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Five new species of the *Callosobruchus chinensis* group
from the Oriental Region and Australia
(Coleoptera: Bruchidae: Bruchinae)

KLAUS-WERNER ANTON
Grünewaldstr. 13, 79312 Emmendingen, Germany

ABSTRACT. Of the *Callosobruchus chinensis* group, *C. emeritus* n. sp. (NW Australia), *C. orientalis* n. sp. (Indonesia: Java, Celebes, Bali, Lombok, Philippines: Mindoro), *C. nigritus* n. sp. (Nepal, N Thailand, Vietnam), *C. antennatus* n. sp. (N India) and *C. montanus* n. sp. (N India, Nepal, N Thailand, Laos) are described. *Bruchus rubens* BOHEMAN, 1833 is synonymized with *Callosobruchus chinensis* (LINNAEUS, 1758), and *Kythorinus semigriseus* MOTSCHULSKI, 1874 is transferred to the genus *Callosobruchus* Pic.

Key words: entomology, taxonomy, zoogeography, new species, *Callosobruchus*, *Bruchinae*, *Bruchidae*, Oriental Region, Australia.

The *Callosobruchus chinensis* group (type species: *Curculio chinensis* LINNAEUS, 1758, preserved in British Musuem, Natural History, London) has the following combination of characters: median lobe and lateral lobes usually strongly elongate, median lobe with ventral valve more or less spear-shaped, internal sac with a single pair of denticulate plates usually subbasally, in one species medially (*C. theobromae*). Hitherto eleven species of the *C. chinensis* group have been described: *C. bhutanicus* DECELLE, 1977, *C. cajanis* ARORA, 1977, *C. chinensis* (LINNAEUS, 1758) (= *Bruchus rubens* BOHEMAN, 1833, **n. syn.**), *C. dolichosi* (GYLLENHAL, 1839), *C. gibbicollis* BOROWIEC, 1984, *C. nigripennis* (ALLARD, 1895), *C. pulcher* (PIC, 1922), *C. semigriseus* (MOTSCHULSKY, 1874), **n. comb.** (= *Kythorinus semigriseus* MOTSCHULSKY, 1874), *C. taiwanensis* CHUJO, 1937, *C. theobromae* (LINNAEUS, 1767), *C. sukhanensis* SINGAL & PAJNI, 1990. Below, five new species are described from the Oriental Region and Australia.

Abbreviations used in the text:

- BMNH: British Museum of Natural History (London, Great Britain);
CKWA: Collection of author (Emmendingen, Germany);
HNHM: Hungarian Natural History Museum (Budapest, Hungary);
MNHN: Muséum Nationale d'Histoire naturelle (Paris, France);
NHMB: Naturhistorisches Museum (Basel, Switzerland);
NHMW: Naturhistorisches Museum (Wien, Austria);
SMNS: Staatliches Museum für Naturkunde (Stuttgart, Germany);
ZMPA: Museum and Institute of Zoology, Polish Academy of Sciences (Warszawa, Poland).

***Callosobruchus orientalis* n. sp.**

(figs. 1-3)

ETYMOLOGY

The name refers to the distribution within the Oriental Region.

DIAGNOSIS

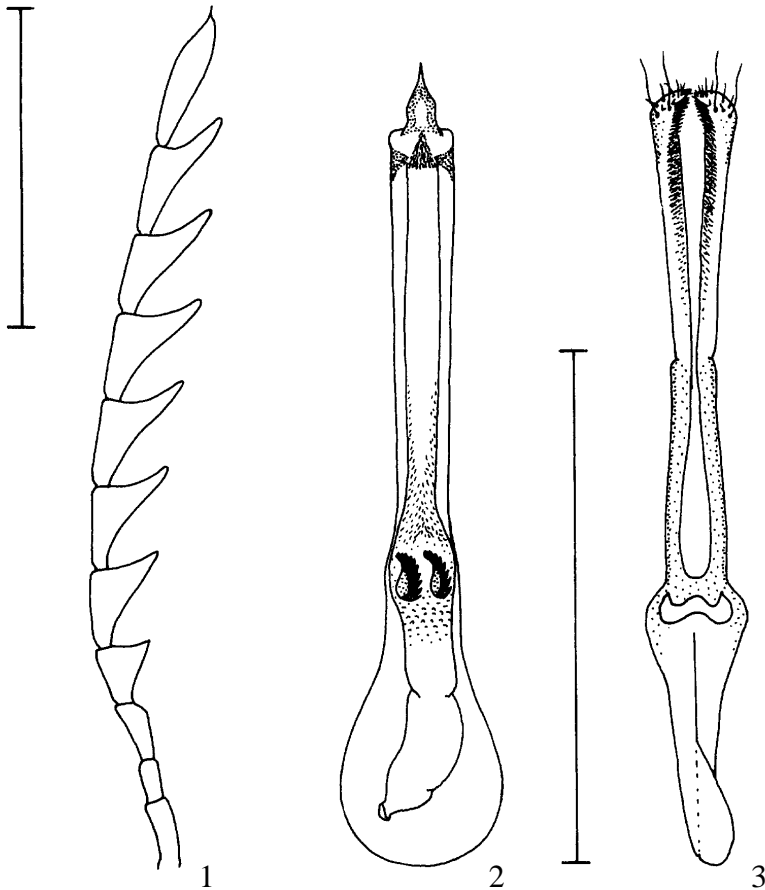
It is a member of the *C. chinensis* group and very closely related to *C. chinensis*. Externally very similar, males of the latter differ in the elytra at apical fifth without pattern of pale greyish and dark brown setae, antenna with segments 6-10 varying from rarely serrate to often pectinate, 11 always distinctly arcuate, eyes less bulging and distance between eyes longer, maximum width of eye about 3.6 times greater than minimum distance between eyes, internal sac in mid part with longitudinal bands of distinct, numerous, elongated, spine-like sclerites, and the lateral lobes apically with about 22-24 setae. Furthermore, both sexes in *C. chinensis* have elytral vestiture with striking, large, transverse, yellowish-golden band in basal second fourth, elytra shorter, about 2.0 times longer than pronotum, strongly converging towards apex, with protuberance at base of striae 3-4 varying from distinctly visible and double-hooked to nearly reduced, barely visible and without hooks, humeral calli very distinct.

DESCRIPTION

Length (pronotum-elytra): 2.0-2.5 mm, width: 1.3-1.8 mm. Body moderately oval.

Color varying from blackish-brown to pale reddish-brown; at least head, mid and metathorax darkened reddish-brown, and antenna, fore and mid legs reddish-yellow with claws always and antennal segments occasionally apically darkened; pronotum and elytra at most in male predominantly pale reddish-brown, in female predominantly darkened brown with intervals 10-11 paler reddish-brown; in both sexes elytra with blackish, irregular, transverse bands at base of intervals 4-10, at mid of intervals 3, 5-9 and subapically at intervals 3, 6 and 7. Vestiture of

scutellum and prescutellar area of pronotal base erected, very dense, silky, whitish, covering body surface completely; remaining vestiture recumbent, moderately dense, not covering body surface completely; ventrally body including pygidium predominantly greyish -whitish and yellowish, dorsal side at most in male predominantly greyish-whitish with dark brown setae at darkened parts of integument, in female predominantly dark brown, elytra in both sexes with three irregular bands: first at most indistinct, slender to moderately broad and greyish to pale yellowish at end of basal fifth, second distinct, slender and greyish-white at end of basal third, and third distinct, broad and greyish-white at beginning of apical third; elytral apex in male at least with greyish to yellowish setae at intervals 2 and 4-8, in female uniformly with dark-brown setae.



1-3. *Callosobruchus orientalis* n. sp.: 1 - male antenna; 2 - median lobe; 3 - lateral lobes. Scale bar = 1.0 mm

Head of moderate length. Eyes bulging, emarginate to half length. Tempora short. Frons and vertex convex, with elongate, glabrous, shiny interocular carina.

Pronotum conical, about 1.5 times wider than long, with sides straight to feebly bisinuate. Disc very densely punctate. Scutellum rectangular, slightly longer than wide.

Elytra about 2.2 times longer than pronotum, about 1.1 times longer than their combined width, with maximum width at end of basal third. Sides straight at mid third, weakly converging towards apex. Humeral calli distinct. Elytral striae distinct, punctate, striae 3-4 basally without protuberance. Intervals flat, with moderately dense micropuncturation and irregular row of large punctures.

Hind femora with acute, preapical denticle at lateroventral and mesoventral margins; both denticles of same length, lateroventral denticle distinctly broader than mesoventral denticle. Hind tibia with ventral, ventrolateral, lateral and dorsomesal carinae complete, dorsal carina indistinct; mucro about 2.5 times longer than coronal denticle at extension of lateral carina.

Pygidium densely punctate.

Male: Antennae extending to end of third fourth of elytral length; shape of segments not varying, 1-2 filiform, 3 subserrate, 4-10 serrate, 11 elongate and linear, 3-8 becoming steadily broader, 1 about twice longer than 2 and about 1.6 times longer than 3, 8-10 about as long as wide, segment 11 about 4.7 times longer than wide, with distinctly pointed tip (fig. 1). Eyes strongly bulging, maximum width of eye about 6.8 times wider than minimum distance between eyes. Abdomen moderately telescoped, sternite V emarginate to four fifths; pygidium moderately convex, as wide as long. Median lobe strongly elongate; ventral valve spear-shaped, with about 12 setae at basal half. Internal sac subbasally with pair of denticulate sclerites; each sclerite praed with about 9 denticles becoming steadily smaller from base to apex of sclerite; apically of denticulate sclerites with indistinct, minute, spine-like sclerites; basally of denticulate sclerites with minute, plate-like sclerites (fig. 2). Lateral lobes strongly elongate, completely separated, subspatulate, lateroapically and at basal half stronger sclerotized than at remaining parts, apically arcuate; apex with about 18 setae; setae varying in length, two of them very long (fig. 3). Basal strut elongate, with median carina. Spiculum gastrale Y-like.

Female: Antennae similar to males, but shorter, reaching behind humeral callus; segments 1-3 filiform, 4 subserrate, 5-10 serrate, 11 oblonge, 8-10 about 1.1 times longer than wide, 11 about 1.9 times longer than wide, with pointed tip. Eyes moderately bulging, maximum width of eye about 2.5 times wider than minimum distance between eyes. Abdomen simple; pygidium 1.1 times longer than wide; sternite V not emarginate. Ovipositor very short, with apical styli oblonge; stylus apically with three short setae; bursa copulatrix without sclerotized armature.

HOST PLANT

Unknown.

TYPES

Holotype, male: Indonesia, Java, Baluran, Beokol, nr. Banjuwangi, 13.V.1959, B. PISARSKI & J. PRÓSZYŃSKI (ZMPA); holotype genitalia slide no. 131299II; allotype, female: same data as holotype (ZMPA); paratypes, 25 males and 31 females: same data as holotype (ZMPA, CKWA); paratypes, male and female: same data as holotype, but 18.V.1959 (ZMPA); paratypes, 6 males and 2 females: Indonesia, Java, Djakarta, 6.V.1959, B. PISARSKI & J. PRÓSZYŃSKI (ZMPA, CKWA); paratypes, 3 males and 2 females: Indonesia, Bali, Gilimanuk, 26.V.1959, B. PISARSKI & J. PRÓSZYŃSKI (ZMPA, CKWA); paratype, male: Indonesia, Lombok, Senaro, N slope of Rinjani, 1100 m, 2.-5.II.1994, BOLM (SMNS); paratype, male: Indonesia, S Celebes, Samanga, XI.1895, H. FRUSTORFER, "samanganus n. sp." handwritten by M. PIC, (MNHN); paratype, female: Philippines, Mindoro, E of Puerto Galera, Sabang, XI.1992, M. JÄCH (NHMW).

REMARK: The species "*samanganus*" was not described by M. PIC, neither as *Bruchus* nor as *Callosobruchus*.

***Callosobruchus eremitus* n. sp.**

(figs. 4-6)

ETYMOLOGY

The name refers to the hitherto unknown occurrence of this genus in Australia.

DIAGNOSIS

It is a member of the *C. chinensis* group and closely related to *C. orientalis* and *C. chinensis*. Both the latter species differ in the body stouter, elytra maximum 2.2 times longer than pronotum, elytral sides less parallel, pronotal disc less convex, vestiture of scutellum and prescutellar area of pronotal base erected, very dense, silky, white, covering body surface completely, male elytra with at most distinct pattern of pale greyish and dark brown setae, internal sac with subbasal pair of denticulate sclerites oval, and lateral lobes without strongly pointed apical tip.

DESCRIPTION

Length (pronotum-elytra): 2.0-2.5 mm, width: 1.3-1.8 mm. Body oblonge-oval.

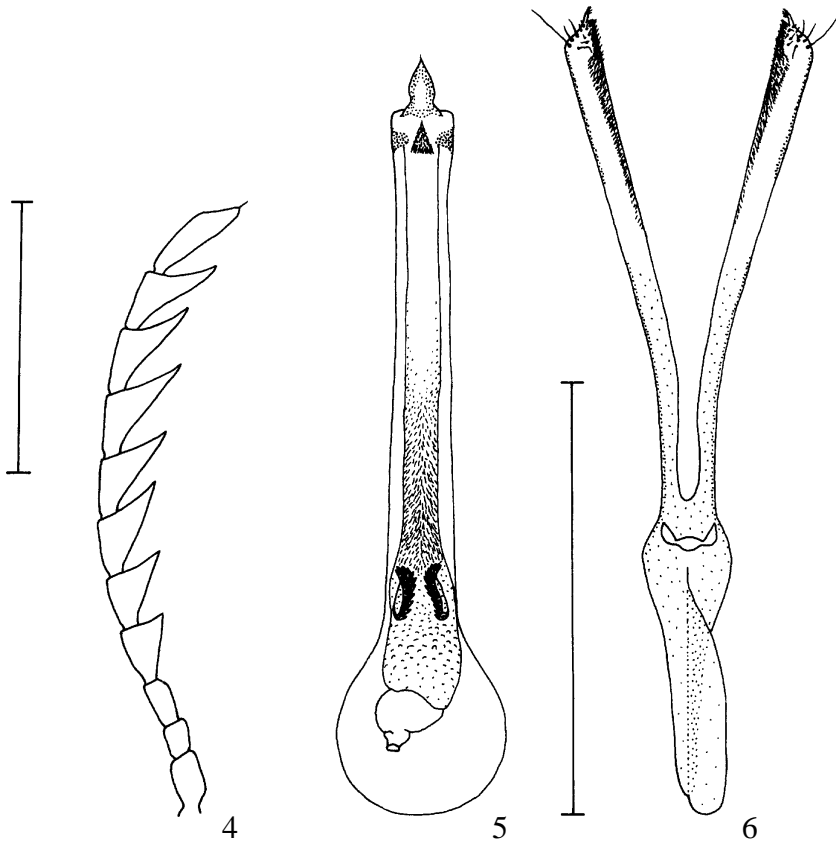
Color in male completely reddish-brown, in female blackish brown with antennal segments 1-2 and 11, knees and tarsal segments 3 more or less reddish-brown. Vestiture recumbent, moderately dense, not covering body surface completely; ventrally greyish-white, male dorsally completely greyish-white and yellowish-brown, female predominantly blackish with greyish, white and pale yellowish parts; male elytra with two more or less indistinct, irregular, transverse, greyish-white to pale yellowish bands, first at end of basal half, second at beginning of apical third; female elytra with three distinct, irregular, transverse bands, first pale yellowish at end of basal third, second white at end of basal half,

third greyish-white at beginning of apical third; in both sexes scutellum and prescutellar area of pronotal base greyish-white, pygidium greyish-whitish to pale yellowish, with oblong mediobasal patch; female pygidium lateroapically with additional, paired, dark-brown patch.

Head short. Eyes bulging, emarginate to three fifths of their length. Tempora short. Frons and vertex convex, with elongate, glabrous, shiny interocular carina.

Pronotum conical, about 1.2-1.3 times wider than long, with sides distinctly bisinuate. Disc moderately densely double punctate. Scutellum longer than wide, bifid.

Elytra about 2.2 times longer than pronotum, about 1.1 times longer than their combined width, with maximum width at end of basal third. Sides straight and parallel at mid third. Humeral calli very distinct. Elytral striae distinct,



4-6. *Callosobruchus eremitus* n. sp.: 4 - male antenna; 5 - median lobe; 6 - lateral lobes. Scale bar = 1.0 mm

punctate, striae 3-4 basally without protuberance. Intervals flat, with moderately dense micropuncturation and irregular row of large punctures.

Hind femora with acute, preapical denticle at lateroventral and mesoventral margins; lateroventral denticle distinctly broader and somewhat longer than mesoventral denticle. Hind tibia with ventral, lateral and dorsomesal carinae complete, ventrolateral carina incomplete, dorsal carina indistinct; mucro about twice longer than coronal denticle at extension of lateral carina.

Abdomen simple. Pygidium densely double punctate.

Male: Antennae extending to beginning of apical fourth of elytral length; shape of segments not varying, 1-2 filiform, 3 subserrate, 4-10 serrate, 11 elongate and linear, 3-8 becoming steadily broader, 1 about twice longer than 2 and about 1.6 times longer than 3, 8-10 about as long as wide, segment 11 about 3.0 times longer than wide, with pointed tip (fig. 4). Eyes strongly bulging, maximum width of eye about 3.2 times wider than minimum distance between eyes. Sternite V emarginate to half length; pygidium moderately convex, nearly as long as wide. Median lobe strongly elongate; ventral valve spear-shaped, with about 16-18 setae at basal half. Internal sac with pair of oblong, denticulate sclerites at beginning of basal part, each sclerite with about 9-10 denticles becoming steadily smaller from base to apex of sclerite; apically of denticulate sclerites with distinct, numerous, small, spine-like sclerites; basally of denticulate sclerites with minute, plate-like sclerites (fig. 5). Lateral lobes strongly elongate, completely separated, lateroapically and at basal half stronger sclerotized than at remaining parts, mesoapically with slender, pointed tip; apex with about 18 setae; setae varying in length, one of them very long (fig. 6). Basal strut elongate, with median carina. Spiculum gastrale Y-like.

Female: Antennae similar to male, with segments shorter, reaching to end of basal half of elytral length; segments 8-10 wider, about 1.1-1.2 times longer than wide, 11 about twice longer than wide. Eyes moderately bulging, maximum width of eye about 2.5 times wider than minimum distance between eyes. Abdomen simple, pygidium 1.1 times longer than wide, sternite V not emarginate. Ovipositor short, with apical styli elongate; stylus apically with three short setae; bursa copulatrix without sclerotized armature.

HOST PLANT

Unknown.

TYPES

Holotype, male: Australia, N Western Australia, Mt. Barnett, Manning River, 16°39'22.1''S 125°55'43.5''E, 18.VII.1998, W. ULLRICH (NHMB); holotype genitalia slide no. 211198I; allotype, female, and paratypes, 2 males: same data as holotype (allotype NHMB, paratype each NHMB and CKWA).

***Callosobruchus nigrinus* n. sp.**

(figs. 7-9)

ETYMOLOGY

The name refers to the predominantly black body and vestiture.

DIAGNOSIS

It is a member of the *C. chinensis* group. At first glance *C. nigrinus* is similar to closely related *C. nigripennis*, but the latter differs in color varying from completely reddish-brown to incompletely black, antenna at least basally and distally reddish-yellow, fore and mid legs nearly completely yellow, vestiture additionally pale yellow to yellowish-brown, especially intervals 1-2 at basal third yellowish-brown, male antennal segments 5-10 serrate, ventral valve distinctly slimmer, stronger acute, at basal half with about 12 setae, and internal sac apically of pair of denticulate sclerites without small, spine-like sclerites.

DESCRIPTION

Length (pronotum-elytra): 2.4-2.8 mm, width: 1.7-1.9 mm. Body short-oval.

Color black; antennal segments 1-2(3) ventrally reddish-brown; fore legs blackish with tarsi completely, tibiae incompletely and extreme apex of femora red-yellow; mid legs blackish with tarsi completely, extreme apex and base of tibiae, and extreme apex of femora red-yellowish; hind legs black with only tarsal segments 3-4 reddish-yellow. Vestiture of scutellum and prescutellar area of pronotal base erected, very dense, silky, ochre-white, covering body surface completely; remaining vestiture recumbent, moderately dense, not covering body surface completely; predominantly black, with greyish-white patches; elytra with circumscutellar area and two more or less distinct, irregular, transverse, greyish-white bands, first oblique, at end of basal third to beginning of apical half, and second at beginning of apical third; pygidium white to pale yellowish-white.

Head of moderate length. Eyes bulging, emarginate to two thirds of their length. Tempora very short. Frons and vertex convex, with elongate, glabrous, shiny interocular carina.

Pronotum conical, about 1.4 times wider than long, with sides weakly concave. Disc very densely punctate. Scutellum longer than wide, bifid.

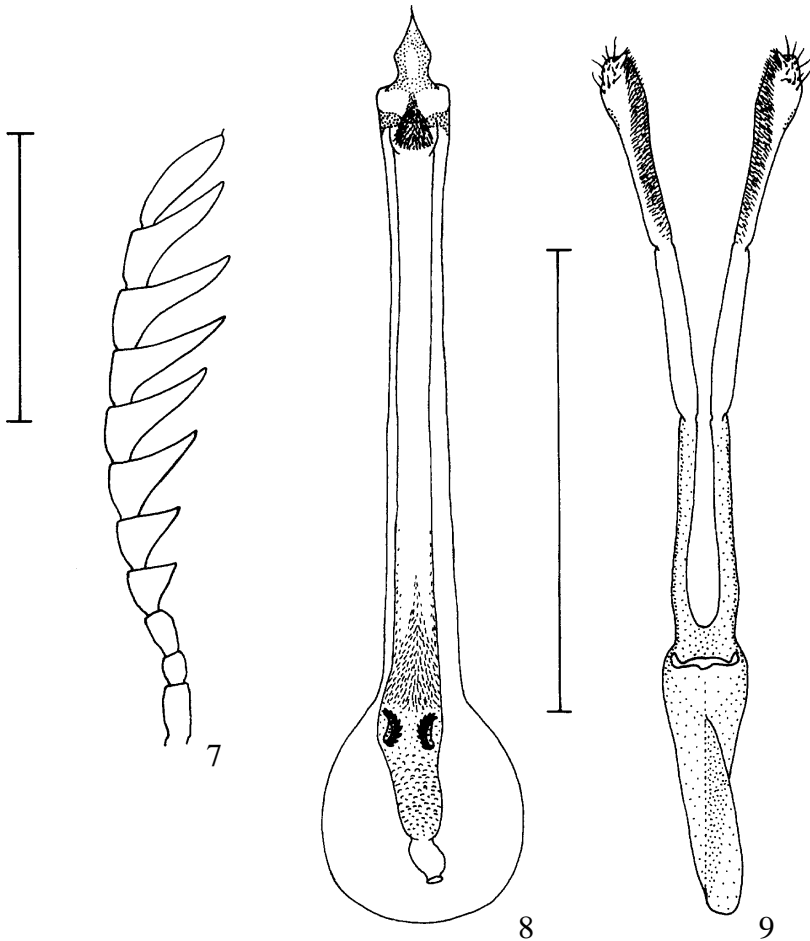
Elytra about 2.2 times longer than pronotum, about 1.1 times longer than their combined width, with maximum width at end of basal third. Sides at mid third straight, moderately converging towards apex. Humeral calli very distinct. Elytral striae distinct, punctate, striae 3-4 basally without protuberance. Intervals flat, with moderately dense, partially rugulous micropunctuation and with irregular row of large punctures.

Hind femora with acute, preapical denticle at lateroventral and mesoventral margins; lateroventral denticle distinctly broader and feebly longer than mesoventral denticle. Hind tibia with ventral, ventrolateral, lateral, dorsal and

dorsomesal carinae complete; mucro about twice longer than coronal denticle at extension of lateral carina.

Pygidium very densely punctate.

Male: Antennae extending to end of elytral mid third; shape of segments not varying, 1-2 filiform, 3 subserrate, 4 serrate, 5-10 subpectinate, 11 elongate and arcuate, 4-8 becoming steadily broader than remaining segments, 11 about 2.2 times longer than 2 and about 1.9 times longer than 3, 8-10 about 2.1 times wider than long, segment 11 about 3.8 times longer than wide, with pointed tip (fig. 7). Maximum width of eye about 3.3 times greater than minimum distance between eyes. Abdomen moderately telescoped, sternite V nearly completely emarginate;



7-9. *Callosobruchus nigritus* n. sp.: 7 - male antenna; 8 - median lobe; 9 - lateral lobes. Scale bar = 1.0 mm

pygidium moderately convex, about 1.1 times longer than wide. Median lobe strongly elongate; ventral valve spear-shaped, with about 18 setae at basal half. Internal sac subbasally with pair of oval, denticulate sclerites, each sclerite with about 12 denticles of more or less same length; apically of denticulate sclerites with triangular area of distinct, numerous, small, spine-like sclerites; basally of denticulate sclerites with minute, less sclerotized, plate-like sclerites (fig. 8). Lateral lobes strongly elongate, completely separated, subspatulate, laterobasally and at apex stronger sclerotized than at remaining parts, mesoapically with indistinctly pointed tip; apex with about 18-20 setae; setae varying in length, but no very long setae (fig. 9). Basal strut elongate, with median carina. Spiculum gastrale Y-like.

Female: Antennae similar to male, weakly shorter, but with segments 5-10 serrate. Eyes moderately bulging, maximum width of eye about 2.5 times wider than minimum distance between eyes. Abdomen weakly telescoped, pygidium 1.2 times longer than wide, sternite V not emarginate. Ovipositor very short, with apical styli oblonge; stylus apically with two short and one very long setae extending length of stylus; bursa copulatrix without sclerotized armature.

HOST PLANT

Unknown.

TYPES

Holotype, male: NW Thailand, Soppong - Pai, 1500 m, 1.V.1992, P. PACHOLÁTKO (CKWA); holotype genitalia slide no. 061099II; allotype, female, and paratype, female: same data as holotype (CKWA); paratype, female: NW Thailand, Mae Hong Son, Ban Huai Po, 1600-2000 m, 8.-18.V.1992, J. HORÁK (CKWA); paratype, female: E Nepal, Khandbari - Arunthan, 1100-1300 m, 22.V.1980, W. HORÁK (NHMB); paratype, male: "Tonkin, Hoah Binh, I.1936, A. de COOMAN" (MNHN); paratype, male: same data, but 1926 (CKWA); paratype, female: S Vietnam, 12 km N of Dalat, Lang Bian, 28.-30.IV.1994, PACHOLÁTKO & DEMBICKÝ (NHMW).

Callosobruchus antennatus n. sp.

(figs. 10-12)

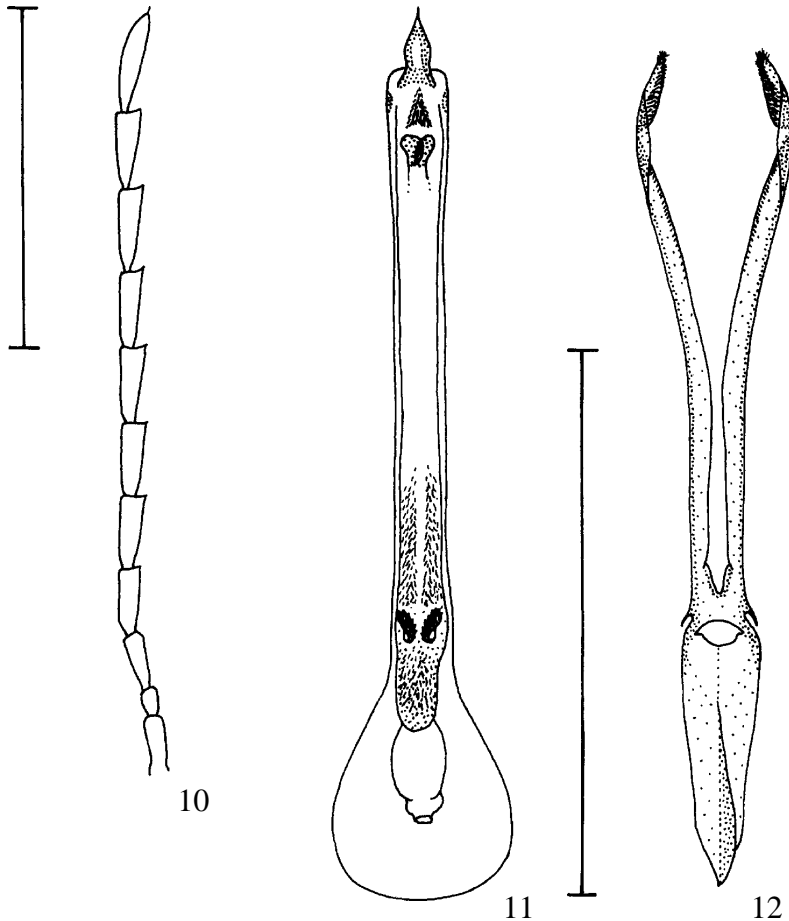
ETYMOLOGY

The name refers to the striking shape of male antenna.

DIAGNOSIS

It is a member of the *C. chinensis* group. Externally *C. antennatus* resembles *C. antenniferus* SINGAL & PAJANI, 1990 including male antenna, but the latter differs in color varying from reddish-brown to black, eyes stronger bulging, maximal width of eye about 2.2-2.3 times wider than minimum distance between

eyes, and hind tibia with mucro longer, about 2.5 times longer than the coronal denticle at extension of the lateral carina. However, with respect to its genitalia *C. antenniferus* belongs to the *C. maculatus* group, whose members have male genitalia with the median lobe distinctly shorter, ventral valve triangular, and the internal sac subapically with pair of oblong to longitudinal bands of numerous, minute, plate-like sclerites. With regard to the median lobe, *C. antennatus* is closely related to *C. orientalis* and *C. chinensis* which differ in the number of setae in basal half of ventral valve, about 18-24 setae, and the internal sac subapically without pair of large, plate-like sclerites. The lateral lobes of *C. antennatus* are similar to *C. bhutanicus*, but the latter has the lobes incompletely separated at base and the apical fourth of lobes strongly curved towards mesoventral side.



10-12. *Callosobruchus antennatus* n. sp.: 10 - male antenna; 11 - median lobe; 12 - lateral lobes.
Scale bar = 1.0 mm

DESCRIPTION

Length (pronotum-elytra): 1.9-2.0 mm, width: 1.3 mm. Body short-oval.

Color blackish; antennae, fore and mid legs completely reddish-yellow; hind legs partially reddish-brown; elytra reddish-brown with epipleura, suture, extreme base, oblong patch in apical third of interval 3 and longitudinal patch from humeral calli to middle of intervals 7-9 black. Vestiture of scutellum and prescutellar area of pronotal base erected, very dense, silky, white, covering body surface completely; remaining vestiture recumbent, moderately dense, not covering body surface completely; ventrally greyish-white to pale yellow, dorsally predominantly greyish-white and yellowish, blackish at darkened parts of elytra; elytra with two more or less distinct, irregular, transverse, greyish-white bands, first at beginning of mid third, second at beginning of apical third; pygidium greyish-white to pale yellow, with longitudinal, white patch reaching from middle of base to near of apex.

Head of moderate length. Eyes bulging, emarginate to four fifths of their length. Tempora short. Frons and vertex convex, with elongate, glabrous, shiny interocular carina.

Pronotum conical, about 1.4 times wider than long, with sides linear. Disc very densely punctate. Scutellum rectangular, nearly as wide as long.

Elytra about 2.1 times longer than pronotum, not much longer than their combined width, with maximum width at end of basal third. Sides at mid third straight, nearly parallel. Humeral calli distinct. Elytral striae distinct, punctate, striae 3-4 basally without protuberance. Intervals flat, with moderately dense, rugulous micropunctuation and with irregular row of large punctures.

Hind femora with acute, preapical denticle at lateroventral and mesoventral margins; both denticles of same length, lateroventral denticle distinctly broader than mesoventral denticle. Hind tibia with ventral, lateral, dorsal and dorsomesal carinae complete, ventrolateral carina nearly complete; mucro about twice longer than coronal denticle at extension of lateral carina.

Pygidium very densely punctate.

Male: Antennae extending to elytral apex; shape of segments not varying, 1-2 filiform, 3 subserrate, 4-10 serrate, 11 elongate and linear, 4-10 not much broader than remaining segments, 1 about twice longer than 2 and about 1.2 times longer than 3, 8-10 about 2.2 times longer than wide, segment 11 about 4.0 times longer than wide, with pointed tip (fig. 10). Maximum width of eye about twice greater than minimum distance between eyes. Abdomen weakly telescoped, sternite V emarginate to half length; pygidium moderately convex, about 1.2 times longer than wide. Median lobe strongly elongate; ventral valve spear-shaped, with about 10-12 setae at basal half. Internal sac subapically with large, weakly sclerotized pair of nearly circular, plate-like sclerites; subbasally with pair of oval, denticulate sclerites; each sclerite with about 15-16 denticles of same length; apically and basally of denticulate sclerites with small, spine-like sclerites (fig. 11). Lateral lobes strongly elongate, simple, completely separated,

laterally stronger sclerotized than at remaining parts, with apical third weakly curved towards mesoventral side; apex with about 12 setae; setae short, scarcely varying in length (fig. 12). Basal strut elongate, with median carina. Spiculum gastrale Y-like.

Female: Unknown.

HOST PLANT

Unknown.

TYPES

Holotype, male: India, Radjasthan, Bharatpur, 12.VIII.1989, A. RIEDEL (CKWA); holotype genitalia slide no. 220191III; paratype, male (with antennae destroyed): "Calcutta", "Bruchus chinensis L. var." handwritten by M. PIC (BMNH); paratype, male (left antenna lacking): India, Madhya Pradesh, S of Jabalpur, 29.III.1967, G. TOPAL (HNHM).

Callosobruchus montanus n. sp.

(figs. 13-15)

ETYMOLOGY

The name refers to the main distribution range in the mountains.

DIAGNOSIS

It is a member of the *C. chinensis* group. Externally *C. montanus* resembles *C. antennatus*, but the latter has the male antennae distinctly longer, with segments 3-10 elongate, pronotum wider, about 1.4 times wider than long, with sides straight and the eyes stronger emarginate; male genitalia of *C. antennatus* differ in the number of setae at basal half of ventral valve, about 12 setae, internal sac subapically with large pair of plate-like sclerites, with subbasal pair of denticulate sclerites distinctly oval, and the lateral lobes simple, with apical third weakly curved towards mesoventral side.

DESCRIPTION

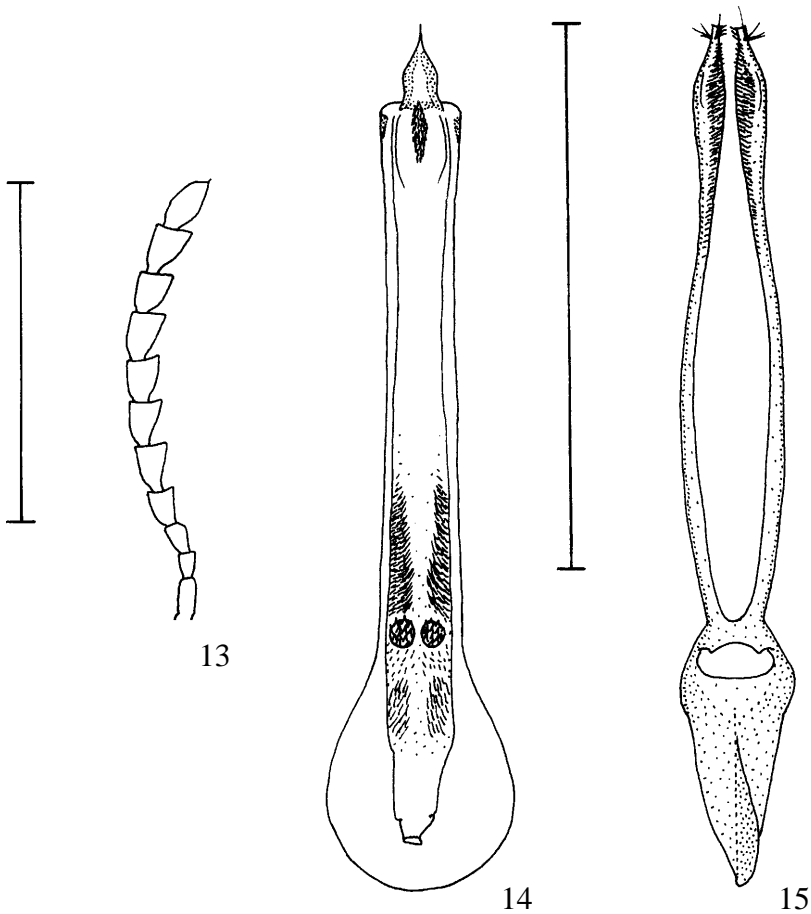
Length (pronotum-elytra): 1.6-2.6 mm, width: 1.1-1.7 mm. Body short-oval.

Color varying from blackish to reddish-brown; antennae, fore and mid legs completely reddish-yellow; at least (often females) pygidium completely, pronotum apically, elytra and hind legs partially reddish; at most (rarely males) pronotum and hind legs nearly completely, elytra completely and sternites II-V laterally reddish-brown. Vestiture of prescutellar area of pronotal base extremely dense, erected, silky, white, covering body surface completely; vestiture of pygidium very dense, recumbent, covering body surface nearly completely, in male uniformly white, in female often whitish basally to pale yellow apically;

remaining vestiture recumbent, moderately dense, not covering body surface completely; ventrally uniformly white; dorsally in male always and in female often predominantly greyish-white, with elytra often brown at extreme base and apex, at middle of intervals 4-8 brown to blackish; female sometimes dorsally predominantly blackish, elytra with two distinct, irregular, transverse, greyish-white bands, first more or less at end of basal third, second more or less at beginning of apical third.

Head of moderate length. Eyes bulging, emarginate to half length. Tempora short. Frons and vertex convex, with elongate, glabrous, shiny interocular carina.

Pronotum conical, about 1.2 times wider than long, with sides weakly bisinuate. Disc densely punctate. Scutellum nearly as wide as long, bifid.



13-15. *Callosobruchus montanus* n. sp.: 13 - male antenna; 14 - median lobe; 15 - lateral lobes.
Scale bar = 1.0 mm

Elytra about 2.0 times longer than pronotum, about 1.1 times longer than their combined width, with maximum width at end of basal third. Sides at mid third straight, moderately converging towards apex. Humeral calli distinct. Elytral striae distinct, punctate, striae 3-4 basally without protuberance. Intervals flat, with moderately dense, partially rugulous micropuncturation and irregular row of large punctures.

Hind femora with acute, preapical denticle at lateroventral and mesoventral margins; lateroventral denticle distinctly broader and not much longer than mesoventral denticle. Hind tibia with ventral, lateral, dorsal and dorsomesal carinae complete, ventrolateral carina nearly complete; mucro about twice longer than coronal denticle at extension of lateral carina.

Pygidium very densely punctate.

Male: Antennae extending to mid third of elytral length; shape of segments not varying, 1-2 filiform, 3 subserrate, 4-10 serrate, 11 elongate and linear, 4-10 becoming broader than remaining segments, 1 about twice longer than 2 and about 1.6 times longer than 3, 8-10 about 1.2 times longer than wide, segment 11 about 1.8 times longer than wide, with pointed tip (fig. 13). Maximum width of eye about 1.8 times greater than minimum distance between eyes. Abdomen weakly telescoped, sternite V emarginate to half length; pygidium moderately convex, about 1.2 times longer than wide. Median lobe strongly elongate; ventral valve spear-shaped, with about 20 setae at basal half. Internal sac subbasally with pair of circular, denticulate sclerites; each sclerite with about 15-16 denticles of same length; apically of denticulate sclerites with numerous, spine-like sclerites of moderate size; basally of denticulate sclerites with indistinct, numerous, small, spine-like sclerites, followed basally by paired agglomeration of distinct, spine-like sclerites of moderate size (fig. 14). Lateral lobes strongly elongate, subspatulate, completely separated, laterally stronger sclerotized than at remaining parts, with apical third not curved towards mesal side; extreme apex truncate, with about 10 setae; setae varying in length, but no very long setae (fig. 15). Basal strut elongate, with median carina. Spiculum gastrale Y-like.

Female: Antennae similar to male, slightly shorter, segments 8-10 about as long as wide. Maximum width of eye about 1.6 times wider than minimum distance between eyes. Abdomen simple, pygidium 1.1 times longer than wide, sternite V not emarginate. Ovipositor very short, with apical styli oblong; stylus apically with three short setae; bursa copulatrix without sclerotized armature.

HOST PLANT

Unknown.

TYPES

Holotype, male: NW Thailand, Mae Hong Son distr., Soppong - Pai, 19°27'N 98°20'E, 1500 m, 7.-12.V.1996, J. HORÁK (CKWA); holotype genitalia slide no. 210197I; allotype, female, and 10 paratypes, 4 males and 6 females: same data as

holotype (CKWA); 5 paratypes, male and 4 females: same data as holotype, S. BEČVÁŘ (CKWA); 2 paratypes, male and female: same data as holotype, but Sopping, V. KUBÁN (CKWA); 2 paratypes, females: same data as holotype, but without GPS data, 1.V.1992, P. PACHOLÁTKO (CKWA); 2 paratypes, females: NW Thailand, Mae Hong Son, Ban Huai Po, 1600-2000 m, 8.-18.V.1992, J. HORÁK (CKWA); paratype, female: NW Thailand, Chiang Mai prov., Doi Suthep, 19.-22.IV.1991, S. BÍLY (NHMB); paratype, female: NW Thailand, Chiang Mai, Doi Suthep to Doi Pui, 19.-23.IV.1991, J. HORÁK (NHMB); 2 paratypes, males: same data as last paratype, but 18°49'N 99°00'E, L. DEMBICKÝ (NHMB, CKWA); paratype, female: Laos, Oudom Xai prov., SE Muang Xai, env. Miang riv., 20°33'N 102°14'E, 1200-1300 m, 24.IV.-12.V.1999, K.-W. ANTON (CKWA); paratype, female: India, Uttar Pradesh, Chaubattia, 1900-2100 m, 25.V.1981, M. BRANCUCCI (NHMB); paratype, female: Nepal, East. Kosi zone, Dhankuta distr., Arun vall., Hille - Shidua, Bhedetar, 2000-2700 m, 24.-28.V.1996, P. CHECHOVSKI (CKWA).

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REFERENCES

- ALLARD, E., 1895. Notes sur les Bruchides recueillis dans l'Inde anglaise. Ann. Soc. Ent. Belg., **39**: 225-228.
- ARORA, G. L., 1977. Taxonomy of the *Bruchidae* (Coleoptera) of Northwest India. Part I. Adults. Oriental Insects, **7**: 1-132.
- BOHEMAN, C. H., 1833. In: SCHOENHERR, C. J., Genera et species curculionidum, cum synonymia hujus familiae. Tomus **I**. Parisiis: 31-114.
- DECELLE, J., 1977. Ergebnisse der Bhutan-Expedition 1972 des Naturhistorischen Museums in Basel. *Coleoptera*: Fam. *Bruchidae*. Entomol. Basiliens., **2**: 393-409.
- GYLLENHAL, L., 1839. In: SCHOENHERR, C. J., Genera et species curculionidum, cum synonymia hujus familiae. Tomus **V**. Parisiis, Lipsiae: 1-141.
- LINNAEUS, C., 1758. Systema naturae . . . , ed. **X**. Holmiae: 4 + 824pp.
- , 1767. Systema naturae . . . , ed. **XII**. Holmiae: 533-1327.
- MOTSCHULSKY, V., 1874. Énumération des nouvelles espèces de coléoptères rapportés de ses voyages. Bulletin de la Société des Naturalistes de Moscou, **47**: 203-252.
- PIC, M., 1922. Nouveautés diverses. Melang. Exot. Entomol., **35**: 1-32.
- SINGAL, S. K., PAJANI, H. R., 1990. Six new species of *Callosobruchus* Pic from India (*Coleoptera*: *Bruchidae*). Pol. Pismo Entomol. **59**: 761-782.