from Latin word vulgaris = common.

#### Gastrallus whitei sp. n.

(Figs 40, 71)

**Type material.** Holotype ( $\mathcal{C}$ ): Thailand N, Nan prov., Klua, 700 m, 22.-26.iv.1999, D. Hauck lgt. Allotype ( $\mathcal{Q}$ ): the same data as holotype. Paratypes: ( $2 \mathcal{Q} \mathcal{Q}$ ): the same data as holotype; ( $1 \mathcal{C}$ ): Thailand NW, Ban Si Lang, 1200 m, 1-8.v.1992, J. Horák lgt.; ( $2 \mathcal{C} \mathcal{C}$ ): Thailand NW, Ban Huai Po, 1600-2000 m, 8.-18.v.1992, J. Horák lgt. Deposited in author's collection.

**Description.** Male (holotype). Oblong oval, transversally very convex, body length 1.75 mm, greatest width 0.7 mm. Ratio length:width of elytra 1.55. Brown, pubescence whitish silvery, short, dense, recumbent. Antennae, palpi and legs bright brown.

Head evenly convex, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Eyes large, slightly globular. Frons slightly narrower than width of eye from dorsal view. Antennae consist of ten antennomeres. The first antennomere relatively robust and long, the second almost globular, the third twice longer than wide, from the fourth to the sixth approximately as wide as long and the seventh very small, almost rounded. The last three (from eighth to the tenth) enlarged, the eighth and the ninth almost twice longer than wide, both slightly triangular, the tenth twice longer than wide, taper.

Pronotum slightly transverse (length 0.45 mm, width 0.6 mm), strongly convex, widest at two thirds, without bump anteriorly in the middle. Lateral margin visible only shortly before of base (dorsal view). Base of pronotum twice slightly emarginated (Fig. 71). Surface of pronotum matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense. Scutellum trapezoidal, slightly longer than wide.

Elytra without distinct shoulders, matt, with double punctuation - the first is coarse and sparse, diameter of puncture the same as distance between punctures, the second is fine and dense, with very fine striae, lateral striae more distinct.

The first and second visible sternites long, approximately twice wider than the third. The fourth as long as the third, the fifth slightly wider than the fourth and the third. The first sternite with sharp and long hook.

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Aedeagus see Fig. 40. Female: Unknown.

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**Variability.** Body length 1.45-2.0 mm, width 0.6-0.85 mm. Colour of body sometimes dark brown, striae on elytra more or less visible, sometimes almost invisible, excepted 2 or 3 lateral striae.

**Differential diagnosis.** This species is very similar to other species from *G. laevigatus*group, with small differences in shape of pronotum and antennae. The most important is shape of aedeagus, which is stable and very different from other species.

**Name derivation.** Dedicated to the well-know world specialist in Ptinidae (= Anobidae) Richard E. White.

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