

Five new species of *Galerita* from Asia and new distributional records (Coleoptera: Carabidae: Galeritini)

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Abstract. *Galerita borneensis* sp. nov. from Indonesia (South Kalimantan), *G. chinensis* sp. nov. from China (Guanxi Zhuang Aut. Reg.), *G. guangdongensis* from China (Guangdong, Fujian and Jiangxi Prov.), *G. tonkinensis* sp. nov. from Vietnam and *G. wrasei* sp. nov. from China (Yunnan Prov.) are described. The new species are illustrated and compared with theirs supposedly most relative congeners. *Galerita batesi* Andrewes, 1923 and *G. feae* Bates, 1892 are recorded as new species for the fauna of Thailand.

INTRODUCTION

The nominotypical subgenus of the pantropical genus *Galerita* Fabricius, 1801 is represented by 85 species in all zoogeographic regions excluding Oceania, in Australasian realm reaching only marginally to few islands east of the Wallace line (Sulawesi, Sumbawa, Flores). Asian species were revised by Reichardt (1965). The author recognised only seven distinct species in his revision, which were divided by him in two species-groups: the *orientalis*-group and the *carinifrons*-group. The *orientalis*-group was characterised by Reichardt (1965: 7) "mainly by the shape of pronotum, with posterior constriction very basally placed, not well defined; basal angles very rounded; elytra usually with very conspicuous pilosity, formed by two more or less parallel rows of rufous hairs in each carinae-carinulae interstice". The *carinifrons*-group was characterised by Reichardt (1965: 12) by "pronotum usually with better defined posterior constriction; this is situated less basally than in *orientalis*-group; basal angles sharp; elytra with pilosity less visible, sometimes absent; species with more restricted distribution, some with reduced wings".

The differences between these groups which are based on shape of the pronotum, namely on length and shape of latero-posterior pronotal constriction, which are more or less fictitious. Reichardt never has seen and studied the type specimens of *Galerita orientalis* Schmidt-Göbel, 1846; his only source of information about them was evidently the redescription given by Andrewes (1923). Both syntypes of this species have very distinct lateral pronotal sinuation, which is nearly as long and exactly as deep as in syntype of *G. feae* Bates, 1892 or only slightly less deep than in the holotype of *G. carinifrons* Schaufuss, 1887; hind pronotal angles are not so sharp in *G. orientalis*, so that only this character remains as the only difference between species of both groups observable on pronotum. Thus, the main reliable difference between both species-groups remains elytral pilosity in carinae-carinulae interstices on elytral disc, which is formed by one row of setigerous punctures in species of *carinifrons*-group or by two rows of setigerous punctures in *orientalis*-group. However, even in this case Reichardt's statement about presence of two rows of setigerous punctures in all carinae-carinulae interstices is not exact. Even both syntypes of *G. orientalis* Schmidt-Göbel have part of this interstices along first, fifth and seventh carina with only one row of setigerous punctures, and the new Chinese species described below

and assigned to *orientalis*-group has row of punctures in all carinae-carinulae interstices along odd carinae single.

Elytral macrosculpture is of the type IVA in Asiatic species, microsculpture seems to me to be near the type 4B as defined by Ball (1985).

The purpose of this paper is to describe five additional new species of *Galerita* from mainland China (namely from Guangxi Zhuang Autonomous Region, Guangdong and Yunnan Provinces) and from Indonesia (South Kalimantan) and Vietnam. Two from this new species belong to *carinifrons*-group, three belong to *orientalis*-group.

New distributional records of *Galerita batesi* Andrewes, 1923 and *Galerita feae* Bates, 1892 are given.

MATERIAL AND METHODS

Material examined is housed in the following collections:

- ADCW private collection of Alexander Dostal (Wien, Austria);
- BMNH The Natural History Museum [former British Museum (Natural History)], London, U. K. (Beulah Garner, Michael Geiser);
- DWCG collection of David W. Wrase, Gusow-Platkow, Germany (part of Zoologische Staatssammlung München);
- IBCD private collection of Ingo Brunk (Dresden, Germany);
- JTCK private collection of Jaroslav Turna (Kostelec na Hané, Czech Republic);
- MCGD Museo Civico di Storia Naturale "G. Doria", Genova (Maria Tavano, Roberto Poggi);
- MHCH private collection of Martin Häckel (Hostivice, Czech Republic);
- MNBC Museum für Naturkunde, Berlin (Johannes Frisch, Bernd Jaeger);
- NMPC National Museum, Prague, Czech Republic (Jiří Hájek);
- OHCP private collection of Oldřich Hovorka (Dobříš and Praha, Czech Republic);
- RSCM private collection of Riccardo Sciaky (Milano, Italy).

Measurements were made by using an ocular micrometer in an MBS 10 stereobinocular microscope. Total body length (TL) was measured from apex of the left mandible to the apex of longer elytron; the length of the head (HL) as the distance from anterior margin of the clypeus to the level of constriction posteriad the eyes; the width of the head (HW) as the maximum linear distance across the head, including the compound eyes; the length of eye (YL) as distance from anterior to posterior margin of eye in dorsal view; the length of occiput (OL) as distance from the level of hind eye margin to the level of neck constriction; the length of the pronotum (PL) from the anterior margin to the posterior one along the midline; the length of the elytra (EL) from the border between the peduncle and basal inclination to the apex of the longer elytron; the width of the pronotum (PW) and of the elytra (EW) at their broadest point.

The microsculpture was examined under a magnification of 56x. Dissection was made with standard technique; male genitalia are glued on the small card beneath the specimen or after cleaning by KOH placed in plastic tube with glycerol.

Photographs of specimens were taken with the Canon EOS 600D digital camera with Canon MP-E 65 mm objective for details and Canon EF 60 mm objective for general habitus of specimens. Images of the same objects at different focal planes were combined by using the Helicon Focus 6.4.3 software.

Labels are cited in the following manner: lines on the same label are separated by slash /, separate labels are indicated by double-slash //. Each specimen or a series of specimens are separated by a semicolon.

The type specimen of newly described species are provided with locality label and one red printed label: "*Galerita specificepithet* sp. nov., HOLOTYPE (or PARATYPE), det. O. Hovorka, 2018 (or 2019)".

The new species are all habitually similar to *G. feae* by completely black or piceous body and legs. They differs by pattern of elytral pilosity (two of them have the same type as was defined for *carinifrons*-group, three Chinese species corresponds in this character to *orientalis*-group) and by several other morphological characters which are species-specific in genus *Galerita* (e.g. ratio of width of carinae interstices to carinae-carinulae interstices, ratio of eye length to occiput length, proportions of pronotum etc.). It looks that regardless of type of elytral pilosity (and of some other morphological characters) all wholly black specimens of *Galerita* from continental Asia were in past determined as *G. feae*, as the Reichardt's (1965) key is based on colour of legs (and on colour of body in general). Studying some historical specimens from several museum collections and mainly the recently collected materials from some private collections, I found that there exist several morphological types of strongly brachypterous *Galerita* populations. The great similarity in male genital morphology of four morphotypes from continental Asia described below indicate, that this populations represent young taxa of uncertain taxonomic category (species, subspecies or other infrasubspecific groupings or in opposite some superspecific assemblage). I decided to describe them as species, as the gene flow between any two from this populations is not probable due to their brachyptery and therefore isolation, and the external morphological differences are of the same degree as in other *Galerita* species considered to be distinct.

DESCRIPTION OF NEW SPECIES

***Galerita carinifrons* species group**

Reichardt (1965) classified four species in this group: *batesi* Andrewes, 1923, *carinifrons* Schaufuss, 1887, *feae* Bates, 1892 and *toreuta* Andrewes, 1933. Three additional species were described after that from Asia, which were not formally assigned to any species-group - *G. javana* Jedlička, 1965 from Java, which was shown to be a mislabelled specimen of some species belonging to the subgenus *Galerita* (*Progaleritina*) (Hovorka 2017), *G. loeffleri* Jedlička, 1966 from Laos, which belongs to the *carinifrons*-group and *G. hrdlickai* Hovorka, 2017 from Bali I., closely related to *toreuta* and therefore belonging to this group, too.

The group is characterized by relatively sharp, only narrowly rounded posterior pronotal angles, and by presence of only one row of setigerous punctures in each carina-carinula interval on elytral disc; but on elytral base, approximately at the level of scutellar tip or slightly posteriorly this level, and in carina-carinula interval laterally to eight carina double row of setigerous punctures can occur. Descriptions of two new species of *carinifrons*-group follows.

***Galerita borneensis* sp. nov.**

(Figs. 1-2)

Type material. Holotype (♀) labelled: "Südborneo / Bandjermasin / L.W. Schaufuss G." (MNBC).

Description. Habitus (Fig. 1). Middle sized (TL 19.8 mm), brown-black species with somewhat lighter, brown head and brown to brown-red appendages.

Coloration and microsculpture - pronotum and elytra brown-black, head slightly lighter, dark brown; clypeus, labrum, mandibles, antennomeres and palpomeres brown to red-brown, only

mandibular terebrum and apical part of first antennomere (scapus) darkened, piceous. Legs brown, femoral apex infuscated, black-brown. Tarsomeres brown-red. Ventral side somewhat lighter than dorsum, brownish. Head (including labrum and dorsal side of mandibles) and whole ventral side with weak isodiametric to slightly transverse microsculpture, pronotum with very indistinct microsculpture. Elytra dull through strong nodulate microsculpture. Body with short (± 0.25 mm long), yellow-brown to red-brown setae.



Figs. 1-2. *Galerita borneensis* sp. nov., holotype: 1-general habitus (total length 19.8 mm); 2-detail of head and pronotum, dorsal view. Without scales.

Head (Fig. 2) slightly longer than wide (HL/HW 1.10). Eyes relatively large and strongly convex, prominent, occiput short (OL/YL 0.91), narrowed posteriad (Fig. 5). Frons concave, cavity irregularly rugose to rugoso-punctate, divided by distinct median ridge. Posterior part of frons and occiput distinctly and relatively densely punctured, punctures on occiput confluent in transverse rows; central area of posterior part of frons and anterior part of occiput distinctly flattened. Labrum transverse, with anterior margin transverse, with only very slightly indicated incision in the

middle, with six large setae. Clypeus transverse, with two pairs of strong setae in the middle and apico-laterally with 2-3 small setae. Antennae relatively long, reaching nearly half-length of elytron.

Pronotum (Fig. 2) subquadrate, only very slightly longer than wide (PL/PW 1.03) and distinctly wider than head (PW/HW 1.22), distinctly and densely punctured, punctures connected in transverse or oblique rows. Anterior pronotal margin slightly incised, concave, anterior angles rounded. Lateral pronotal margin rounded and convex in anterior three quarters, distinctly incised posteriad, sides then almost parallel, not divergent towards hind angles, which are rounded. Proepisternites punctured mainly antero-medially, posterior part smooth with exception of few setigerous punctures along posterior proepisternal margin, prosternite more densely punctured on whole surface. Scutellum triangular, elongated, densely punctured on whole surface, setose, setae decumbent, only near apex semi-erect. Prosternal process laterally not margined, distinctly punctured, with slight but distinct central elongated ridge not reaching its apex. Metepisternites narrow, elongated, about 2 times longer than wide. Hind wings fully developed.

Elytra elongate, much longer than wide (EL/EW = 1.68) and distinctly much wider than pronotum (EW/PW = 1.75); greatest elytral width in two thirds of length. Elytra narrow at base, humerus rounded, poorly developed. Lateral elytral margin with very slight, indistinct concavity in basal quarter. Elytral carinae well developed, carinulae very thin, not closer to each other than to adjacent carina, but carinulae interstices as wide as carinae-carinulae interstices. Carinulae interstices with row of relatively large punctures, which are slightly sparser than punctures in carinae-carinulae interstices; this interstices with one row of relatively dense punctures bearing relatively short, yellowish hairs. Meso- and metatibia with dense, almost brush-like rufous pubescence on distal half of inner side.

Male genitalia unknown.

It is the first species of genus *Galerita* known from the Borneo (Stork 1986), if the locality label is authentic; but there is at the moment no reason to cast doubt on the locality data. The type specimen was collected in Bandjermasin (recently Banjarmasin), the capital of Indonesian province South Kalimantan, on the south coast of Borneo.

Differential diagnosis and relationships. *Galerita borneensis* sp. nov. differs from all consubgenera from the Oriental Region by the following combination of characters: body not black, but more or less piceous to rufopiceous; legs not distinctly bicolorous; carinae-carinulae interstices with one row of setae on elytral disc; head only slightly elongate, with large, convex eyes and short occiput, which is shorter than eye; pronotum subquadrate; elytra with distinctly developed carinae and carinulae, carinulae interstices distinctly punctured, as wide as carinae-carinulae interstices; hind wings not reduced, elytral humerus developed, but widely rounded. A lot of characters is shared with *G. carinifrons*, which differs by distinctly bicolorous legs, less distinct elytral humerus, more strongly developed carinulae, carinulae interstices distinctly narrower than carinae-carinulae interstices and strongly reduced hind wings. Apart from mentioned differences, the species *carinifrons* seems to be most closely relative to *G. borneensis* sp. nov. within all known species belonging to *carinifrons*-group. *G. feae* from mainland Asia, *G. toreuta* Andrewes, 1933 from Java and recently described *G. hrdlickai* Hovorka, 2017 from Bali Isl. are evidently more distant species.

Name derivation. Specific epithet is derived from the name of the island where the specimen was collected - Borneo.

***Galerita tonkinensis* sp. nov.**
(Figs. 3-8)

Type material. Holotype (♂) labelled: "Vietnam, Tam Dao / 3.6.-11.6. 1985 / Vinh phu prov. / Jan Viša lgt.", white printed label "ex coll. Jan Macek / National Museum / Prague, Czech Republic", white handwritten determination label "Galeritula / feae Bat. / Jan Macek det. [20]00" (NMPC). Paratypes: 1 ♀, the same data as holotype (NMPC); 1 ♂, "SE Asia N-Vietnam / Vinh Phu Province / Tam Dao / vi-1985 lgt. V. Švihla", light blue printed label "Martin Häckel / collection / Prague / Czech Republic" (MHCH); 1 ♀, "Tam Dao / Tonkin / H. Perrot // 53 [white handwritten label] // H.E. Andrewes Coll. / B.M. 1945-97. [white printed label]" (BMNH); 1 ♀, "Vietnam N, Tam Dao / Tam Dao Nat. Park / 11.6. 2011, 1000 m [a.s.l.] / M. Pejcha lgt.", white handwritten determination label "Galerita / spec. / D.W. Wrase det. [20]12", white printed label "coll. Wrase / Berlin", light green label "coll. Wrase / Berlin" (DWCG); 1 ♀, "N. Vietnam / Tam Dao 60 NW Hanoi / 21°34'N, 105°20'E 1200m / 1.-5.v.1993 sek. Wald / leg. Sinajev & Simonov" (RSCM); 1 ♂, "North Vietnam / Fang Sipang mt. [= Fan Si Pan, Fansipan or Phan Xi Păng in Vietnamese] / 8.-28.v.1993 / leg. Siniaev &" (RSCM); 1 ♀, "Vietnam, Tam Dao / 05.2010 / leg. Zaritzkyi D. / ex.coll. Udovichenko P." (RSCM).



Figs. 3-8. *Galerita tonkinensis* sp. nov., holotype: 3- general habitus (total length 26.1 mm); 4- detail of head and pronotum, dorsal view; 5- medial lobus of male, lateral view; 6- medial lobus of male, dorsal view; 7- medial lobus of male, ventral view; 8- left paramere. Without scales.

Description. Habitus (Fig. 3). Very large (TL 26.0-28.1 mm), elongate, black species.

Coloration and microsculpture - body black; legs - femora wholly black, tibiae from black knees gradually turning brown to apices; labrum black with brown-red margins; mandibles black-brown with lighter apices; antennae, palpomeres and tarsomeres brown to red-brown, scapus and pedicellus darker than flagellomeres. Head with not sharply delimited brown to brown-red oblique strips between the eyes, in some specimens divided into two spots or reduced; lateral margins or almost whole frons reddish-brown. Ventral side black to brown-black. Labrum and mandibles with very distinct isodiametric microsculpture, head (only on temporal area), pronotum and whole ventral side with very weak, almost unrecognisable microsculpture, elytra dull through strong nodulate microsculpture. Body with short, yellow-brown to yellow-red setae.

Head (Fig. 4) distinctly very elongate (HL/HW 1.23-1.36). Eyes relatively small, slightly convex and prominent. Occiput long, much longer than transverse diameter of eye (2.14-2.48 times in males and 2.50-2.70 times in females) and markedly longer than length of eye (OL/YL 1.26-1.35 times in males and 1.34-1.45 times in females), its sides slightly convex or almost linearly narrowed posteriad. Frons with two distinct depressions divided by median ridge, with very sparse and fine punctures, depressions irregularly, obliquely rugose. Posterior part of frons and occiput distinctly and relatively densely punctured, punctures on occiput confluent in transverse rows. Labrum transverse, with anterior margin linear or slightly convex and slightly but distinctly notched in the middle, with six large setae. Clypeus transverse, with two pairs of strong setae in the middle and apico-laterally with 2-3 small setae on each side. Antennae long, almost reaching half-length of elytron.

Pronotum elongate, distinctly longer than wide, more in males than in females (PL/PW 1.21-1.25 in males, 1.11-1.18 in females) and slightly wider than head (PW/HW 1.25-1.32), distinctly and densely punctured, punctures tend to be connected in transverse or slightly oblique rows. Anterior pronotal margin slightly incised, concave, anterior angles rounded. Lateral pronotal margin rounded and convex in anterior two thirds, distinctly incised posteriad, sides then almost parallel, only very slightly divergent towards hind angles, which are obtusely angled and rounded. Proepisternites relatively shallowly and sparsely punctured only in antero-medial portion, prosternite much more densely punctured, punctures connected in transverse rows. Scutellum triangular, elongate, densely punctured on whole surface. Prosternal process laterally not margined, distinctly punctured, with very slight and indistinct central elongate ridge. Metepisternites narrow, elongate, about 2 times longer than wide. Hind wings strongly reduced.

Elytra elongate, much longer than wide, especially in males (EL/EW 1.75-1.84 in males and 1.64-1.68 in females), and distinctly wider than pronotum (EW/PW 1.73-1.87); greatest elytral width at two thirds of length. Elytra narrow at base, humerus reduced, poorly developed. Lateral elytral margin with slight but distinct concavity in basal quarter. Elytral carinae well developed, carinulae thin, slightly closer to each other than to adjacent carina. Carinae lower and less distinct basally, but not markedly reduced (shortened). Carinulae interstices without setae, but with row of relatively large punctures, which are not sparser than punctures in carinae-carinulae interstices; this interstices with one row of relatively dense punctures bearing short, yellowish hairs. The row of punctures is in carinae-carinulae interstices of inner intervals irregular in anterior 0.10-0.15 of their length, so that partial second row of punctures is sometime created.

Male genitalia as in Figs. 5-8; ventral side of median lobe is in lateral view only very slightly convex, only extreme apex of median lobe bent down in lateral view (Fig. 5); inner sac of aedeagus basally with one large folded microtrichial field. More distally with two series of denticulate sclerites - dorsal series composed of eight sclerites and subdorsal composed of five sclerites, arranged in longitudinal row (dorsal series) or arc (ventral series). Basal sclerites

distinctly smaller than distal ones in both series, terminal sclerite of subdorsal row very large. One big, \pm oval, convex basal denticulate sclerite is ventrally under basal sclerites of mentioned rows. Two other big denticulate sclerites are in apical part of median lobe, one ventrally from penultimate plate of subdorsal series, second ventrally on left side of aedeagus on the same level as basal sclerite (Fig. 7). Left paramere relatively widely elliptic (Fig. 8), 2.1 times longer than wide, apex widely rounded. Meso- and metatibia with dense, almost brush-like rufous pubescence on distal half of inner side.

Differential diagnosis and relationships. *Galerita tonkinensis* sp. nov. differs from all consubgenera from Asiatic mainland by the following combination of characters: pronotum and legs black; head extremely elongate, with small but convex eyes and very long occiput, much longer (more than 1.25 times) than eye; elytra with distinctly developed carinae and carinulae, carinulae interstices punctured, only very slightly narrower than carinae-carinulae interstices; hind wings reduced, elytral humerus poorly developed; body length over 25 mm.

Name derivation. The name refers to the occurrence of the species in Tonkin - northern part of Vietnam.

Galerita orientalis species group

Reichardt (1965) classified three species in this group: *indica* Chaudoir, 1861, *orientalis* Schmidt-Göbel, 1846 and *ruficeps* Chaudoir, 1861. No from subsequently described species belongs to this species group, but three additional species are described here.

The group is characterized by more widely rounded basal pronotal angles and by presence of minimally two rows of setigerous punctures along at least even carinae on elytral disc.

Galerita chinensis sp. nov.

(Figs. 9-13)

Type material. Holotype (σ) labelled: "China - Guangxi - reg. / Fuchuan county, Chaifu env. / 24°00'N, 109°00'E, 20.-28.7.2002 / Einh. Fänger lgt." (DWCG); [as the Fuchuan county is located in north-eastern part of Guangxi autonomous region, the geographic coordinates given on locality label seem to be inexact]. Paratypes: 3 σ , "China, E Guangxi, For. Park / Gupo Shan, 1400 m / 24°38'N, 111°31'E / Jatua leg. 29.vi.-4.vii.2015" (ADCW, OHCP).

Description. Habitus (Fig. 9). Large (TL 23.3-25.0 mm), elongate, piceous to black species.

Coloration and microsculpture - body piceous or black; legs, antennae, labrum and apical part of mandibles brown, femora darker than tibiae in male, legs unicolorously black in female; scapus and pedicellus (and two basal flagellomeres in female) darker than (other) flagellomeres, palpomeres and tarsomeres brown. Head with not sharply delimited brown to brown-red spots between the eyes and almost whole temporal area reddish-brown in male, without spot and with only lateral parts of frons brownish in female. Ventral side black to brown-black. There is a possibility that male holotype is not fully mature and enumerated differences in colour of head and legs are caused by this fact. Head (including labrum and dorsal side of mandibles), pronotum and whole ventral side with weak isodiametric microsculpture, elytra dull through strong nodulate microsculpture. Body with short, inconspicuous brown to red-brown setae.

Head elongate (HL/HW 1.15-1.21). Eyes relatively small, but strongly convex and prominent, occiput long, 1.93-2.05 times longer than transverse diameter of eye and markedly longer than length of eye (OL/YL 1.08-1.20), narrowed posteriad. Frons concave, cavity irregularly rugoso-

punctate, divided by distinct median ridge. Posterior part of frons and occiput distinctly and relatively densely punctured, punctures on occiput confluent in transverse or oblique rows. Labrum transverse, with anterior margin prominent, slightly convex and slightly but distinctly notched in the middle, with six large setae. Clypeus transverse, with two pairs of strong setae in the middle and apico-laterally with 2-3 small setae. Antennae long, reaching half-length of elytron.

Pronotum elongate, distinctly longer than wide (PL/PW 1.19-1.24) and slightly wider than head (PW/HW 1.15-1.19), distinctly and densely punctured, punctures tend to be connected in transverse or oblique rows. Anterior pronotal margin slightly incised, concave, anterior angles rounded. Lateral pronotal margin rounded and convex in anterior three quarters, distinctly incised posteriad, sides than almost parallel, only slightly divergent towards hind angles, which are obtusely angled and rounded. Proepisternites punctured relatively shallowly and sparsely, especially in middle, prosternite more densely punctured. Scutellum triangular, elongate, densely punctured on whole surface. Prosternal process laterally not margined, anteriorly distinctly punctured, with slight but distinct central elongated ridge. Metepisternites narrow, elongated, about 2.2 times longer than wide. Hind wings vestigial, elytron 4.7 times longer than hind wing rudiment.



Figs. 9-13. *Galerita chinensis* sp. nov., holotype: 9- general habitus (total length 22.5 mm); 10- medial lobus of male, lateral view; 11- medial lobus of male, dorsal view; 12- medial lobus of male, ventral view; 13- left paramere. Without scales.

Elytra elongate, much longer than wide ($EL/EW = 1.68-1.80$) and distinctly much wider than pronotum ($EW/PW = 1.73-1.80$); greatest elytral width in two thirds of length. Elytra narrow at base, humerus reduced, poorly developed. Lateral elytral margin with slight but distinct concavity in basal quarter. Elytral carinae well developed, carinulae thin, somewhat undulate, markedly closer to each other than to adjacent carina. Carinae reduced (shortened) basally in male holotype, four inner carinae not reaching to the level of scutellar tip, normally developed in female. Carinulae interstices without setae, but with row of relatively large punctures, which are more sparse than punctures in carinae-carinulae interstices; this interstices along odd carinae with single row of setigerous punctures, but there are 2-3 rows of setigerous punctures in carinae-carinulae interstices along even carinae.

Male genitalia as on Figs. 10-13; ventral side of median lobe is in lateral view slightly convex, apical part of median lobe is in lateral view bent down (Fig. 10); inner sac of aedeagus basally with one large folded microtrichial field and one big sclerotized, \pm oval, convex denticulate sclerite and distally with two series of smaller denticulate sclerites - dorsal series composed of eight sclerites and subdorsal composed of four sclerites (in both series basal sclerites distinctly smaller than distal ones) arranged in longitudinal arc (dorsal series) or row (ventral one), ventrally from terminal sclerite of subdorsal series one another large single sclerite and in apical part of aedeagus two other large sclerites, seemingly in lateral view forming terminal sclerites of dorsal and subdorsal rows respectively, but in dorsal or ventral view evidently not arranged in one row with respective series (Fig. 12). Left paramere more or less trapezoidal (Fig. 13), 2.0 times longer than wide, apex subacute, narrowly rounded. Meso- and metatibia with dense, almost brush-like rufous pubescence on distal half of inner side.

Differential diagnosis and relationships. *Galerita chinensis* sp. nov. differs from all consubgenera from Asiatic mainland by the following combination of characters: pronotum and legs black; head distinctly elongate, with small but convex eyes and long occiput, which is 1.1-1.2 times longer than eye; pronotum markedly longer than wide, less than 1.2 times wider than head; elytra with distinctly developed carinae and carinulae; carinulae interstices punctured; hind wings reduced, elytral humerus poorly developed; shape of male left paramere is typical. This species is habitually and by the proportions very similar to *G. tamdaoensis*, but differs distinctly by elytral pilosity typical for members of *orientalis*-group.

Name derivation. The name refers to the occurrence of the species in China.

***Galerita guangdongensis* sp. nov.**

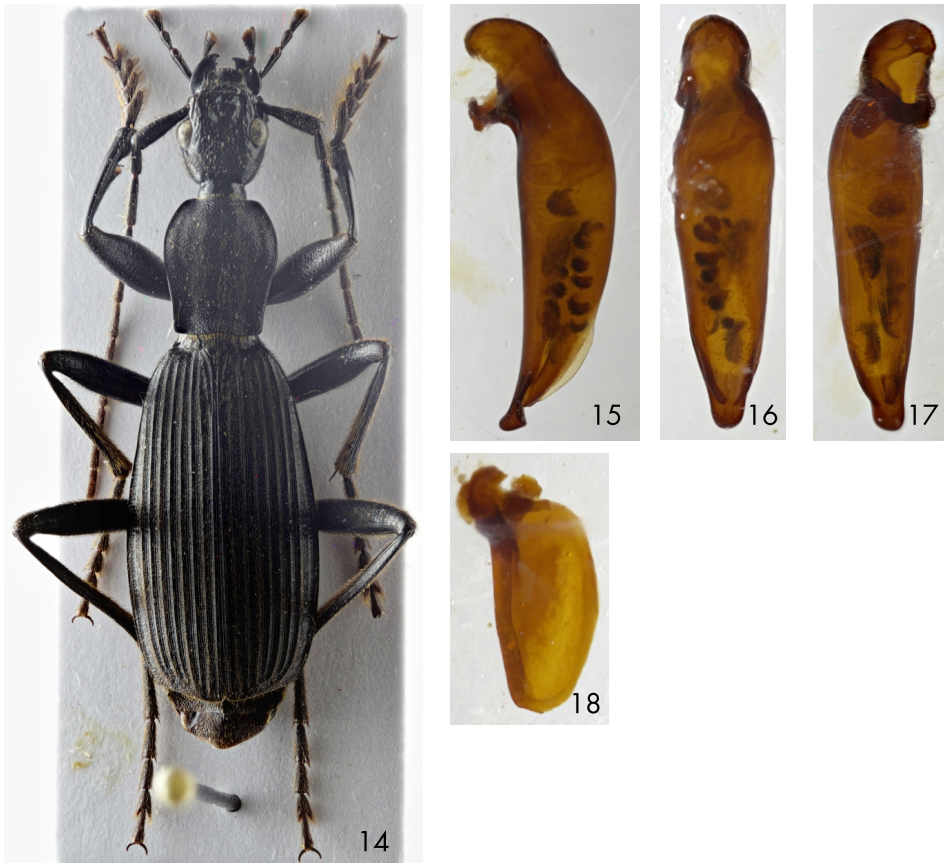
(Figs. 14-18)

Type material. Holotype (♂) labelled: "China, centr. Guangdong prov. / Yunjishan, 700-1300m / Nat.Res., 24°06'07"N 114°10'E / Jatua leg. 13.-23.vi.2013"; light green printed label "coll. Wrase / Berlin" (DWCG). Paratypes: 6 ♀♀, the same data as holotype (DWCG, JTCK, OHCP); 2 ♀♀, "China, NE Guangdong prov. / Yinna Shan, 600-900m / 24°24'N 116°24'25"E / Jatua leg. 25.v.-17.vi.2015" (ADCW); 1 ♂, 2 ♀♀, "S China, NE Guangdong / Qifeng Shan, 1050m / 23°51'N 115°21'E / vi. 2016" (MHCH); 2 ♂♂, 10 ♀♀, the same data as previous but "900-1200 m / Jatua leg., 31.v.-18.vi.2015" (IBCD, JTCK); 1 ♀, "China, SE Guangdong prov. / Lianhua Shan, 450m / 23°02'N 115°15'E / Jatua leg. 23.v.-2.vi. 2015" (JTCK); 4 ♀♀, "China, W Guangdong prov. / Qixingyanding, 950-1200m / 23°32'N 111°57'58"E / Jatua leg. 21.v.-13.vi. 2012" (JTCK, OHCP); 1 ♀, the same data but "25.v.-16.vi. 2013" (JTCK); 1 ♂, "China, SW Guangdong prov. / Baishui Pubu, 750m / 21°53'N 111°23'E / Jatua leg. 5.-24.vi. 2015" (OHCP); 2 ♀♀, "China, W Guangdong prov. / Qilinshan, forest park / 850m, 23°29'N 111°42'E / Jatua leg. 20.v.-14.vi. 2012" (JTCK); 2 ♂♂, "China, N Guangdong prov. / Xiaokeng, 240m / 24°42'N 113°49'E / Jatua leg. 12.vi. 2013" (JTCK, OHCP); 1 ♀,

"China, E Guangdong prov. / Qimuzhang, 1100-1200m / 23°51'N 115°22'E / Jatua leg. 7.vi.-1.vii. 2014" (JTCK); 4 ♀♀, "China, NW Guangdong prov. / Bang Shan, 650m / 23°53'N 111°59'E / Jatua leg. 14.vi.-5.vii. 2015" (JTCK); 2 ♀♀, the same data but "450m / 20.v.-5.vi. 2016" (JTCK); 5 ♀♀, "China, N Guangdong prov. / Nanlingshan, 1100-1600m / for.park, 24°56'N 113°00'E / Jatua leg. 18.v.-30.vi. 2012" (JTCK); 1 ♀, "China, E Fujian, 25.vi.-17.vii. / Jiuxianshan, 1350m / 25°42'N 118°07'E / 2007" (ADCW); 1 ♀, "China, Fujian c., 20.vi.-12.vii. / Tianbaoyanshan, NW slopes / 25°58'N 117°31'E, 1100m / 2007" (ADCW); 1 ♀, the same data as previous but "21.v.-26.vi.2011 / 117°32'E, 1100-1200m" (RSCM); 2 ♀♀ "China, E Fujian, 30.iv.-30.v. / Dalyunshan, 1100m / 25°38'N 118°13'E / 2009" (IBCD); 1 ♀, "China, centr. Fujian, 20.v.-27.vi. / Tiantaishan for.park / 1100-1200m, 25°43'N 117°17'E / 2011" (OHCP); 3 ♀♀, "China, S Jiangxi, Nat. Res. / Jiulian Shan, 750m / 24°32'N 114°28'E / Jatua leg., 27.v.-20.vi.2015" (OHCP).

Description. Habitus (Fig. 14). Large (TL 23.8-25.1 mm), elongate, black species.

Coloration and microsculpture - body black; antennomeres V-XI, tarsomeres, apical part of mandibles and apical part of terminal palpomeres brown to red-brown. Head without red spots between the eyes. Ventral side black. Head (including labrum and dorsal side of mandibles), pronotum and whole ventral side with weak isodiametric microsculpture, elytra dull through strong nodulate microsculpture. Body with moderately long brown to red-brown setae.



Figs. 14-18. *Galerita guangdongensis* sp. nov., holotype: 14- general habitus (total length 24.0 mm); 15- medial lobus of male, lateral view; 16- medial lobus of male, dorsal view; 17- medial lobus of male, ventral view; 18- left paramere. Without scales.

Head elongate (HL/HW 1.17-1.19). Eyes medium-sized, strongly convex and prominent. Occiput relatively long, 1.83-2.00 times longer than transverse diameter of eye and 1.08-1.20 times longer than longitudinal diameter of eye, laterally convex, narrowed posteriad. Frons with two distinct depressions divided by median ridge, with very sparse and fine punctures, depressions finely, transversely or obliquely rugose. Posterior part of frons and occiput distinctly and relatively densely punctured, punctures on occiput confluent in transverse or oblique rows. Labrum transverse, with anterior margin slightly convex and slightly but distinctly notched in the middle, with three pairs of large setae. Clypeus transverse, with two pairs of strong setae in the middle and apico-laterally with 2-3 small setae. Antennae relatively long, reaching nearly half-length of elytron.

Pronotum elongate, distinctly longer than wide (PL/PW 1.10-1.29) and markedly wider than head (PW/HW 1.20-1.27), distinctly and densely punctured, punctures often connected in transverse or oblique rows. Anterior pronotal margin very slightly incised and concave, anterior angles rounded. Lateral pronotal margin rounded and convex in anterior three quarters, distinctly, but relatively shallowly incised posteriad, sides shortly before base almost parallel, hind angles distinct but rounded at tips. Proepisternites relatively shallowly and sparsely punctured only in antero-medial portion and along posterior margin, prosternite much more densely punctured, punctures connected in transverse rows. Scutellum triangular, elongated, densely punctured on whole surface. Prosternal process laterally not margined, distinctly punctured, with slight but distinct central elongated rounded ridge. Metepisternites narrow, elongated, about 1.6 times longer than wide. Hind wings strongly reduced, rudimentary.

Elytra elongate, much longer than wide, narrower and more elongate in males (EL/EW = 1.76-1.89) than in females (EL/EW = 1.66-1.76) and distinctly much wider than pronotum, less in males (EW/PW = 1.67-1.69) than in females (EW/PW = 1.70-1.83); greatest elytral width in two thirds of length. Elytra narrow at base, humerus fully reduced, not developed. Lateral elytral margin with very slight and almost indistinct concavity in basal quarter. Elytral carinae well developed, carinulae thin, somewhat undulate, markedly much closer to each other than to adjacent carina, carinae-carinulae interstices being twice or wider than carinulae interstices. Carinulae interstices without setae, indistinctly punctate, punctures very shallow and sparser than punctures in carinae-carinulae interstices. The row of punctures is in carinae-carinulae interstices along odd carinae single, but there are 2-3 rows of setigerous punctures in carinae-carinulae interstices along even carinae; part of this punctures intervene top of even carinae, which are therefore less sharp and distinct than odd carinae.

Male genitalia as in Figs. 15-18; ventral side of median lobe is in lateral view almost straight, apical part of median lobe is in lateral view distinctly bent down (Fig. 15); inner sac of aedeagus basally with one large folded microtrichial field and one big, \pm oval, convex denticulate sclerite and distally with two series of smaller denticulate sclerites - dorsal series composed of seven sclerites and subdorsal composed of three sclerites (in both series basal sclerites slightly smaller than distal ones) arranged in longitudinal arc (dorsal series) or row (ventral one), ventrally from basal sclerites of both series one another large single sclerite and in apical part of aedeagus two other large sclerites, seemingly in lateral view forming terminal sclerites of dorsal and subdorsal rows respectively, but in dorsal or ventral view evidently not arranged in one row with respective series (Figs. 16, 17). Left paramere elongate-oval (Fig. 18), 2.3 times longer than wide, apex widely rounded. Meso- and metatibia with dense, almost brush-like rufous pubescence on distal half of inner side.

Differential diagnosis and relationships. *Galerita guangdongensis* sp. nov. differs from

all consubgenera from Asiatic mainland by the following combination of characters: pronotum and legs black; head elongate, with small but convex eyes and long occiput (approximately 1.1-1.2 times longer than eye); frons without red spots between the eyes; pronotum markedly elongate, always more than 1.1 times longer than wide, and distinctly much wider than head (more than 1.2 times); elytra with distinctly developed carinae and carinulae, carinulae interstices indistinctly punctured; hind wings reduced, elytral humerus reduced.

Distribution and collecting circumstances. The species is widely distributed in Guangdong province and in adjacent areas of neighbouring provinces - in extreme south of Jiangxi province and in south-western and central Fujian province. Beetles from type series were collected in wide span of altitudes from 240 to 1600 m a.s.l.

Name derivation. Specific epithet is derived from the name of Chinese province Guangdong, where most of the specimens of type series were collected.

***Galerita wrasei* sp. nov.**

(Figs. 19-23)

Type material. Holotype (♂) labelled: "China (Yunnan) Lincang Pref., / Bangma Shan, E pass, 17 km NW / Lincang 2040 m / 23°57'31"N 99°56'13"E, / (secondary pine forest / with ferns, in soil around trees) / 9.ix.2009 D.W. Wrase (36A)"; light green printed label "coll. Wrase / Berlin" (DWCG). Paratypes: 1 ♂, 1 ♀, the same data as holotype (DWCG, OHCP); 6 ♂♂, 17 ♀♀, "China, S-Yunnan Prov. / Pu'er, Xiaoyanzi / 22°50'N 101°01'E 1835m / Jatua leg. 18.-28.v.2017" (ADCW, IBCH, MHCH, OHCP); 1 ♂, "China - Yunnan / Monwan town / Lincang vi.2017" (RSCM).

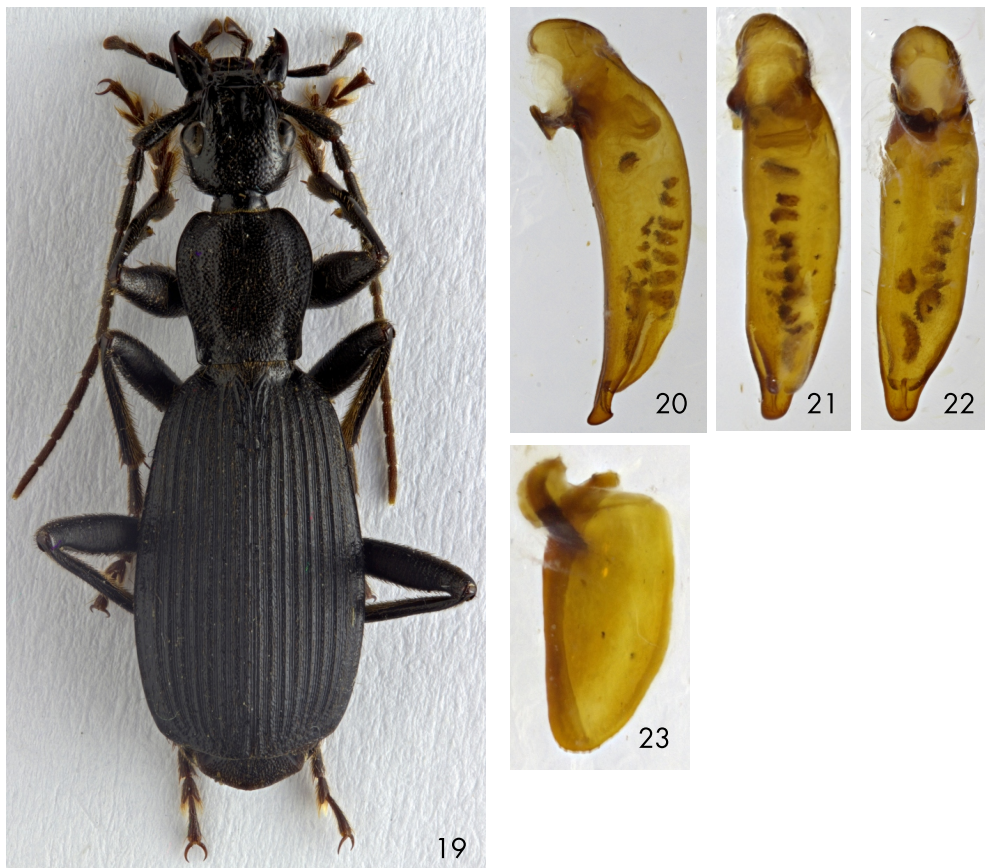
Description. Habitus (Fig. 19). Large (TL 20.7-21.8 mm), elongate, black species.

Coloration and microsculpture - body black; mandibles black-brown, palpomeres brown, antennae - scapus and pedicellus black, antennomere III dark brown, antennomere IV brown, antennomeres V-XI and tarsomeres yellow-brown. Head with very indistinct, narrow, oblique reddish-brown maculae on posterior part of frons. Ventral side black. Head (including labrum and dorsal side of mandibles), pronotum and whole ventral side with weak isodiametric microsculpture (which is on head and pronotal disc almost indistinct), elytra dull through strong nodulate microsculpture. Body with short, distinct, dark (brown to red-brown) setae.

Head elongate (HL/HW 1.07-1.18). Eyes relatively small, slightly convex. Occiput long, slightly longer than length of eye (OL/YL 1.05-1.19), parallel in anterior part, than strongly convex and narrowed posteriad, forming widely rounded obtuse angle. Frons concave, cavity irregularly and slightly rugoso-punctate, divided by distinct median ridge. Posterior part of frons and anterior part of vertex distinctly and densely punctured, punctures large, confluent in transverse or oblique rows; posterior part of vertex and occipital area with punctures smaller and sparse. Labrum transverse, with anterior margin transverse, slightly but distinctly notched in the middle, with six large setae. Clypeus transverse, with two pairs of strong setae in the middle and apico-laterally with 2-3 small setae. Antennae long, reaching 0.4 length of elytron.

Pronotum slightly elongate, slightly longer than wide (PL/PW 1.01-1.13) and slightly wider than head (PW/HW 1.12-1.22), distinctly and densely punctured, punctures tend to be connected in transverse or oblique rows. Anterior pronotal margin slightly incised, concave, anterior angles rounded. Lateral pronotal margin rounded and convex in anterior three quarters, distinctly incised posteriad, sides than parallel, not divergent towards hind angles, which are obtusely angled and rounded. Proepisternites punctured relatively shallowly and sparsely, especially in middle, prosternite more densely punctured. Scutellum triangular, elongated, densely punctured on whole

surface except extreme apex. Prosternal process laterally not margined, anteriorly distinctly punctured, with slight but distinct central elongated ridge. Metepisternites narrow, elongate, about 1.5 times longer than wide. Hind wings strongly reduced, vestigial.



Figs. 19-23. *Galerita wrasei* sp. nov., holotype: 19- general habitus (total length 20.8 mm); 20- medial lobe of male, lateral view; 21- medial lobe of male, dorsal view; 22- medial lobe of male, ventral view; 23- left paramere. Without scales.

Elytra elongate, much longer than wide, narrower and slightly more elongate in males ($EL/EW = 1.61-1.75$) than in females ($EL/EW = 1.57-1.69$) and distinctly much wider than pronotum, less in males ($EW/PW = 1.65-1.79$) than in females ($EW/PW = 1.73-1.89$); greatest elytral width in two thirds of length. Elytra narrow at base, humerus reduced, widely rounded, but distinct. Lateral elytral margin with slight but distinct concavity in basal quarter. Elytral carinae well developed, carinulae thin, markedly much closer to each other than to adjacent carina, carinae-carinulae interstices being distinctly much wider than carinulae interstices. Carinulae interstices without setae, punctate, punctures shallow and sparser than punctures in carinae-carinulae interstices. The row of punctures is in carinae-carinulae interstices along odd carinae single, but there are 2 rows of setigerous punctures in carinae-carinulae interstices along even carinae; part of this punctures intervene top of even carinae, which are therefore less sharp and distinct than odd carinae, as in previous species.

Male genitalia as in Figs. 20-23; ventral side of median lobe is in lateral view slightly concave, apical part of median lobe in lateral view not distinctly bent down with exception of apical capitulum (Fig. 20); inner sac of aedeagus basally with one large folded microtrichial field and one medium sized, \pm oval, convex denticulate sclerite and distally with two series of small denticulate sclerites. Dorsal series composed of eight denticulate sclerites and subdorsal composed of six denticulate sclerites (in both series basal plates smaller than distal ones) arranged in longitudinal rows, in apical part of aedeagus two other large denticulate sclerites, seemingly in lateral view forming terminal sclerites of dorsal and subdorsal rows respectively, but in ventral view evidently not arranged in one row with respective series (Fig. 22). Left paramere elongate-oval (Fig. 23), about 2 times longer than wide, ventral margin almost straight, dorsal margin asymmetrically narrowed towards relatively widely rounded apex. Meso- and metatibia with dense, almost brush-like rufous pubescence on distal half of inner side.

Differential diagnosis and relationships. *Galerita wrasei* sp. nov. differs from all consubgenera from Asiatic mainland by the following combination of characters: pronotum and legs black; head only slightly elongate, with small but convex eyes and long occiput (approximately 1.1-1.2 times longer than eye); frons without red spots between the eyes; elytra with distinctly developed carinae and carinulae; pronotum elongate, but usually less than 1.1 times longer than wide, and wider than head, but mostly less than 1.2 times; carinulae interstices indistinctly punctured; hind wings reduced, elytral humerus widely rounded, but still visible; carinae-carinulae interstices along even carinae with 2-3 rows of setigerous punctures; male median lobus with smaller and more numerous denticulate sclerites than previous species. Similar to *guangdongensis*, but smaller and more robust, with less elongate head and pronotum.

Distribution and collecting circumstances. The species is known only from three localities in south-western part of the Chinese province Yunnan. Beetles from the type series were collected (if known) in relatively high altitudes from 1835 to 2040 m a.s.l., part of them in secondary pine forest with ferns, in soil around trees.

Name derivation. Specific epithet is patronym in honour of the David W. Wrase, who collected the part of the type series.

DISTRIBUTIONAL RECORDS

***Galerita batesi* Andrewes, 1923** - known distribution: Myanmar, India (Assam) (Reichardt 1965), Annam (= Central Vietnam) (Csiki 1932).

Studied material: 1 ♀, "Thai, 17.-24.vi.1991, Doi Chiang Dao mts., 19°25'N 98°52'E, lgt. D. Král, 1000 m [a.s.l.]" (OHCP). New species for Thailand.

***Galerita feae* Bates, 1892** - Bates (1892) described the species from Burma (= Myanmar), Csiki (1932) mentioned it besides from Laos, Reichardt (1965) reported the species from China (Yunnan), Laos and Vietnam, both Baehr (2003) and Huber & Marggi (2017) from Southwestern Territory of China (= Chongqing, Guizhou, Sichuan and Yunnan) and Oriental Region (of course without more precise specification).

Studied material: 1 ♀, labelled: "NW Thailand 23.-31.v. / Mae Hong Son, 1991 / Ban Si Lang, 1200m [a.s.l.] / J. Horák leg." (OHCP); 1 ♀, "SE Asia E-Thailand / Kanchanaburi distr. / Khao Soi Dao V-1998 / lgt. J. Horák" (MHCH); 1 ♀, "Thailand 7.-12.v. / Mae Hong Son prov. / Soppong, 1500m [a.s.l.] / 19°27'N 98°20'E / lgt. S. Bečvář, 1996" (RSCM); 1 ♀, "Thailand N, 2018 / Chiang Dao 8.v. / Wiang Haeng env. /

M. Snížek lgt." (ADCW). All females were carefully compared with female syntype of *G. feae* Bates, 1892 from Genova museum. They agree in all important morphological characteristics with two exceptions - their eyes are larger (and more convex), so that occiput is only as long as eye or only slightly longer (OL/YL 1.00-1.07, but in female syntype is this ratio 1.18); and ratio of head width and head length is in specimens from Thailand slightly lesser (HL/HW 1.09-1.14) than in syntype from Myanmar (1.16). Nevertheless, as all other morphological characters agree with *G. feae* and no male from Thailand is available at the moment, they are tentatively attributed to this species. New species for Thailand.

The recent catalogues of Palaearctic Coleoptera (Baehr 2003, Huber & Marggi 2017) quoted for the territory of China only two species of *Galerita* Fabricius, 1801 - *G. orientalis* Schmidt-Göbel, 1846 which is recorded from six Chinese provinces, autonomous regions or special administrative regions (Fujian, Guangdong, Guangxi, Hong Kong, Sichuan, Yunnan and Taiwan), and *G. feae* Bates, 1892 from Southwestern Territory of China (= provinces Chongqing, Guizhou, Sichuan and Yunnan). In the case of *G. feae*, it is very probable that at least a part of these records are actually based on misidentified specimens belonging to other species, in part to those described in this paper or to so far undescribed taxa. The occurrence of true *G. feae* in China needs confirmation.

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