Genus	Vol. 23(2): 229-248	Wrocław, 30 VI 2012

The Cephenniini of China. V. *Cephennodes* Reitter of Guizhou and Zhejiang (Coleoptera: Staphylinidae: Scydmaeninae)

Paweł Jałoszyński
Museum of Natural History, Wrocław University, Sienkiewicza 21, 50-335 Wrocław, Poland,
e-mail: scydmaenus@yahoo.com

Abstract. Six new species of *Cephennodes* (s. str.) are described from China: *C. guizhouanus* sp. nov. (Guizhou Prov.), *C. capra* sp. nov. (Guizhou), *C. clypeicornis* sp. nov. (Zhejiang Prov.), *C. capricornis* sp. nov. (Zhejiang and a border between Zhejiang and Anhui), *C. zunyianus* sp. nov. (Guizhou) and *C. clypeatus* sp. nov. (Zhejiang). Affinities of the newly described taxa to previously proposed informal species groups within *Cephennodes* are discussed, and important characters, including aedeagi, are illustrated.

Key words: Staphylinidae, Scydmaeninae, Cephenniini, *Cephennodes*, new species, taxonomy, East Palearctic, China.

INTRODUCTION

To date, fifty one species of the ant-like stone beetle genus *Cephennodes* Reitter were described in a series of articles on the tribe Cephenniini of China (Jałoszyński 2007a, 2007b, 2012). A large material collected in seven provinces (Yunnan, Guangxi, Fujian, Jiangxi, Sichuan, Shaanxi, Hainan) was examined, but vast areas of this large country still remain very poorly studied. The present paper is focused on six new species of *Cephennodes* discovered recently in the provinces Guizhou and Zhejiang.

The measurements and nomenclature used in the descriptions follow conventions adopted by Jałoszyński (2007a). The following depository acronyms are used: cAP - collection of Andreas Pütz, Eisenhüttenstadt, Germany; cMS - collection of Michael Schülke, Berlin, Germany; cPJ - collection of Paweł Jałoszyński, Wrocław, Poland; SHNU - Department of Biology, Shanghai Normal University, Shanghai, China. The type specimens were labeled with red (holotype) or yellow (paratypes) printed labels

bearing name of genus, subgenus and species followed by "m." and "det. P. JAŁOSZYŃSKI, '12, HOLOTYPUS / PARATYPUS".

TAXONOMY

Subgenus *Cephennodes* s. str.

longipes species group

Species belonging in this group have a very convex body, with the pronotum usually narrower than the elytra, the antennae and legs strikingly long and slender, the elytra in males with secondary sexual characters on apices (flattened, impressed or bearing modified or at least distinctly denser or longer setae), and the head and pronotum densely punctate. The aedeagus is similar to the *latus* type (types of the aedeagus were described and discussed by JAŁOSZYŃSKI (2007a)), broadest at base and narrowing towards apex, its ventral membranous area is small and concealed by the ventral wall of the median lobe, the apical projections are asymmetrical and generally subtriangular in shape. This group included previously four species: *C. longipes* JAŁOSZYŃSKI, 2007a (China: Guangxi), *C. penicillatus* JAŁOSZYŃSKI, 2007a (China: Fujian), *C. nematocerus* JAŁOSZYŃSKI, 2007b (China: Sichuan) and *C. apicalis* JAŁOSZYŃSKI & NOMURA, 2009 (Vietnam). All species of the *longipes* group can be identified using characters compiled in Table 1.

Cephennodes (s. str.) *guizhouanus* sp. nov.

(Figs. 1-3)

NAME DERIVATION

After Guizhou Province.

DIAGNOSIS

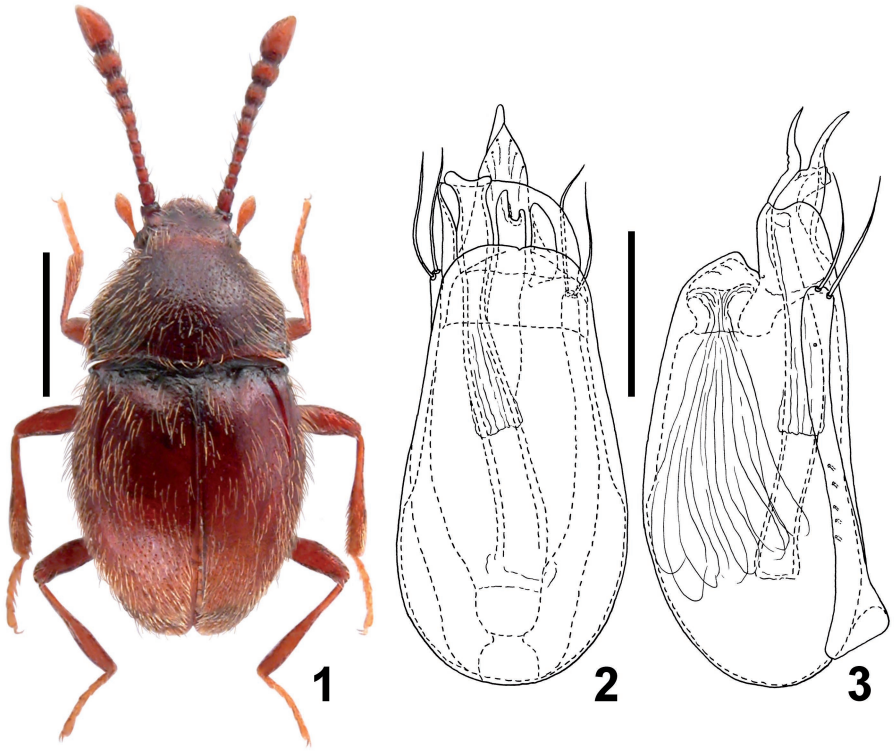
Males of *Cephennodes guizhouanus* differ from all other species of the *longipes* group in the following combination of characters: antennomere VII nearly twice as long as broad; pronotum strongly narrowing anterad, 1.4× as broad as long; elytral apices unmodified except for vestiture, which is denser and shorter than on remaining elytral surface; and ventral apical margin of median lobe of aedeagus bearing indistinct median notch. Females, nearly identical to males, can be identified by direct comparison, preferably when collected together with males.

DESCRIPTION

Male. Body (Fig. 1) moderately large, length 1.48-1.58 mm (mean 1.51 mm), moderately elongate, strongly convex, with very shallow and weakly marked constriction between pronotum and elytra, dark brown, covered with light brown vestiture. Head moderately large in relation to pronotum, length 0.20-0.23 mm (mean 0.21 mm), width 0.36-0.38 mm (mean 0.37 mm); vertex evenly convex; frontoclypeal region flattened;

supraantennal tubercles weakly raised but distinct. Anterior part of vertex and frons covered with small but sharply marked and deep punctures separated by spaces as wide as puncture diameters, supraantennal tubercles and posterior part of vertex nearly impunctate. Setae sparse, moderately long, suberect. Antennae short but slender, length 0.78 mm; five distal antennomeres covered with slightly coarser microsculpture than proximal part of antenna and forming gradually broadening but indistinctly delimited club; antennomere I distinctly shorter than broad; II slightly narrower and much longer than I, nearly twice as long as broad; III much narrower and shorter than II, 1.8× as long as broad; IV-VI subequal in length and width, each as broad as III but distinctly shorter, 1.3× as long as broad; VII only slightly broader than VI and distinctly longer, nearly twice as long as broad; VIII broader and shorter than VII, 1.2× as long as broad; IX larger than VIII, 1.3× as long as broad; X larger than IX, 1.2× as long as broad; XI distinctly broader than X, about as long as IX-X together, twice as long as broad, strongly narrowing apically.

Pronotum semielliptical in shape, broadest slightly anterior to middle, length 0.45-0.50 mm (mean 0.47 mm), width 0.66-0.69 mm (mean 0.68 mm); anterior margin broadly arcuate; lateral margins strongly rounded in anterior third and weakly rounded in posterior half, weakly convergent towards strongly obtuse but pointed hind pronotal



1-3. *Cephennodes guizhouanus* sp. nov. Male dorsal habitus (1); aedeagus in ventral (2) and lateral (3) views (scale bars: 1 – 0.5 mm; 2-3 – 0.1 mm)

angles; posterior margin shallowly biemarginate; lateral ante-basal foveae shallow but distinct, each located distinctly closer to lateral than to posterior pronotal margin; lateral carinae narrow and not separated from lateral margins. Punctures on median part of pronotal disc moderately large, shallow but sharply marked, separated by spaces 0.5-1× as wide as puncture diameters, punctures becoming slightly smaller and shallower towards pronotal margins, moderately broad area along posterior margin nearly impunctate, punctures in anterior pronotal angles nearly adjacent one to another, but not coarse; setae moderately long and dense, suberect.

Elytra oval, distinctly more convex than pronotum, broadest slightly anterior to middle, length 0.83-0.85 mm (mean 0.84 mm), width 0.75-0.80 mm (mean 0.79 mm), elytral index 1.03-1.10. Subhumeral lines slightly shorter than 0.4× length of elytra, developed as sharp boarder between more convex humeral and less convex adsutural regions; apices of elytra separately rounded, unmodified. Punctures much smaller and shallower than those on pronotum, but nearly as dense; setae moderately long and dense, suberect, becoming gradually denser and shorter towards elytral apex, in posterior third of elytra directed posteromesally.

Metaventrite without postmesocoxal impressions.

Legs long and slender, without modifications.

Aedeagus (Figs. 2-3) 0.35 mm long, similar to the *latus* type, median lobe indistinctly asymmetrical, with ventral apical margin arcuate with very shallow median notch; apical projections long, distinctly divided into broad subapical group of three projections separated by asymmetrical collar from apical group of two narrow and long projections.

Female. Very similar to male, including elytral vestiture; body length 1.48-1.53 mm (mean 1.50 mm); length of head 0.20 mm, width 0.38-0.40 mm (mean 0.38 mm), length of antenna 0.75-0.78 mm (mean 0.77 mm); length of pronotum 0.48-0.50 mm (mean 0.50 mm), width 0.68-0.69 mm (mean 0.68 mm); length of elytra 0.78-0.83 mm (mean 0.81 mm), width 0.75-0.80 mm (mean 0.78 mm), elytral index 1.03-1.05.

Type material

Holotype (male): white printed label: "China: Guizhou Prov. / Suiyang County, Kuan- / kuoshui N. R., Gongton- / ggou, alt. 1550m, 9-VI-2010, Yin, Zhai & Lu leg." (SHNU). Paratypes (13 exx.: 3♂♂, 10♀♀): 1♂, 3♀♀, same data as for holotype; 2♂♂, 7♀♀, two white printed labels: "China: Guizhou Prov. / Zunyi City / Suiyang County / Kuankuoshui N.R. / Gongtonggou", "18-VIII-2010 / alt. 1550m / Near Dadong / FENG & YIN leg." Paratypes in SHNU and cPJ.

Distribution

China, Guizhou Prov.

Remarks

This species differs from all congeners in the *longipes* group in an unusual shape of the pronotum (strongly narrowing anteriorly, and not nearly subquadrate as in most other species) and convex elytral apices (impressed or flattened in all other species).

Table 1. Major morphological differences between species within the *longipes* species group of *Cephennodes* (L, length; W, width).

	C. longipes Jałoszyński	*C. penicillatus* Jałoszyński	*C. nematocerus* Jałoszyński	*C. apicalis* Jałoszyński & Nomura	*C. guizhouanus* sp. nov.
Antennomere VII	L > 3× W	L = 2.2× W	L = 2.5× W	L = nearly 3× W	L = nearly 2× W
Pronotum	1.3× as broad as long	1.5× as broad as long	1.2× as broad as long	1.2× as broad as long	1.4× as broad as long
Elytral apex	impressed	impressed	flattened	impressed	convex
Setae on each elytral apex	unmodified	forming loose subconical brush directed caudad	forming dense narrow and strongly curved brush directed mesad	forming loose groups directed mesad	short and dense, recumbent, directed mesad
Ventral apical margin of aedeagus	with deep subquadrate notch	shallowly concave	with deep U-shaped notch	shallowly concave	with shallow subtriangular notch

Table 2. Major morphological differences between species within the *taurus* species group of *Cephennodes*.

	C. taurus Jałoszyński	*C. tauroides* Jałoszyński	*C. qiongdaoanus* Jałoszyński	*C. capra* sp. nov.	*C. clypeicornis* sp. nov.	*C. capricornis* sp. nov.
Lateral bristles on vertex	much longer than eye	much longer than eye	much longer than eye	much longer than eye	much longer than eye	about as long as eye
Frontal impressions	single impression across frons	pair of lateral impressions	single impression across frons	pair of lateral impressions	single impression across frons	absent
Lateral fronto-clypeal protuberances	present, strongly convex	absent	present, weakly convex	absent	present, strongly convex	absent
Median setal brush on frons	absent	present	present	present	absent	absent
Median punctate line on frontoclypeal region	absent	present	absent	present	present	absent
Apex of median lobe of aedeagus	narrowly subtriangular, strongly projecting	narrowly subtriangular, strongly projecting	broadly subtriangular, slightly projecting	narrowly subtriangular, strongly projecting	broadly rounded	narrowly subtriangular, weakly projecting

taurus species group

Males of species belonging in this group have a pair of long and thick lateral bristles expanded distally and directed anterodorsally on the frons (or between the frons and vertex) and the aedeagus representing the *simonis* type (types of the aedeagus were described and discussed by Jałoszyński (2007a)), with stout and drop-shaped median lobe, broad apical projections and the subapical area of the dorsal wall bearing numerous fine setae. Nearly all species have also a modified frontoclypeal region of the head, bearing an impression or a pair of lateral impressions. However, one of species newly described herein is devoid of such modifications, yet its aedeagus highly resembles those of *C. taurus* Jałoszyński, 2007a (Fujian), *C. tauroides* Jałoszyński, 2007b (Sichuan), *C. qiongdaoanus* Jałoszyński, 2012 (Hainan), and two other new Chinese species (see below). All species of the *taurus* group can be identified using characters compiled in Table 2.

Cephennodes (s. str.) *capra* sp. nov.

(Figs. 4, 8, 12-13)

Name derivation

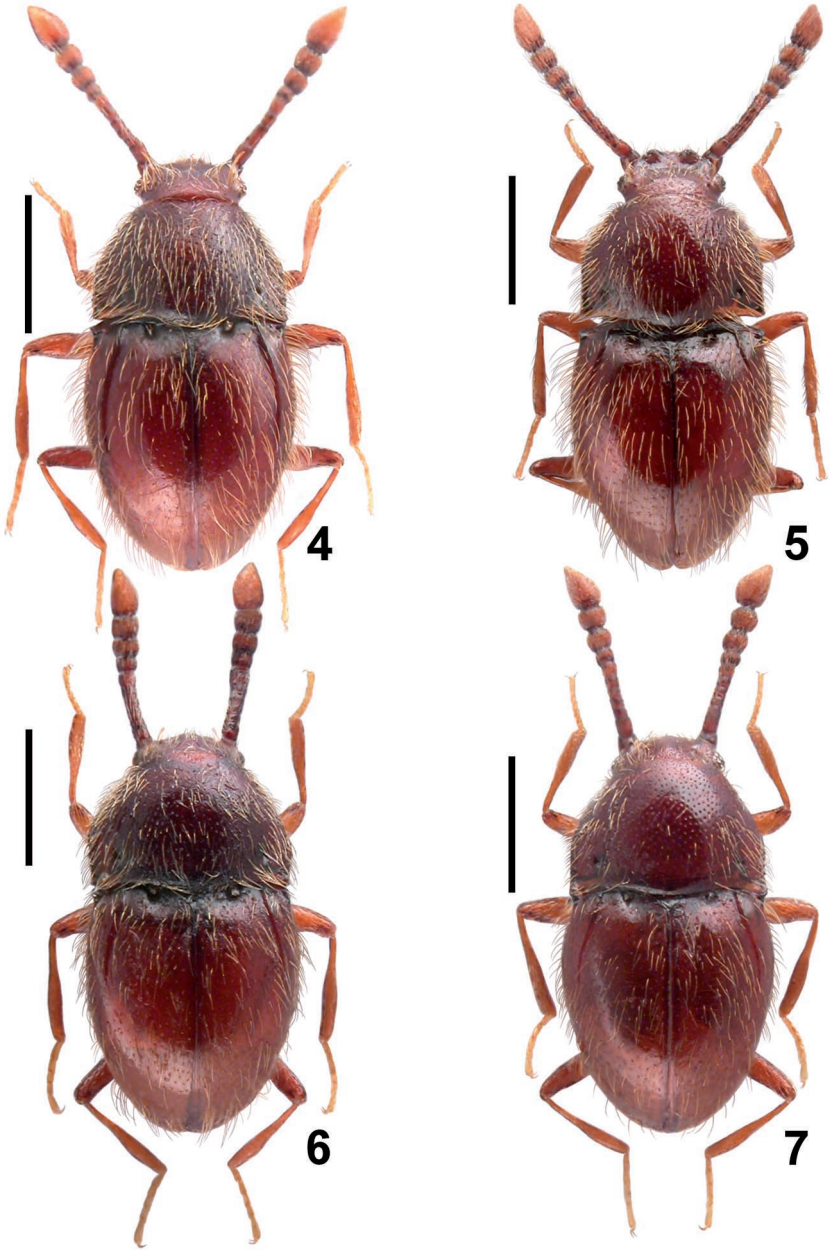
The specific epithet (a noun in apposition) refers to a bovid genus *Capra* and reflects a similarity of the paired frontal bristles in *C. capra* to long horns of goats.

Diagnosis

Males of *Cephennodes capra* differ from all other members of the *taurus* species group in the following combination of characters: lateral frontal bristles much longer than eyes; frons with lateral pair of impressions, median setal brush and median longitudinal punctate line; lateral fronto-clypeal protuberances absent; median lobe of aedeagus with narrowly subtriangular, strongly projecting apex. Females and their diagnostic characters unknown.

Description

Male. Body (Fig. 4) moderately large, length 1.60-1.63 mm (mean 1.62 mm), moderately elongate, with very shallow and weakly marked constriction between pronotum and elytra, dark brown, covered with light brown vestiture. Head (Fig. 8) large in relation to pronotum, length 0.23 mm, width 0.41-0.43 mm (mean 0.42 mm); vertex evenly convex, impunctate in middle, on sides with small and shallow but distinct punctures separated by spaces equal to or slightly shorter than puncture diameters; frons between eyes with a pair of shallow lateral impressions indistinctly separated in middle by longitudinal line of fine and dense punctures, also anterior margins of impressions finely and densely punctate, median part of frons posterior to impressions impunctate; the impunctate area on frons and vertex forms a triangle narrowing posteriorly; clypeus anterior to impressions convex and in middle covered with distinct, sharply marked punctures separated by spaces about equal to puncture diameters, sides of clypeus adjacent to anteromesal margins of weakly raised and impunctate supraanten-



4-7. Dorsal habitus of males. *Cephennodes capra* sp. nov. (4); *C. clypeicornis* sp. nov. (5); *C. capricornis* sp. nov. from Tianmu Shan (6); *C.* cf. *capricornis* from Longwang-shan N.R. (7) (scale bars: 0.5 mm)

nal tubercles devoid of punctures. Vestiture of head dorsum composed of short, sparse and suberect setae distributed on posterior and lateral parts of vertex, sides of frons lateral to median impunctate area and on clypeus, median brush of loosely assembled, long setae inserted on frontal median longitudinal line of punctures and a lateral pair of very long, curved and apically thickened bristles between frons and vertex. Antennae moderately long and slender, with five distal antennomeres covered with slightly coarser microsculpture but only three terminal ones distinctly enlarged and forming club; length 0.80 mm; antennomere I distinctly broader than long; II slightly narrower and longer than I, 1.6× as long as broad; III slightly narrower and much shorter than II, slightly transverse; IV-VI subequal in length and width, each as broad as III but slightly longer, subquadrate; VII slightly longer and broader than VI, slightly elongate; VIII about as long as VII but distinctly broader, 1.1× as long as broad; IX slightly longer and distinctly broader than VIII, slightly transverse; X slightly larger than IX, slightly transverse; XI distinctly broader than X, about as long as IX-X together, nearly twice as long as broad, strongly narrowing apically.

Pronotum semielliptical in shape, broadest in or near middle, length 0.48-0.50 mm (mean 0.50 mm), width 0.73-0.75 mm (mean 0.74 mm); anterior margin broadly, weakly arcuate; lateral margins strongly rounded in anterior third, weakly rounded in posterior half; hind angles distinctly obtuse and acute; posterior margin deeply biemarginate; lateral carina narrow but distinct, not separated from lateral margins; lateral ante-basal foveae small but distinct, each located much closer to posterior than to lateral pronotal margin. Punctures on central part of disc distinct, deep and sharply marked, separated by spaces about as wide as puncture diameters, broad area along posterior pronotal margin nearly impunctate, punctures on sides becoming distinctly denser and slightly shallower, those along lateral margins and in anterior angles nearly adjacent one to another, but not coarse. Setae sparse and long, erect.

Elytra oval, about as convex as pronotum, broadest near anterior third, length 0.88-0.93 mm (mean 0.90 mm), width 0.80-0.81 mm (mean 0.80 mm), elytral index 1.09-1.14. Subhumeral lines as long as 0.6× length of elytra, distinctly carinate; apices of elytra separately rounded. Punctures much smaller and shallower than those on pronotum, but about as dense; setae distinctly longer and more erect than those on pronotum.

Metaventrite without postmesocoxal impressions.

Legs moderately long and slender, without modifications.

Aedeagus (Figs. 12-13) 0.35 mm in length, *simonis* type, median lobe distinctly asymmetrical, with subtriangular and distinctly projecting apex, dorsal wall with fine dense setae in subapical region; apical projections broad, with robust but short hook bent dorsally; parameres strongly asymmetrical, slender.

Female. Unknown.

Type material

Holotype (male): white printed label: "China: Guizhou Prov. / Suiyang County / Kuankuoshui N.R. / Baishaogou, alt.750- / 900m 05-VI-2010 / YIN & ZHAI leg." (SHNU). Paratypes (4♂♂): 1♂, same data as for holotype; 2♂♂, white printed label: "China: Guizhou Prov. / Kuankuoshui N.R. / Baishaogou / 04-VI-2010 / alt.700m /

LU,YIN & ZHAI leg."; 1♂, white printed label: "China: Guizhou Prov. / Suiyang County / Kuankuoshui N.R. / Baishaogou, alt.700- / 750m 03-VI-2010 / LU, YIN & ZHAI leg.". Paratypes in SHNU and cPJ.

Distribution

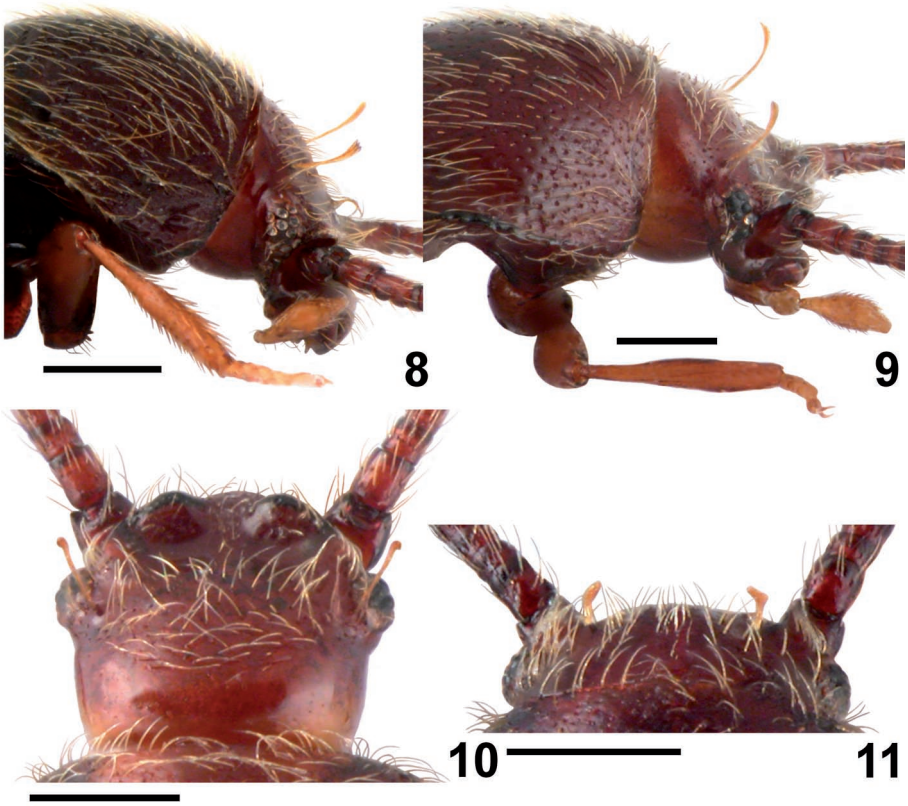
China, Guizhou Prov.

Cephennodes (s. str.) *clypeicornis* sp. nov.

(Figs. 5, 9-10, 14-15)

Name derivation

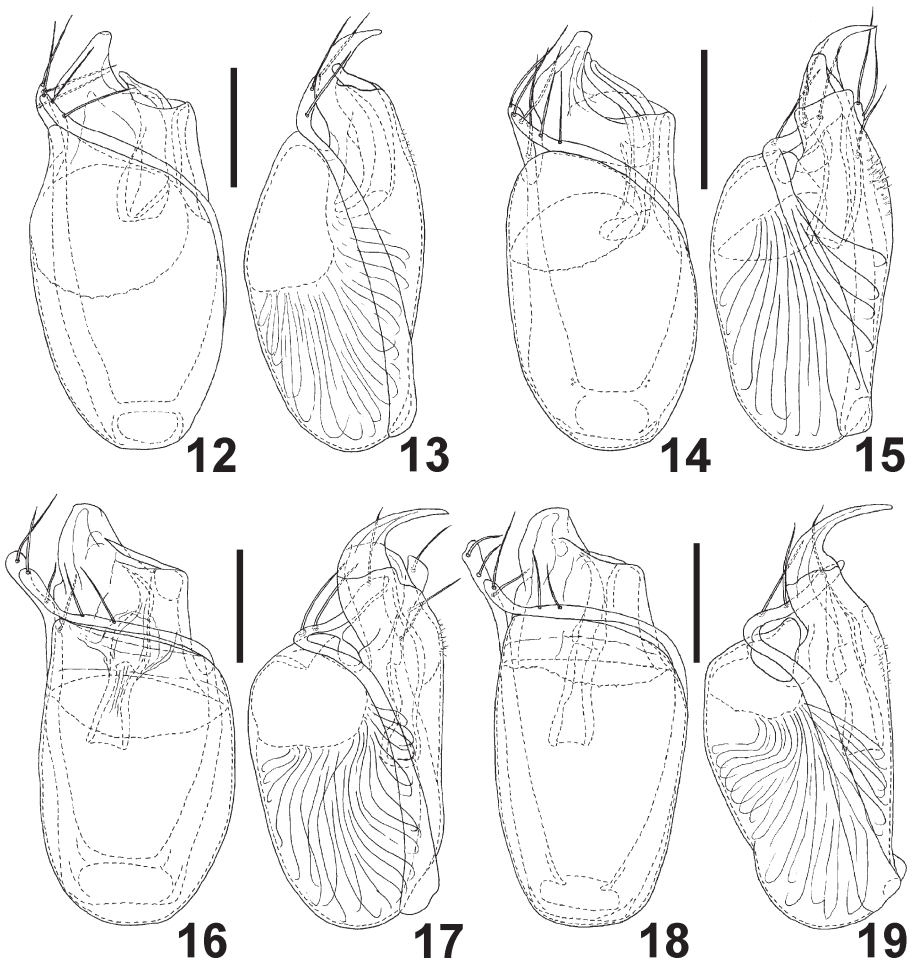
The name refers to prominent lateral fronto-clypeal protuberances well-visible in dorsal view.



8-11. Head of males in lateral (8), latero-dorsal (9), dorsal (10) and dorso-posterior (11) views. *Cephennodes capra* sp. nov. (8); *C. clypeicornis* sp. nov. (9-10); *C. capricornis* sp. nov. (11) (scale bars: 0.2 mm)

Diagnosis

Males of *Cephennodes clypeicornis* differ from all other members of the *taurus* species group in the following combination of characters: lateral frontal bristles much longer than eyes; frons with single transverse impression and median longitudinal punctate line, but without median setal brush; lateral fronto-clypeal protuberances prominent; and median lobe of aedeagus with broadly rounded apex. Females (with non-modified head) can be identified only by direct comparison to males, when collected together.



12-19. Aedeagus in ventral (12, 14, 16, 18) and lateral (13, 15, 17, 19) views. *Cephennodes capra* sp. nov. (12-13); *C. clypeicornis* sp. nov. (14-15); *C. capricornis* sp. nov. from Tianmu Shan (16-17); *C.* cf. *capricornis* from Longwang-shan N.R. (18-19) (scale bars: 0.1 mm)

Description

Male. Body (Fig. 5) moderately large, length 1.63 mm, moderately elongate, with very shallow and weakly marked constriction between pronotum and elytra, dark brown, covered with light brown vestiture. Head (Figs. 9-10) large in relation to pronotum, length 0.25 mm, width 0.43 mm; vertex evenly convex, nearly evenly covered with fine punctures separated by spaces 1-2× as wide as puncture diameters; frons between large, strongly convex and coarsely faceted eyes with broad transverse and slightly arcuate impunctate impression distinctly delimited laterally by weakly raised antennal tubercles, posteriorly confluent with vertex and anteriorly delimited by a lateral pair of large subtriangular, finely and densely punctate protuberances separated in middle by flattened area confluent with frontal impression and bearing median longitudinal line of fine, dense punctures extending from anterior margins of protuberances to frontal impression; clypeus steeply and abruptly lowering anteriorly, slightly convex, covered with punctures larger and deeper than those on vertex, separated by spaces about equal to puncture diameters. Setae on vertex and clypeus sparse, short and suberect, vertex with lateral pair of long, curved dorsally and thickened apically bristles; frontal impression asetose, fronto-clypeal protuberances with short and dense suberect setae. Antennae moderately long but relatively slender, with five distal antennomeres covered with slightly more coarse microsculpture but only four terminal antennomeres enlarged and forming indistinctly separated, gradually thickening club, length 0.83 mm; antennomere I slightly shorter than long; II distinctly narrower and longer than I, 1.3× as long as broad; III-VI subequal in length and width, each slightly narrower and much shorter than II, subquadrate or slightly longer than broad; VII slightly broader than VI but much longer, 1.6× as long as broad; VIII slightly broader but shorter than VII, slightly transverse; IX slightly longer but much broader than VIII, distinctly transverse; X slightly larger than IX, slightly transverse; XI slightly broader than X, as long as IX-X together, twice as long as broad, strongly narrowing apically.

Pronotum subrectangular in shape, equally broad between base and middle, length 0.53 mm, width 0.70 mm; anterior margin only slightly arcuate and strikingly long; lateral margins evenly rounded in anterior third and nearly straight and parallel in posterior half; hind angles straight and moderately acute; posterior margin deeply bisinuate; lateral ante-basal foveae small but distinct, each located slightly closer to posterior than to lateral pronotal margin; lateral carinae narrow, not separated from margins. Punctures on median part of pronotal disc distinct, small but sharply marked and separated by spaces similar to puncture diameters, punctures becoming smaller and shallower towards margins of pronotum, those along anterior margin are very small and indistinct, broad area along posterior margin nearly impunctate, punctures in anterior angles only slightly smaller than those in middle, but distinctly denser and shallower, not coarse. Setae long, sparse, suberect.

Elytra oval, about as convex as pronotum, broadest near anterior third, length 0.85 mm, width 0.78 mm, elytral index 1.10. Subhumeral lines as long as 0.4× length of elytra, distinctly carinate, especially near base; apices of elytra separately rounded. Punctures much smaller and shallower than those on pronotum, but similarly dense; setae distinctly longer and more erect than those on pronotum.

Metaventrite without postmesocoxal impressions.

Legs moderately long and slender, without modifications.

Aedeagus (Figs. 14-15) 0.30 mm long, *simonis* type, median lobe distinctly asymmetrical, with broadly rounded apex, dorsal wall with fine dense setae in subapical region; apical projections broad, with robust but short hook bent dorsally; parameres strongly asymmetrical, slender.

Female. Similar to male but with vertex and frontoclypeal area confluent, convex and without impressions, protuberances or long bristles, covered with distinct and sharply marked, moderately large punctures separated by spaces 1-2× as long as puncture diameters; eyes slightly smaller than in male; body length 1.60 mm, length of head 0.25 mm, width 0.45 mm, length of antennae 0.80 mm; length of pronotum 0.53 mm, width 0.78 mm; length of elytra 0.83 mm, width 0.78 mm, elytral index 1.06.

Type material

Holotype (male): white printed label: "China: Zhejiang [CH07-39], / Hangzhou Pref., Tianmu Shan, 40 / km WNW Linan, water reservoir, / 30°20'56''N, 119°18'42''E, 300 / m, plant refuse, litter from rock / edges, 17.VI.2007, leg. A. Pütz" (cAP). Paratype: 1♀, same data as for holotype (cPJ).

Distribution

China, Zhejiang Prov.

Cephennodes (s. str.) *capricornis* sp. nov.

(Figs. 6, 11, 16-17)

Name derivation

The specific epithet refers to a bovid genus *Capricorn*, reflecting a similarity of the paired frontal bristles in *C. capricornis* to short horns of serows.

Diagnosis

Males of *Cephennodes capricornis* differ from all other members of the *taurus* species group in the following combination of characters: lateral frontal bristles short, about as long as eyes; frons without modifications; and median lobe of aedeagus with narrowly subtriangular, weakly projecting apex. Females (without lateral frontal bristles) can be identified only by direct comparison to males, when collected together.

Description

Male. Body (Fig. 6) moderately large, length 1.60-1.63 mm (mean 1.62 mm), moderately elongate, with very shallow and weakly marked constriction between pronotum and elytra, dark brown, covered with light brown vestiture. Head (Fig. 11) large in relation to pronotum, length 0.20-0.23 mm (mean 0.22 mm), width 0.40-0.43 mm (mean 0.41 mm); vertex convex, confluent with frontoclypeal region; frons convex, with distinctly marked highest point in middle between eyes, without impressions and not demarcated from convex clypeus; supraantennal tubercles indistinctly raised; eyes

large and strongly convex, coarsely faceted. Punctures in middle of frons small but sharply marked and dense, separated by spaces smaller than puncture diameters, punctures becoming slightly sparser caudad and laterad, those on clypeus are much larger and separated by spaces equal to or slightly shorter than puncture diameters; modified lateral bristles are short and strongly thickened apically, inserted on lateroposterior part of frons; setae on head dorsum sparse and short, suberect. Antennae moderately long, slender, with five terminal antennomeres covered with slightly coarser microsculpture but only three distal ones are distinctly enlarged and forming indistinctly delimited club, length 0.75-0.78 mm (an 0.77 mm); antennomere I distinctly shorter than long; II narrower and longer than I, 1.2× as long as broad; III-VI subequal in length, each slightly narrower and much shorter than II, distinctly transverse; VII slightly longer and broader than VI, about as long as broad; VIII slightly broader and slightly shorter than VII, distinctly transverse; IX longer and broader than VIII, distinctly transverse; X larger than IX, distinctly transverse; XI slightly broader than X, about as long as IX-X together, twice as long as broad, strongly narrowing apically.

Pronotum semielliptical in shape, broadest near middle, length 0.50 mm, width 0.73-0.75 mm (mean 0.73 mm); anterior margin broadly but weakly arcuate; lateral margins broadly rounded in anterior half, evenly and slightly rounded in posterior half; hind angles obtuse and blunt, tip of each slightly projecting laterally; posterior margin deeply bisinuate; lateral ante-basal foveae small but deep and sharply marked, each located distinctly closer to posterior than to lateral pronotal margin; lateral carina narrow and not separated from margin. Punctures in middle of pronotal disc moderately large and deep, sharply marked, separated by spaces equal to or slightly shorter than puncture diameters, punctures becoming smaller and sparser towards anterior and posterior pronotal margins, those along anterior margin are indistinct, broad area along posterior margin remains nearly impunctate, laterally punctures becoming only slightly smaller, distinctly shallower and denser, but not coarser. Setae moderately long, sparse, suberect.

Elytra oval, about as convex as pronotum, broadest near anterior third, length 0.88-0.93 mm (mean 0.90 mm), width 0.78 mm, elytral index 1.13-1.19. Subhumeral lines as long as only 0.3× length of elytra, indistinctly carinate; apices of elytra separately rounded. Punctures fine, much smaller, shallower and slightly sparser than those on pronotum; setae slightly longer and distinctly more erect than those on pronotum.

Metaventrite without postmesocoxal impressions.

Legs moderately long and slender, without modifications.

Aedeagus (Figs. 16-17) 0.38 mm long, *simonis* type, median lobe distinctly asymmetrical, with subtriangular and weakly projecting apex, dorsal wall with fine dense setae in subapical region; apical projections broad, with robust and long hook bent dorsally; parameres strongly asymmetrical, slender.

Female. Differs only in lack of modified lateral bristles and uniformly convex frons, without marked highest median point; body length 1.59-1.68 mm (mean 1.62 mm); length of head 0.21-0.23 mm (mean 0.22 mm), width 0.40-0.43 mm (mean 0.42 mm), length of antennae 0.70-0.73 mm (mean 0.72 mm); length of pronotum 0.50-0.55 mm (mean 0.52 mm), wdidth 0.73-0.78 mm (mean 0.74 mm); length of elytra 0.88-0.90 mm (mean 0.89 mm), width 0.79-0.80 mm (mean 0.80 mm), elytral index 1.09-1.13.

Type material

Holotype (male): white printed label: "CHINA: Zhejiang/Anhui border / [CH07-41], Tianmu Shan, pass 81 / km W Linan, 625 m, / 30°17'59''N, 118°52'41''E, nut / tree plantation, plant refuse and / litter, sifted 19.VI.2007, leg. A. / Pütz" (cAP). Paratypes (26 exx.; 2♂♂, 24♀♀): 1♂, 13♀♀, white printed label: "CHINA: Zhejiang [CH07-37] / Tianmu Shan, pass 25 km NNW / Linan, 620-820 m, 30°25'40''N, / 119°35'30''E, creek valley with / bamboo and mixed forest, litter, sifted, 16.VI.2007, leg. A. Pütz"; 1♂, 10♀♀, white printed label: "CHINA: Zhejiang [CH07-37] Tianmu / Shan, pass 25 km NNW Linan / 620-820 / m, 30°25'40''N, 119°35'30''E, creek / valley with bamboo and mixed forest, / litter, sifted, 16.VI.2007, M. Schülke"; 1♀, white printed label: "CHINA (Zhejiang) / Tianmu Shan, pass 25 km / NNW Linan, 620-820 m / 30°25'40''N, 119°35'30''E / (creek valley, bamboo, / mixed forest, litter, sifted) / 16.VI.2007 D.W.Wrase [37]". Paratypes in cAP, cMS and cPJ.

Distribution

China, Zhejiang Prov. and a border between Zhejiang and Anhui provinces.

Remarks

This species is unusual within the *taurus* group in lacking any head modifications other than the lateral bristles, which are also remarkably shorter than in all remaining members of this complex. However, the general body shape and size, and the shape of the aedeagus are typical for this group.

A male specimen nearly identical to the holotype of *C. capricornis* was found in Zhejiang Province, Longwang-shan N.R., Shenxi Nongija, at altitude 650 m (leg. Feng, Liu, Yuan and Yin; depository: SHNU) (Figs. 7, 18-19). This male is externally indistinguishable from the type series of *C. capricornis*, having similar shapes, proportions, punctation and vestiture of body parts, and identical structure of the head dorsum, including the remarkably short lateral bristles and distinctly marked median highest point of the frons. It is slightly smaller (1.53 mm in length), and has slightly stouter elytra (elytral index 1.10, while in *C. capricornis* from the type locality it is 1.13-1.19). Moreover, there are small but distinct differences in the aedeagus (Figs. 18-19), especially the median lobe is distinctly narrowing towards the base and its apical margin is less oblique. More specimens from the same locality must be examined to verify whether this is a separate taxon or the observed differences fall within the intraspecific variation. Having seen only a single specimen, I prefer to refrain from creating a new specific or subspecific name. However, it is important to notice and record the observed differences to facilitate further study on Chinese Cephenniini.

***lustricollis* species group**

The *lustricollis*-group was established by Jałoszyński (2011) for two species: *C. lustricollis* Jałoszyński & Nomura, 2009 from Vietnam, and *C. astoni* Jałoszyński, 2011 from Hong Kong. These two distinct species share moderately small and relatively slender body form, finely punctate pronotum contrasting with distinctly and coarsely

punctate elytra; distinct lateral pronotal carinae clearly separated from margins; the hind tibiae of males without any modifications; and the *simonis*-type aedeagus, with strongly elongate, projecting apex of median lobe with truncate distal part, and a broad apical projection with its apical part curved or bent towards the apex of median lobe. The characters of *C. zunyianus* sp. nov. newly described below are similar to those shared by *C. lustricollis* and *C. astoni*, except the pronotal punctation, which is nearly as distinct as that on elytra. However, the general body form, the presence of lateral pronotal carinae, and especially the aedeagus of *C. zunyianus*, highly resembling copulatory organs of the two previously known species support a hypothesis of their close relationships. Therefore, *C. zunyianus* is included in the *lustricollis* species group, and the difference in pronotal and elytral punctures is removed from the group diagnosis. All species of the *lustricollis* group can be identified using characters compiled in Table 3.

***Cephennodes* (s. str.) *zunyianus* sp. nov.**

(Figs. 20-22)

Name derivation

After the city Zunyi in Guizhou Prov.

Diagnosis

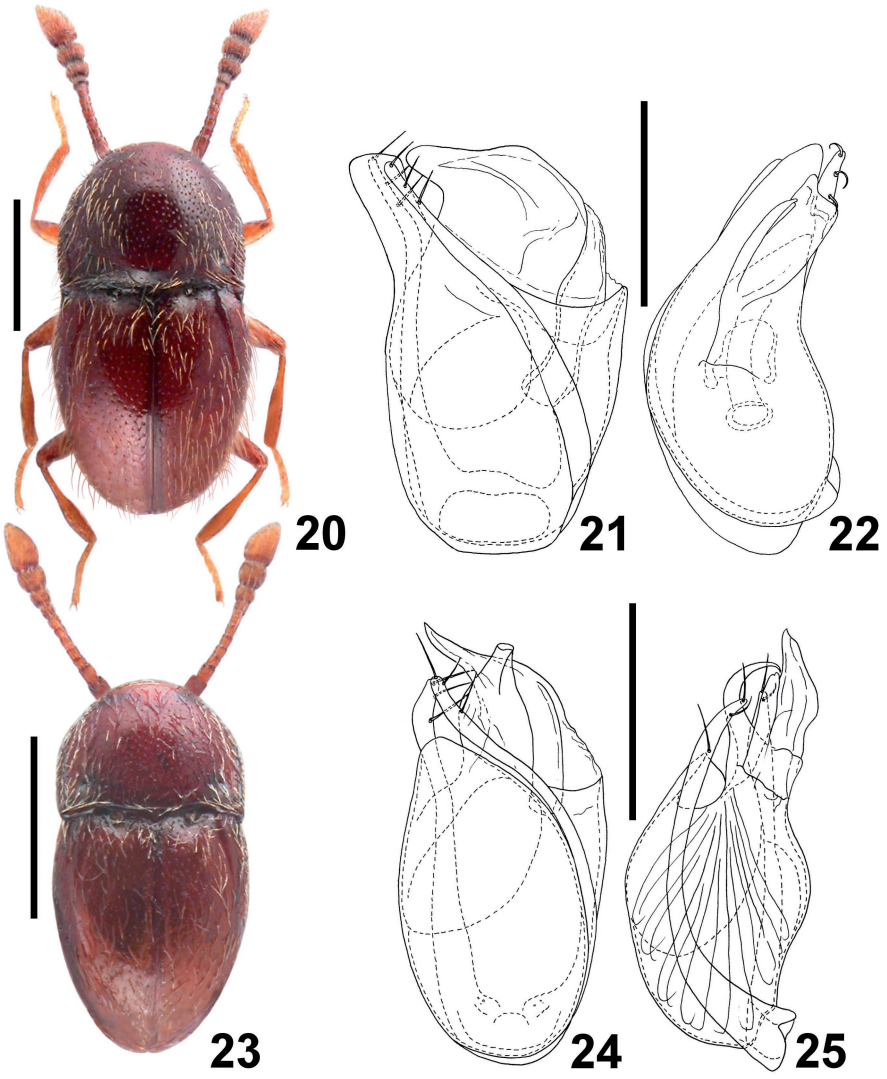
Males of *Cephennodes zunyianus* differ from the two remaining members of the *lustricollis* species group in the following characters: body length > 1.5 mm; punctures on pronotal disc nearly as distinct as those on elytra; head with lateral impressions between frons and clypeus; frons in middle impunctate; apical projection of aedeagus with broad apex and slightly concave apical margin transverse in relation to the long axis of aedeagus. Females and their diagnostic characters remain unknown.

Table 3. Major morphological differences between species within the *lustricollis* species group of *Cephennodes*.

	C. lustricollis Jałoszyński & Nomura	*C. astoni* Jałoszyński	*C. zunyianus* sp. nov.
Body length	1.22 mm	1.15-1.24 mm	1.59 mm
Pronotal punctures	fine	fine	distinct
Punctures on frons	sparse and fine on entire surface	dense and distinct in middle, absent on sides	absent in middle, sparse and fine on sides
Lateral fronto-clypeal impressions	absent	absent	present
Apical margin of apical projection of aedeagus	straight	slightly emarginate	slightly emarginate
Apex of apical projection of aedeagus	narrow	broad	broad

Description

Male. Body (Fig. 20) moderately large, length 1.59 mm, distinctly elongate, with very shallow and barely noticeable constriction between pronotum and elytra, dark brown, covered with light brown vestiture. Head large in relation to pronotum, length 0.24 mm, width 0.30 mm; vertex and posterior part of frons evenly convex and conflu-



20-25. *Cephennodes zunyianus* sp. nov. (20-22) and *C. clypeatus* sp. nov. (23-25). Male dorsal habitus (20, 23); aedeagus in ventral (21, 24) and lateral (22, 25) views (scale bars: 20, 23 – 0.5 mm; 21-22, 24-25 – 0.1 mm)

ent, covered with fine and shallow but sharply marked punctures separated by spaces 1-2× as wide as puncture diameters; anterior part of frons separated from clypeus by a pair of shallow but distinct lateral impressions, posterior part of impressions and median part of frons above impressions impunctate; clypeus distinctly convex and with punctures more distinct and denser than those on vertex; supraantennal tubercles weakly raised. Setae on vertex, posterior and lateral parts of frons and clypeus sparse, short and suberect, each frontal impression with a small bunch of long and nearly recumbent setae directed mesally and posteromesally (i.e., forming a fan inserted in impression and spread towards middle of frons and slightly posteriorly). Antennae moderately long and slender, with four distal antennomeres enlarged and forming indistinctly delimited club; length 0.70 mm; antennomere I distinctly shorter than broad; II slightly narrower and distinctly longer than I, 1.6× as long as broad; III-IV subequal in length and width, each distinctly narrower and much shorter than II, slightly transverse; V-VI subequal in length and width, each as broad as IV but slightly longer, about 1.1× as long as broad; VII as broad as VI but slightly longer, 1.3× as long as broad; VIII distinctly broader but shorter than VII, slightly transverse; IX slightly longer and distinctly broader than VIII, distinctly transverse; X distinctly larger than IX, transverse; XI slightly broader than X, about as long as IX-X together, twice as long as broad, strongly narrowing apically.

Pronotum semielliptical in shape, strongly convex, broadest between middle and anterior third, length 0.53 mm, width 0.68 mm; anterior margin broadly arcuate; lateral margins strongly rounded in anterior third, weakly rounded in posterior half; hind angles nearly right and acute; posterior margin deeply biemarginate; lateral antebasal pits shallow, each located distinctly closer to posterior than to lateral pronotal margin; lateral carinae distinctly separated from lateral pronotal margins. Punctures on disc small and moderately deep, sharply marked, separated by spaces about equal to puncture diameters, moderately broad area along posterior margin nearly impunctate, punctures between lateral edges of pronotum and lateral carinae slightly coarse; setae short and sparse, suberect.

Elytra oval, distinctly less convex than pronotum, broadest near anterior third, length 0.83 mm, width 0.70 mm, elytral index 1.18. Subhumeral lines as long as 0.4× length of elytra, each developed as a sharp boarder between more convex humeral and less convex adsutural region; apices of elytra separately rounded. Punctures slightly denser than those on pronotum and similar in diameter, but distinctly shallower; setae similar to those on pronotum but slightly longer and more erect.

Metaventrite without postmesocoxal impressions.

Legs moderately long and slender, without modifications.

Aedeagus (Figs. 21-22) 0.20 mm long, *simonis* type, median lobe strongly asymmetrical, with strongly projecting, nearly subrectangular apical part, dorsal wall devoid of setae; apical projections broad, in ventral view strongly curved towards apex of median lobe, in lateral view without apical hook; parameres strongly asymmetrical, slender.

Female. Unknown.

Type material

Holotype (male): two white printed labels: “China: Guizhou Prov. / Zunyi City / Suiyang County / Kuankuoshui N.R. / Gongtonggou”, “18-VIII-2010 / alt. 1550m / Near Dadong / FENG & YIN leg.” (SHNU).

Distribution

China, Guizhou Prov.

incertae sedis

A single species described below cannot be included in any known species group within *Cephennodes* and is treated as *incertae sedis*.

Cephennodes (s. str.) *clypeatus* sp. nov.

(Figs. 23-25)

Name derivation

The specific epithet refers to the small clypeus distinctly separated from the frons.

Diagnosis

Males of *Cephennodes clypeatus* can be distinguished from all other species of *Cephennodes* s. str. by the following combination of characters: body length 1.20 mm; body elongate, slender; clypeus separated from frons by transverse impression distinctly deeper on sides than in middle, anterior margin of frons adjacent to impression abruptly demarcated and broadly V-shaped, anterior margin of impression gradually confluent with clypeus; lateral pronotal carinae narrow and not separated from lateral margins; legs and elytra without modifications; subhumeral lines on elytra as long as 0.4× elytral length; aedeagus *simonis*-type, with oval median lobe, its apical part broadly subtriangular and rounded, weakly projecting; in ventral view apex of right apical projection strongly curved to the left and apex of the left apical projection slightly curved to the right.

Description

Male. Body (Fig. 23) small, length 1.20 mm, moderately elongate, with very shallow and weakly marked constriction between pronotum and elytra, dark brown, covered with light brown vestiture. Head moderately large in relation to pronotum, length 0.15-0.18 mm, width 0.30 mm; vertex and frons confluent and evenly convex, covered with fine but sharply marked punctures separated by spaces 1.5-2× as long as puncture diameters; supraantennal tubercles weakly raised; clypeus separated from frons by transverse impression distinctly deeper on sides than in middle, anterior margin of frons adjacent to impression abruptly demarcated and broadly V-shaped, anterior margin of impression gradually confluent with convex, nearly quadrate and nearly impunctate clypeus; eyes moderately large and convex, coarsely faceted. Setae on head dorsum

sparse and moderately long, suberect. Antennae relatively long and slender, with four terminal antennomeres forming indistinctly separated, gradually thickened club, length of antenna 0.58-0.60 mm; antennomere I about as long as broad; II distinctly narrower and about as long as I, 1.4× as long as broad; III distinctly narrower and shorter than II, subquadrate; IV-VII subequal in length and width, each as wide as III but slightly longer, about 1.2× as long as broad; VIII slightly shorter and slightly broader than VII, subquadrate; IX distinctly broader and longer than VIII, slightly transverse; X much broader and distinctly longer than IX, transverse; XI slightly broader than X, about as broad as IX-X together, twice as long as broad, moderately strongly narrowing apically.

Pronotum semielliptical in shape, broadest near posterior third but barely noticeably narrowing caudad, length 0.35-0.38 mm, width 0.50 mm; anterior margin broadly rounded; lateral margins strongly rounded only in anterior fourth, then weakly, evenly rounded up to nearly right and blunt hind angles; posterior margin shallowly bisinuate; lateral ante-basal foveae small but deep, each located distinctly closer to posterior than lateral pronotal margin; lateral carinae narrow and not separated from lateral margins. Punctures on central part of disc fine but distinct, with sharp margins, separated by spaces 1-1.5× as wide as puncture diameters, punctures becoming shallower and sparser towards pronotal margins, broad area along posterior margin remains nearly impunctate. Setae moderately dense and long, suberect.

Elytra oval, about as convex as pronotum, broadest near anterior third, length 0.65-0.70 mm, width 0.54-0.55 mm, elytral index 1.21-1.27. Subhumeral lines as long as about 0.4× length of elytra, each developed as a moderately sharp boarder between more convex humeral and less convex adsutural region; apices of elytra separately rounded. Punctures slightly smaller and shallower than those on central part of pronotum but distinctly denser and unevenly distributed, those in anterior half of each elytron separated by spaces 0.5-1× as wide as puncture diameters; setae similar to those on pronotum but slightly longer and more erect.

Metaventrite without postmesocoxal impressions.

Legs moderately long and slender, without modifications.

Aedeagus (Figs. 24-25) 0.20 mm long, *simonis* type, median lobe distinctly asymmetrical, with subtriangular but weakly projecting apex, dorsal wall devoid of setae; apical projections short and broad, with slender and relatively small hook bent dorsally; parameres strongly asymmetrical, slender.

Female. Unknown.

Type material

Holotype (male): white printed label: "CHINA: Zhejiang [CH07-37], Tianmu / Shan, pass 25 km NWN Linan, 620-820 / m, 30°25'40''N, 119°35'30''E, creek / valley with bamboo and mixed forest, / litter, sifted, 16.VI2007, M. Schülke" (cMS). Paratype: 1♂, same data as for the holotype (cPJ).

Distribution

China, Zhejiang Prov..

Remarks

Cephennodes clypeatus is relatively unremarkable and its identification must be based on a combination of external and genital characters. The aedeagus of this species, with oval median lobe, broadly subtriangular and rounded apex and two subtriangular apical projections is most similar to copulatory organs of *C. sichuanus* Jałoszyński, 2007b from China, *C. papuanus* Jałoszyński, 2008a from New Guinea, *C. hongkongensis* Jałoszyński, 2008b from Hong Kong, and *C. nsukkaensis* Jałoszyński, 2010 from Nigeria. *Cephennodes clypeatus*, with its body length 1.20 mm, is distinctly smaller than *C. papuanus* (1.52 mm) and *C. hongkongensis* (1.42-1.44 mm), and differs from *C. sichuanus* in the presence of a transverse impression between the frons and clypeus, while the latter species has an indistinct median tubercle on a convex frons. The African *C. nsukkaensis* has the frontal impression accompanied by a pair of small median tubercles posteriorly and a single median tubercle anteriorly; such tubercles are missing in *C. clypeatus*. Also aedeagi of all these species clearly differ in the shape of the median lobe and its apex, and the shape and arrangement of apical projections.

Acknowledgments

I'm indebted to Dr. Liang Tang (SHNU), Andreas Pütz (Eisenhüttenstadt, Germany) and Michael Schülke (Berlin, Germany) who kindly sent me the material for study.

REFERENCES

Jałoszyński, P. 2007a. The Cephenniini of China. II. *Cephennodes* Reitter of southern provinces, with taxonomic notes on the *Cephennodes-Chelonoidum* complex (Coleoptera, Scydmaenidae). Genus, **18:** 7-101.

—, 2007b. The Cephenniini of China. III. *Cephennodes* Reitter of Sichuan and Shaanxi (Coleoptera, Scydmaenidae). Genus, **18:** 151-207.

—, 2008a. First record of Eutheiini and Cephenniini in New Guinea, with descriptions of new species of *Paraneseuthia* Franz and *Cephennodes* Reitter (Coleoptera, Scydmaenidae). Genus, **19:** 37-44.

—, 2008b. First record of *Cephennodes* from Hongkong, with description of a new species (Coleoptera, Scydmaenidae). Genus, **19:** 171-175.

—, 2010. Afrotropical Cephenniini (Coleoptera, Staphylinidae, Scydmaeninae): Redescriptions of *Cephennodes* described by Schauffuss and Cauchois and three new species from Ghana, Nigeria and Uganda. Genus, **21:** 175-190.

—, 2011. New records and new species of *Cephennodes* Reitter from Hong Kong, (Coleoptera, Staphylinidae, Scydmaeninae). Genus, **22:** 1-8.

—, 2012. The Cephenniini of China. IV. The first record of *Cephennodes* Reitter from Hainan (Coleoptera: Staphylinidae: Scydmaeninae). Genus, **23:** 33-38.

Jałoszyński, P., Nomura, S. 2009. The Cephenniini of Vietnam (Coleoptera, Scydmaenidae). Bull. Natl. Mus. Nat. Sci., Tokyo, Ser. A, **35:** 167-225.