A contribution to knowledge of Oriental species of Cneorane Baly, 1865 (Chrysomelidae, Galerucinae)

Autor(en): **Medvedev, Lev N.**

Objekttyp: **Article**

Zeitschrift: **Entomologica Basiliensia et Collectionis Frey**

Band (Jahr): **33 (2011)**

PDF erstellt am: **23.07.2024**

Persistenter Link: https://doi.org/10.5169/seals-980974

Entomologica Basiliensia et Collectionis Frey	33	351–368	2011	ISSN 1661–8041

A contribution to knowledge of Oriental species of *Cneorane* Baly, 1865 (Chrysomelidae, Galerucinae)

by **Lev N. Medvedev**

Abstract. A preliminary key to Oriental *Cneorane* Baly, 1865 is given. Three species (*C. bhutana* – Bhutan, *C. sprecherae, C. costipennis* – both Thailand) are described as new for science. *C. nigripennis* Laboissière, 1922 is the new synonym of *C. cariosipennis* Fairmaire, 1888. Four species (*C. ephippiata* Laboissière, 1930, *C. abdominalis* Jacoby, 1890, *C. semipurpurea* Jacoby, 1884, *C. borneensis* Jacoby, 1894) are excluded from the genus.

Keywords. *Galerucinae* – *Cneorane* – Oriental Region – key – new species – new combination

Introduction

The Paleotropical genus *Cneorane* Baly, 1865, largely Oriental, is quite well studied. Most of the Oriental species were described in the 19th century and only eight species have been added in the last 50 years: three from China (GRESSITT & KIMOTO 1963, CHEN 1964, CHEN & JIANG 1976), four from Nepal (CHÛJÔ 1966, KIMOTO & TAKIZAWA 1972, MEDVEDEV 1992, 2004), and one from Bhutan (KIMOTO 1977). Keys exist for almost all regions: "British India" (MAULIK 1936), Russia and neighbouring regions (OGLOBLIN 1936), China (GRESSITT & KIMOTO 1963), Indochina (KIMOTO 1989), and Taiwan (KIMOTO & TAKIZAWA 1997), but all these keys are essentially based on the colour of the antennae, legs and underside and partly on the sculpture of the elytra. Many species are very briefly described and only poorly known.

I had the opportunity to study almost all the types described by M. Jacoby and the types of species described in recent years. The main problem was with Fairmaire's species, because the types were not found (GRESSITT & KIMOTO 1963).

In the key that follows I have used some additional characters, including aedeagus and spermatheca. In any event, this is a preliminary contribution, based mainly on substantial material held by the Naturhistorishes Museum in Basel and in the author's collection, including a large series from Vietnam.

Abbreviations for the collections housing the material examined

NHMB ..... Naturhistorisches Museum Basel, Switzerland
LM ..... Lev N. Medvedev collection, Moscow, Russia
JB ..... Jan Bezděk collection, Brno, Czech Republic

Taxonomy

A key to the species

1(2) Body entirely fulvous, only 3–6 apical antennal segments piceous or black. Elytra very finely and closely punctate, sometimes almost indistinct. Aedeagus – Fig. 1. Length 4.2–5.3 mm. Malacca, Java, New Guinea, Philippines. ..... ***C. modesta*** **Jacoby, 1886**

2(1) Body not entirely fulvous.

3(4) Upperside, including prothorax, black with distinct metallic lustre. Head, breast and legs black with metallic lustre, abdomen pitchy-brown with 2–4 apical segments fulvous. Prothorax and elytra minutely and quite closely punctured. Length 6.5–8.1 mm. China (Sikang/Sichuan). ..... ***C. sikanga*** **Gressitt et Kimoto, 1963**

4(3) Prothorax fulvous or red, sometimes darkened to entirely black, but always without metallic lustre.

5(6) Apex of elytron emarginated. Anterior coxal cavities closed. Male with anterior tibiae widened in angulate fashion at the apex, segment 1 of fore-tarsi strongly widened (Fig. 30) and last abdominal sternite with hairy brushes (Figs 28–29). Prothorax with a pair of more or less distinct short, longitudinal furrows at basal margin. Body black, head and prothorax red, sometimes head with dark vertex, prothorax darkened to entirely black, antennae black with segment 1 reddish beneath, elytra metallic blue or violaceous. Aedeagus strongly constricted in apical third (Fig. 2). Length 5.6–7.8 mm. India, Nepal, Burma, Thailand, Laos, South Vietnam. [syn. *C. rubyana* Maulik, 1936]. See also item 85. ..... ***C. feae*** **Jacoby, 1892**

6(5) Apex of elytra broadly rounded. Anterior coxal cavities open. Anterior tibiae not widened in angulate fashion at apex and most of abdomen without brushes in male. Prothorax red or fulvous, rarely darkened. Aedeagus never strongly constricted before apex.

7(10) Elytra with erect hairs.

8(9) Fulvous, including antennae and epipleurae; elytra, metasternum and abdomen black. Elytra densely punctate, interspaces with dense microsculpture. Aedeagus slightly constricted in apical third, its apex concave with a central short, acute tooth (Fig. 3). Length 5.3 mm. Nepal. (*C. nigripennis* L. Medvedev, 2004). ..... ***C. medvedevi*** **Beenen, 2010**

9(8) Fulvous including antennae and epipleurae, elytra bluish-black with two basal thirds of lateral margin, a basal quarter of sutural margin and entire basal margin sometimes reddish-fulvous; metasternum and abdomen black. Elytra with dense, distinct punctures and granulate interspaces. Aedeagus slightly constricted in apical quarter, its apex rounded with a short apical tip (Fig. 4). Length 4.3–7.0 mm. Nepal. .... ***C. hirsuta*** **Kimoto et Takizawa, 1972**

10(7) Elytra bare or with a few hairs on side and apical margins.

11(12) Elytra bluish-black (without metallic lustre) with lateral, apical and (very narrow) anterior margin fulvous (Fig. 43). Head fulvous with black vertex, remainder of body fulvous, underside sometimes partly

darkened. Anterior coxal cavities practically closed.. Prothorax lustrous and impunctate, elytra dull, densely microsculptured and finely punctate. Aedeagus – Fig. 5. Length 4.2–4.5 mm. Thailand. .... ***C. sprecherae*** **sp.nov.**

12(11) Elytra unicolorous, metallic or black (sometimes epipleurae fulvous).

13(16) Antennae fulvous, usually with apex of apical segment darkened and segments 1 and 2 slightly darkened above.

14(15) Legs black with femora of anterior and mid-legs fulvous. Underside bluish-black. Antennae of male longer than body, in female shorter, segment 3 more than twice as long as 2, segment 4 twice as long as 3. Elytra dark metallic violaceous or dark purplish, very finely and closely punctured. Aedeagus slightly constricted before base, in lateral view thick, with apex acutely triangular (Fig. 6). Length 8.4 mm. Burma (Tenasserim), South Vietnam. ..... ***C. fulvicornis*** **Jacoby, 1889**

15(14) Legs entirely fulvous. Metasternum fulvous, pygidium and abdomen black or bronze-black with apex of last sternite fulvous. Antennae of male reach midway along elytra, segment 3 about three times as long as 2, segment 4 as long as 2+3. Elytra dark greenish-bronze, finely and quite closely punctured. Aedeagus (Fig. 7) parallel-sided with rounded triangular apex, on underside evenly convex, with impressed longitudinal line on apical triangle, quite thin in lateral view. Length 7.5–8.5 mm. Thailand. ..... ***C. siamensis*** **Laboissière, 1929**

16(13) Antennae usually black with a few basal segments, sometimes also with one or two apical segments, red or fulvous; rarely entirely black.

17(22) Head fulvous with black or bluish-black vertex.

18(21) Species from the Himalayas.

19(20) Pygidium of male truncate at apex, with transverse ridge in apical third; in the female this is conical, with longitudinal central furrow in apical part. Upperside dark blue or prothorax fulvous, antennae pitchy-black with fulvous basal segments, underside black, legs dark pitchy-brown with fulvous articulations or fulvous with dark femora. Prothorax 1.3 times as wide as long, not cordiform. Elytra with lustrous interspaces. Aedeagus with narrow acute apex (Fig. 8). Length 3.7–4.8 mm. Nepal. ..... ***C. minuta*** **L. Medvedev, 1992**

20(19) Pygidium of both sexes evenly convex. Prothorax red-fulvous with five ill-defined dark spots, antennae usually black with reddish articulations of three basal segments, elytra metallic blue or green-blue, underside and legs black with reddish knees. Prothorax cordiform, 1.4–1.5 times as wide as long. Elytra with narrow and densely microsculptured interspaces, dull. Aedeagus with bidentate apex (Fig. 9). Length 5.0–5.5 mm. Bhutan. ..... ***C. variabilis*** **Kimoto, 1977**

21(18) Species from Thailand. Prothorax, underside and femora fulvous, tibiae and tarsi black, at least above, antennae fulvous or with segments 4–9 darkened. Pygidium and last abdominal sternite black. Prothorax finely punctate, elytra finely and very densely punctate, interspaces very narrow, but flat, partly with microscopic punctures. Length 6.3–6.6 mm. Male unknown. ..... ***C.*** **sp. A**

22(17) Head entirely fulvous.

23(28) Elytra with sharp ridges.

24(25) Sides of elytra with sharp ridges (Fig. 47). Elytra blue to greenish-blue, very densely punctate, with narrow interspaces. Antennae black with basal and apical segments fulvous, abdomen black with fulvous apical sternites, legs fulvous. Length 3.7–4.3 mm. Thailand. ..... ***C. costipennis* sp.nov.**

25(24) Dorsal part of elytra with ridges. Body much larger.

26(27) Elytra with one fairly complete ridge and two interrupted ridges (Fig. 48). Legs black with red femora. Elytra deep purple, dull. Scutellum black, metasternum and abdomen deep purple. Length 8.5 mm. Burma. Poorly known species. ..... ***C. birmanica* Jacoby, 1900**

27(26) Elytra with quite short humeral ridge and four ridges on dorsum. Legs and underside fulvous including pygidium; elytra metallic green, dull, with microsculptured interspaces. Length 8.0 mm. Eastern Nepal; a single female was determined as *C. birmanica* Jacoby (MEDVEDEV & SPRECHER 1998). ..... ***C.* sp. B**

28(23) Elytra without distinct ridges.

29(46) Legs entirely fulvous, sometimes tarsi and apices of tibiae more or less darkened.

30(35) Antennal segments 8–10 thickened in males.

31(32) Thickened antennal segments distinctly elongate (about twice as long as each of segments 8 and 9, about 1.5 times at segment 10 (Fig. 42). Metasternum deep blue, tarsi mostly blackish, apical antennal segments black. Elytra closely punctate. Length 6.0–7.0 mm. Northern India, Nepal. Indication for Burma (MAULIK 1936) needs confirmation. ..... ***C. braeti* Duvivier, 1892**

32(31) Thickened antennal segment only slightly elongate, almost subquadrate (Fig. 37). Two or three apical antennal segments fulvous.

33(34) Metasternum except sides and abdomen except centre of apex blue, tarsi and apices of tibiae fuscous. Elytra coarsely and very closely punctate. Length 7.0–8.0 mm. China (Yunnan). ..... ***C. dilaticornis* Chen, 1964**

34(33) Metasternum and abdomen fulvous. Elytra finely and densely punctate. Aedeagus narrowed to triangular apex, in lateral view thin and feebly curved (Fig. 10). In females apical antennal segments possibly sometimes black. Length 6.9–7.8 mm. China (Fukien, Kiangsi, Kwantung, Yunnan), Vietnam, Laos. ..... ***C. subcoerulescens* Fairmaire, 1888**

35(30) Apical antennal segments of male not thickened. Elytra dull, with microsculptured interspaces of punctures.

36(37) Species from Sumatra. Scutellum and elytra metallic green, sides of mesosternum, metasternum and abdomen bluish-green, head and prothorax with green tint. Antennae short, reach anterior third of elytra. Prothorax with dense, weak punctures, elytra densely and very finely

punctate. Length 6.0 mm. Sumatra. Unclear species. .... ***C. burchardi*** **Weise, 1922**

37(36) Continental species. Scutellum fulvous to black.

38(41) Underside and pygidium entirely fulvous. Scutellum fulvous. Elytra very densely and comparatively strongly punctate, interspaces very narrow, about half-puncture diameter, convex, densely microsculptured. Antennae with 1–2 apical segments reddish.

39(40) Antennae with two apical segments reddish, segment 4 about twice as long as 2. Length 7.6–8.1 mm. SW China (Fukien, Kweichow). .... ***C. cribratissima*** **Fairmaire, 1888**

40(39) Antennae with one apical segment reddish, segment 4 about 2.2–2.7 times as long as 2. Length 7.5–9.5 mm. Myanmar, northern India, Nepal. ..... ***C. orientalis*** **Jacoby, 1892**

41(38) Metasternum and abdomen black or metallic.

42(43) Species from northern India (Manipur) and Nepal. Antennae reach apical area of elytra. Prothorax sparsely punctate, punctures somewhat larger and more crowded on sides and near base. Elytra lustrous metallic blue, very sparsely and finely punctate, tarsi piceous. Length 8.0 mm. Poorly known species. .... ***C. manipurana*** **Maulik, 1936**

43(42) Species from China and Korea.

44(45) Aedeagus comparatively thick in lateral view, with short apical triangle (Fig.11). Tarsi sometimes more or less darkened. Spermatheca – Fig. 34. Length 5.5–8.0 mm. South of Russian Far East, eastern Mongolia, all eastern China from Russia to Vietnam, Korea. Indication for Taiwan (KIMOTO & TAKIZAWA 1997) is in fact *C. cyanipennis* Chûjô, item 72. [syn. *C. elegans* Fairmaire, 1887, *C. rufipes* Weise, 1889]. Feeding on *Lespedeza* sp. ..... ***C. violaceipennis*** **Allard, 1889**

45(44) Aedeagus very thin in lateral view, with longer apical triangle (Fig. 12). Tibiae and tarsi from entirely fulvous to entirely black, mostly partly blackish. Spermatheca – Fig. 35. Length 6.5–8.5 mm. Southern China, to the north reaching Sichuan and Shansi. Feeding was recorded, with some degree of doubt, on *Cunninghamia* sp. (GRESSITT & KIMOTO 1963). See also item 52. Very possible that this species is identical with *C. episcopalis* Fairmaire, 1889. ..... ***C. fokiensis*** **Weise, 1922 (pars)**

46(29) Legs distinctly bicolorous or entirely black.

47(62) All femora fulvous, tibiae and tarsi black.

48(49) Species from Japan. Elytra greenish-blue, finely punctate, with interstices broader than diameter of punctures, which are quite deep. Aedeagus – Fig. 13. Length 6.3–7.0 mm. Honshu, Shikoku, Kyushu. Indications for northern China and Korea need confirmation. .... ***C. elegans*** **Baly, 1874**

49(48) Continental species.

50(53) Species from China. Elytra violaceous, dark violaceous or violaceous blue.

51(52) Elytra with large, strong punctures with their interspaces narrower than their diameter, sometimes interstices minutely shagreened. Aedeagus – Fig. 14. Length 7.0–9.5 mm. See also item 75. .... ***C. intermedia*** **Fairmaire, 1889 (pars)**

52(51) Elytra finely punctate, their interstices broader than diameter of punctures. Aedeagus – Fig. 13. Length 6.5–8.5 mm. See also item 45. Southern China, reaching as far north as Sichuan and Shansi. Feeding recorded, with some degree of doubt, on *Cunninghamia* sp. (GRESSITT & KIMOTO 1963). ..... ***C. fokiensis*** **Weise, 1922 (pars)**

53(50) Species from northern India and Nepal.

54(55) Antennae with two apical segments fulvous, in male segments 8–10 strongly widened, slightly wider than long, segment 11 elongate triangular, broad at base. Tibiae mostly black on upperside, reddish beneath. Elytra dull, punctures very dense, moderately strong, interspaces not wider than diameter of punctures. Aedeagus rounded at apex, with short, acute apical tip (Fig. 15). Length 8.0–9.4 mm. Nepal, northern India [syn. *C. fulvicollis* Baly, 1865]. .... ***C. rubricollis*** **(Hope, 1831)**

55(54) Apical antennal segments black, in male not widened or only very slightly so.

56(57) Body small, length 5.0–5.3 mm. Elytra dull, strongly microsculptured and finely punctate, without basal convexity. Male: antennae simple, segment 1 of anterior tarsi strongly widened, about 1.2 times as long as wide. Aedeagus – Fig. 16. Length 5.0–5.3 mm. Nepal, northern India (Darjeeling). ..... ***C. tibialis*** **Chujo, 1966**

57(56) Body larger than 6 mm. The following three species are very poorly known.

58(59) Elytra lustrous, strongly punctate, interspaces not wider than diameter of punctures, without microsculpture. Spermatheca – Fig. 36. Length 8.5–9.0 mm. India (Assam). *C. wittmeri* Kimoto, 2004 described from northern India (Megalaya), known to me only by description, appears to be identical with this species. ..... ***C. sudha*** **Maulik, 1936**

59(58) Elytra dull, finely or moderately punctate, with interspaces wider than diameter of punctures.

60(61) Elytral punctures moderately strong, with interspaces not microsculptured. Scutellum fulvous with black sides. Length 7 mm. India (Assam), Nepal. ..... ***C. dohertyi*** **Maulik, 1936**

61(60) Elytral punctures fine and very dense with interspaces distinctly microsculptured. Scutellum black. Length 6 mm. "India orientalis". .... ***C. alutacea*** **Allard, 1889**

62(47) At least hind-femora black.

63(84) Fore- and mid-legs black with red or fulvous femora, hind legs completely black.

64(81) Antennae thin, nitidiform, preapical segments not thickened in male. Prothorax usually with very weakly impressed lines near side margins, sometimes quite indistinct.

65(76) Species from Indochina and mostly from China and Taiwan.

66(67) Apical antennal segments 1–3 fulvous. Elytra closely and partly rugose punctate, with interspaces not larger or smaller than punctures, lustrous in male, dull in female. Male: segment 1 of anterior and mid-tarsi quite wide. Aedeagus – Fig. 17. Length 6.3–8.0 mm. China (Hubei). .... ***C. apicicornis*** **Jacoby, 1890**

67(66) Apical antennal segments black.

68(69) Body small, 4.5–5.0 mm. Elytra finely and densely punctate. North Vietnam. ..... ***C. rufocoerulea*** **Fairmaire, 1888**

69(68) Body larger than 6.5 mm.

70(71) Interspaces of elytral punctures convex, irregularly rugose, microsculptured. Elytra metallic blue, dark blue or black, scutellum red to piceous, underside black or blue. Proportions of segments 2–4 are: 5-13-20, preapical segments about 4–5 times as long as wide. Prothorax with impressed line along side margin, as in Fig. 31. Length 8.5–12 mm. China (Hubei, Sichuan, Sikang, Kwantung, Kweichow, Yunnan). [*C. nigripennis* Laboissière, 1922, **syn.nov.**]. Indication for Thailand (KIMOTO 1989) needs confirmation. .... ***C. cariosipennis*** **Fairmaire, 1888**

71(70) Interspaces of elytra punctures without irregular convexities, lustrous or microsculptured.

72(73) Elytra with fine punctures, not dense, which are distinctly smaller than interspaces, green, greenish-blue or blue, with slight basal convexity. Prothorax without impressed line along lateral margin, but slightly grooved before scutellum. Aedeagus – Fig. 18. Length 6.5–7.5 mm. Taiwan. ..... ***C. cyanipennis*** **Chûjô, 1938**

73(72) Elytra with strong, very dense punctures, which are wider than interspaces. Prothorax usually with impressed line along lateral margin.

74(75) Prothorax with quite a deep groove near hind angles extending forwards and inwards as a slight impressed line (Fig. 32). Elytra mostly blue or greenish-blue, lustrous in male and dull in female. Prothorax 1.2–1.3 times as wide as long. Apex of aedeagus not acute, underside in apical quarter with deep longitudinal impression delimited by elevated sides (Fig. 19). Length 8.5–11.7 mm. Segment 1 of mid-tarsi of male narrowing to apex. China (south of Hupeh), Laos, Vietnam, Taiwan. [syn. *C. delatouchei* Fairmaire, 1888, *C. formosana* Weise, 1922]. ..... ***C. femoralis*** **Jacoby, 1892**

75(74) Prothorax without groove near hind angles, but often with very weak impressed line parallel to side margin (Fig. 33). Elytra mostly violaceous or violaceous blue, usually lustrous in both sexes. Prothorax 1.3–1.5 times as wide as long. Segment 1 of mid-tarsi parallel-sided and thinner in male. Aedeagus with acute apex, on underside in apical quarter flat or slightly concave, with very slight central ridge (Fig. 14). Length 7.0–9.5 mm. China (Hupeh, Sichuan, Kwantung, Kweichow, Tibet, Yunnan). See also item 51. .... ***C. intermedia*** **Fairmaire, 1889 (pars)**

76(65) Species from the Himalayas and Myanmar.

77(80) Elytra strongly and densely punctate, interspaces not wider than diameter of punctures. Aedeagus with triangular apex.

78(79) Antennal segment 3 twice as long as 2. Elytra lustrous, blue or green. Aedeagus with acute triangular apex, apical quarter of underside flat, quite thin in lateral view with apical part slightly curved upwards (Fig. 20). Length 5.9–7.8 mm. Pakistan, northern India, Nepal, indications for Bhutan and Tibet need confirmation. [syn. *C. bicolor* Koller et Redtenbacher, 1844]. ..... ***C. varipes* Jacoby, 1896**

79(78) Antennal segment 3 about three times as long as 2. Elytra greenish-blue or blue, in male lustrous but duller than in preceding species, in female might be microsculptured, also punctures more dense and partly rugose. Aedeagus with moderately acute triangular apex, on underside longitudinally grooved in apical half, in lateral view quite thick, with apical part not curved upwards (Fig. 21). Length 5.5–10.7 mm. Pakistan, northern India, Nepal, Bhutan. Indication for Tibet needs confirmation; indication for Taiwan (KIMOTO & TAKIZAWA 1997) is in fact *C. femoralis* Jacoby. ..... ***C. rugulipennis* Baly, 1886**

80(77) Elytra very finely and not densely punctate, especially on apical slope, interspaces flat and mostly wider than diameter of punctures. Aedeagus with broadly rounded apex and a very short apical tip, underside deeply and broadly concave in apical half (Fig. 22). Length 6.2 mm. ..... ***C. bhutana* sp.nov.**

81(64) Preapical antennal segments (usually 8–10) more or less thickened in male.

82(83) Elytra with deep postbasal depression, punctures small, interspaces distinctly wider than punctures themselves, colour mostly purple-violet with opal reflection. Male: antennal segments 8–10 moderately thickened, each about 1.7–1.75 times as long as wide, segment 11 about 1.5 times more narrow than 10 (Fig. 38). Segment 1 of fore- and mid-tarsi shorter, widened basally, harp-like. Aedeagus (Fig. 23) slightly constricted in preapical quarter, on underside without longitudinal groove, but with preapical impression. Length 6.0–8.5 mm. Myanmar, Thailand, South Vietnam. ..... ***C. subaenea* Jacoby, 1892**

83(82) Elytra with distinct but shallow postbasal impression, punctures dense and moderately large, interspaces mostly not wider than punctures themselves, colour blue or violaceous. Male: antennal segments 8–10 widened, mostly broader than in preceding species, quite variable in form, segment 11 twice as narrow as 10 (Figs 39–41), segment 1 of fore- and mid-tarsi more elongate and parallel-sided. Aedeagus not constricted preapically, with longitudinal groove on underside (Fig.24). Length 6.8–8.0 mm. China (Yunnan, Xizang). ..... ***C. crassicornis* Fairmaire, 1889**

84(63) Legs black or metallic, sometimes articulations may be more or less reddish.

85(86) Apex of elytra emarginated. Head and prothorax red-fulvous or more or less darkened or almost black. Legs black. Antennal segment 4 equal to

segment 3 or a little shorter than it. Elytra blue or greenish-blue or violaceous. Length 5.6–7.8 mm. See also item 5. India, Nepal, Myanmar, Thailand, Laos, South Vietnam. [syn. *C. rubyana* Maulik, 1936, *Cassena rubyana*: Kimoto, 1989]. See also item 5. .... ***C. feae* Jacoby, 1892, females**

86(85) Apex of elytra broadly rounded. Antennal segment 4 distinctly longer than 3.

87(88) Prothorax without depressions. Elytra violaceous, finely and not densely punctate, legs black. Antennal segment 4 a little longer than 3, but shorter than 2+3. Aedeagus slightly constricted in preapical quarter, with acute triangular apex. Length 6.5–7.0 mm. Myanmar. .... ***C. malaisei* Bryant, 1954**

88(87) Prothorax with a shallow round depression at each side. Elytra blue, extremely densely punctate, legs blue. Antennal segment 4 as long as segments 2–3. Length 7.0 mm. China: Tibet. .... ***C. coeruleipes* Chen et Jiang, 1976**

Descriptions of new species and taxonomical notes

Cneorane sprecherae sp.nov.

Material examined. Holotype (male): Thailand, Umfang river, 16° 07′N, 90° 00′E, 1000 m, 28.IV–6.V.1991, leg. V. Kuban (NHMB). Paratypes: same locality and date, 5 ex. (NHMB, 2 ex. LM).

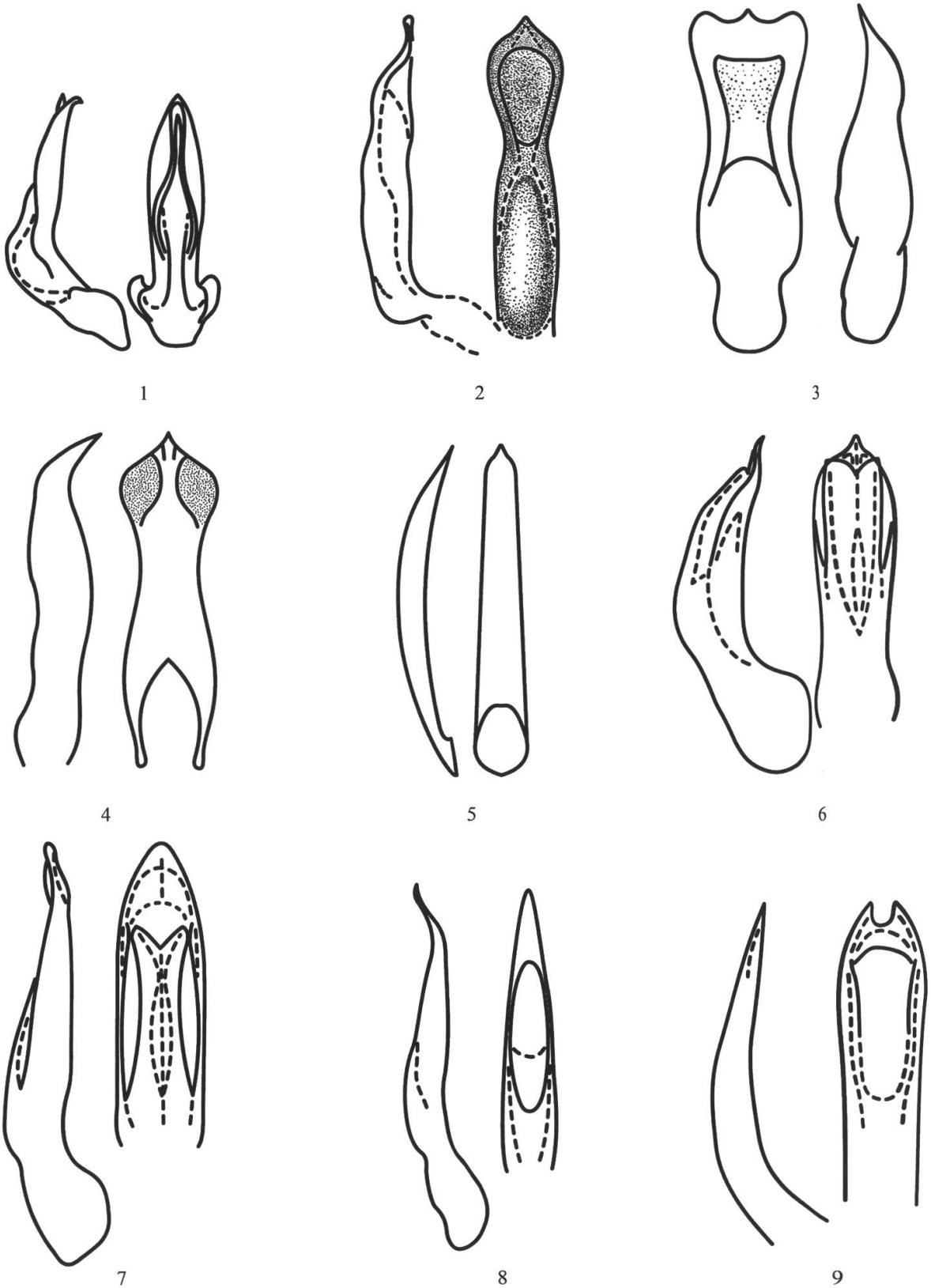
Description. Head fulvous with black vertex, antennae, prothorax and scutellum fulvous, elytra bluish-black, without lustre; fulvous margin along side and apex, very narrowly on anterior margin (Fig. 43); underside and legs fulvous, metasternum mostly more or less darkened to black, abdomen sometimes darkened on sides.

Body elongate, parallel-sided. Head impunctate, clypeus triangular with straight anterior margin, interantennal space carinate, frontal tubercles feebly convex, delimited at the rear by a sharp, straight, impressed line. Antennae reach apical slope of elytra, nitidiform, proportions of segments: 8-3-8-8-8-8-8-8-8-6-8, preapical segments about five times as long as wide. Prothorax 1.3 times as wide as long, broadest in anterior quarter, side margins beyond broadest point almost straight, surface evenly convex, lustrous, with very sparse microscopic punctures. Scutellum as wide as long, broadly rounded at apex, lustrous, impunctate. Elytra 1.5 times as long as wide, parallel-sided, with feeble basal convexity and postbasal impression, surface dull, densely microsculptured and very finely punctate, but punctures not very distinct among dense microsculpture. Anterior coxal cavities almost closed. Aedeagus (Fig. 5) narrow, elongate with acute apex and deep longitudinal groove in middle of underside. Segment 1 of fore- and mid-tarsi practically not widened.

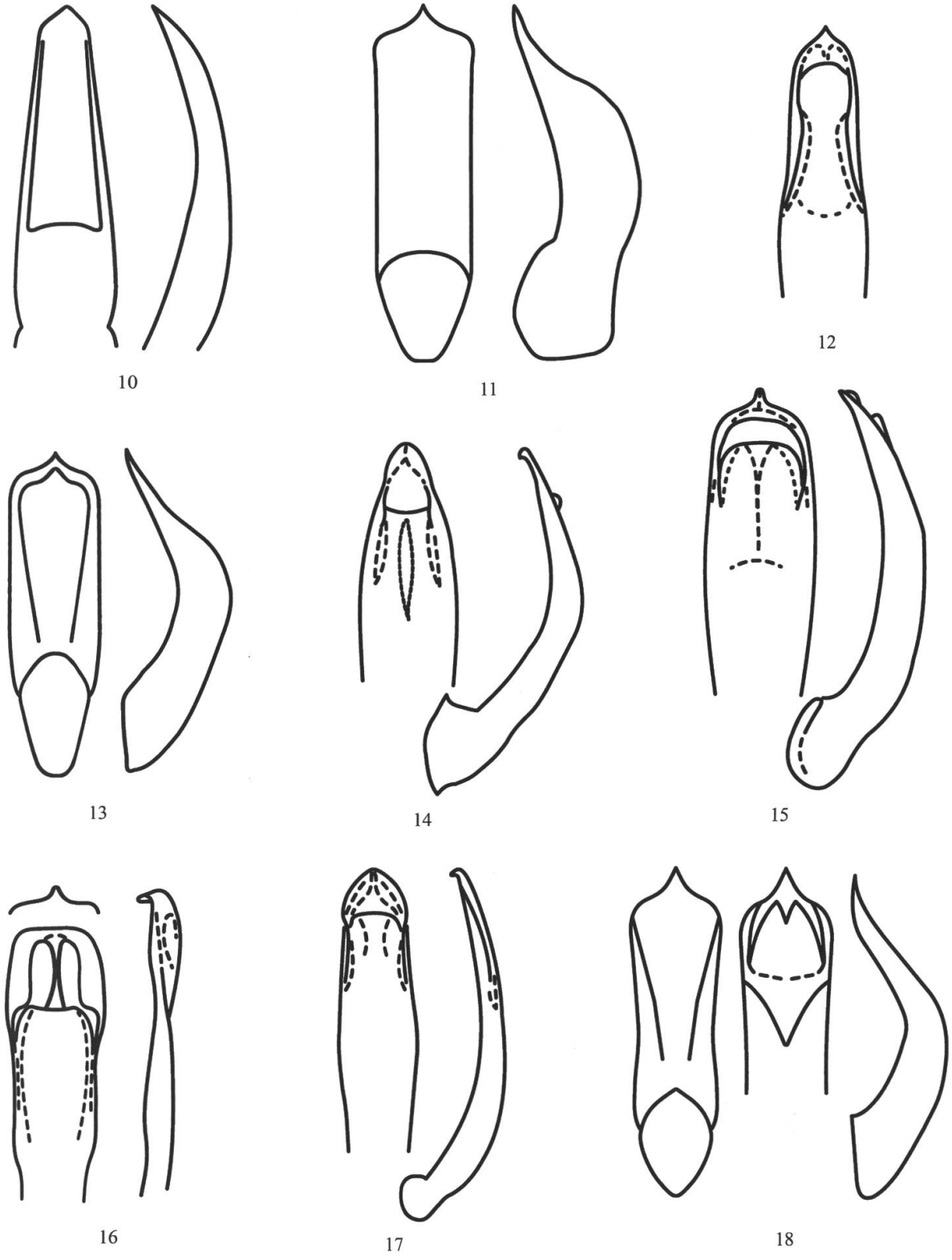
Length of body: 4.2–4.5 mm.

Etymology. This species is dedicated to Dr. E. Sprecher, curator of the entomological collection in the Naturhistorisches Museum Basel.

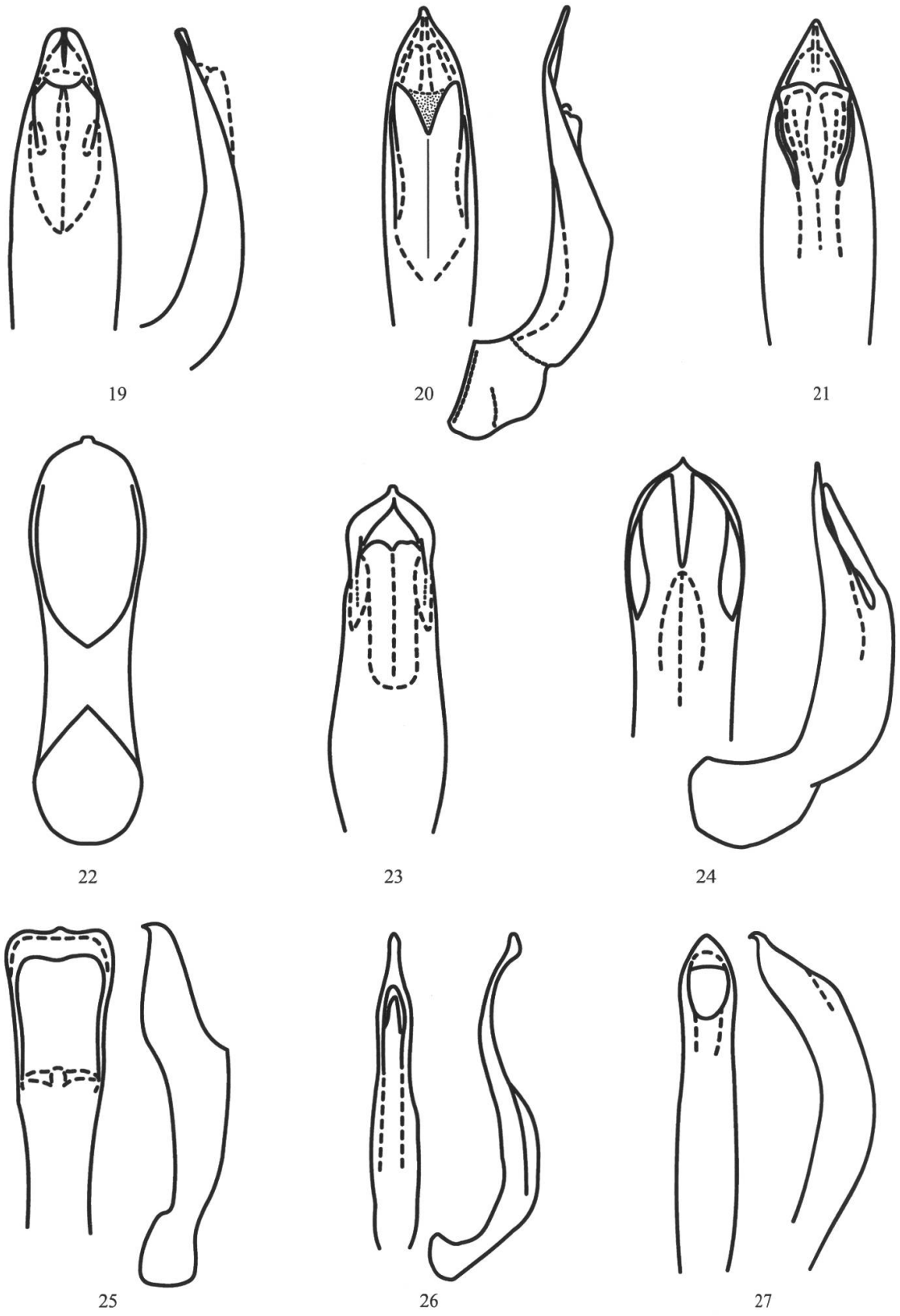
Differential diagnosis. Differs well from almost all species in its very distinct fulvous margin of elytra. The only exception is *C. hirsuta* Kimoto et Takizawa, 1972, which sometimes has two-thirds of lateral margin, a quarter of the sutural and the entire basal margin of the elytra fulvous, but also differs well in pubescent elytra and aedeagus.



Figs 1–9. Aedeagus (d – dorsal, v – ventral, l – lateral): 1 – *C. modesta* Jacoby, d, l, type; 2 – *C. feae* Jacoby, d, l, type; 3 – *C. medvedevi* Beenen, v, l, holotype; 4 – *C. hirsuta* Kimoto, l, v; 5 – *C. sprecherae* sp.nov., v, l, holotype; 6 – *C. fulvicornis* Jacoby, d, l, type; 7 – *C. siamensis* Laboissière, d, l; 8 – *C. minuta* L. Medvedev, d, l, holotype; 9 – *C.variabilis* Kimoto, d, l.



Figs 10–18. Aedeagus (d – dorsal, v – ventral, l – lateral): 10 – *C. subcoerulescens* Fairmaire, d, l; 11 – *C. violaceipennis* Allard, v; 12 – *C. fokiensis* Weise, d; 13 – *C. elegans* Baly, v, l; 14 – *C. intermedia* Fairmaire, d, l; 15 – *C. rubricollis* (Hope), d, l; 16 – *C. tibialis* Chûjô, d, l, and extreme apex; 17 – *C. apicicornis* Jacoby, d, l, type; 18 – *C. cyanipennis* Chûjô, v, d, l.



Figs 19–27. Aedeagus (d – dorsal, v – ventral, l – lateral): 19 – *C. femoralis* Jacoby, d, l; 20 – *C. varipes* Jacoby, d, l; 21 – *C. rugulipennis* Baly, d; 22 – *C. bhutana* sp.nov., v, holotype; 23 – *C. subaenea* Jacoby, d; 24 – *C. crassicornis* Fairmaire, d, l; 25 – *C. abdominalis* Jacoby, d, l, type; 26 – *C. borneensis* Jacoby, d, l, type; 27 – *C. semipurpurea* Jacoby, d, l, type.

Cneorane costipennis sp.nov.

Material examined. Holotype (female): northern Thailand, Chiang Mai, Bella Villa Resort, 18°48′N, 98° 50′E, 500 m, 24–27.VIII.2010, leg. O. Gorbunov (LM).
Paratypes: same locality and date, 3 females (LM), – Thailand, N, Mae Hong Son prov., Soppong env., 600 m, 28.V–2.VI.1999, M. Riha leg., 2 females (JB), – Thailand, N, Mae Hong Son prov., SE of Soppong, 1500 m, 19°27′N, 98°20′E, 23–7.V.1999, M. Riha leg., 1 female (JB), – Thailand, Mae Hong Son prov., Soppong, 1500 m, 19°27′N, 98°20′E, 7–12.V.1996, S. Becvar leg., 4 females (JB).

Description. Head, prothorax, scutellum and legs fulvous, antennae black with three basal and two or three apical segments fulvous, elytra metallic blue to greenish-blue, underside black with last abdominal sternites and pygidium fulvous.

Body elongate ovate. Clypeus with deep, sparse punctures and straight anterior margin, interantennal space quite broad, convex but not carinate, with a few punctures, frontal tubercles triangular, convex, sharply divided posteriorly; with straight, impressed line, as well as from each other; vertex convex, with a few punctures. Antennae reach beyond midpoint of elytra, proportions of segments: 7-3-6-6-6-6-6-6-5-5-8, preapical segments about three times as long as wide. Prothorax 1.5 times as wide as long, broadest in anterior quarter, sides slightly rounded, anterior and posterior angles distinct and produced. Scutellum semicircular, impunctate. Elytra 1.4 times as long as wide, broadest beyond midway, surface with a trace of basal convexity, lustrous, densely punctate, punctures not large but deep, interspaces mostly as wide as diameter of punctures, sharp ridge running from humerus to midpoint of elytra, parallel to side margins; also two additional slight, short ridges, one inside, the other outside, the main ridge (Fig. 47). Prosternum distinct between coxae, anterior coxal cavities half closed. Last abdominal sternite with broadly rounded hind margin.

Length of body: 3.7–4.3 mm.

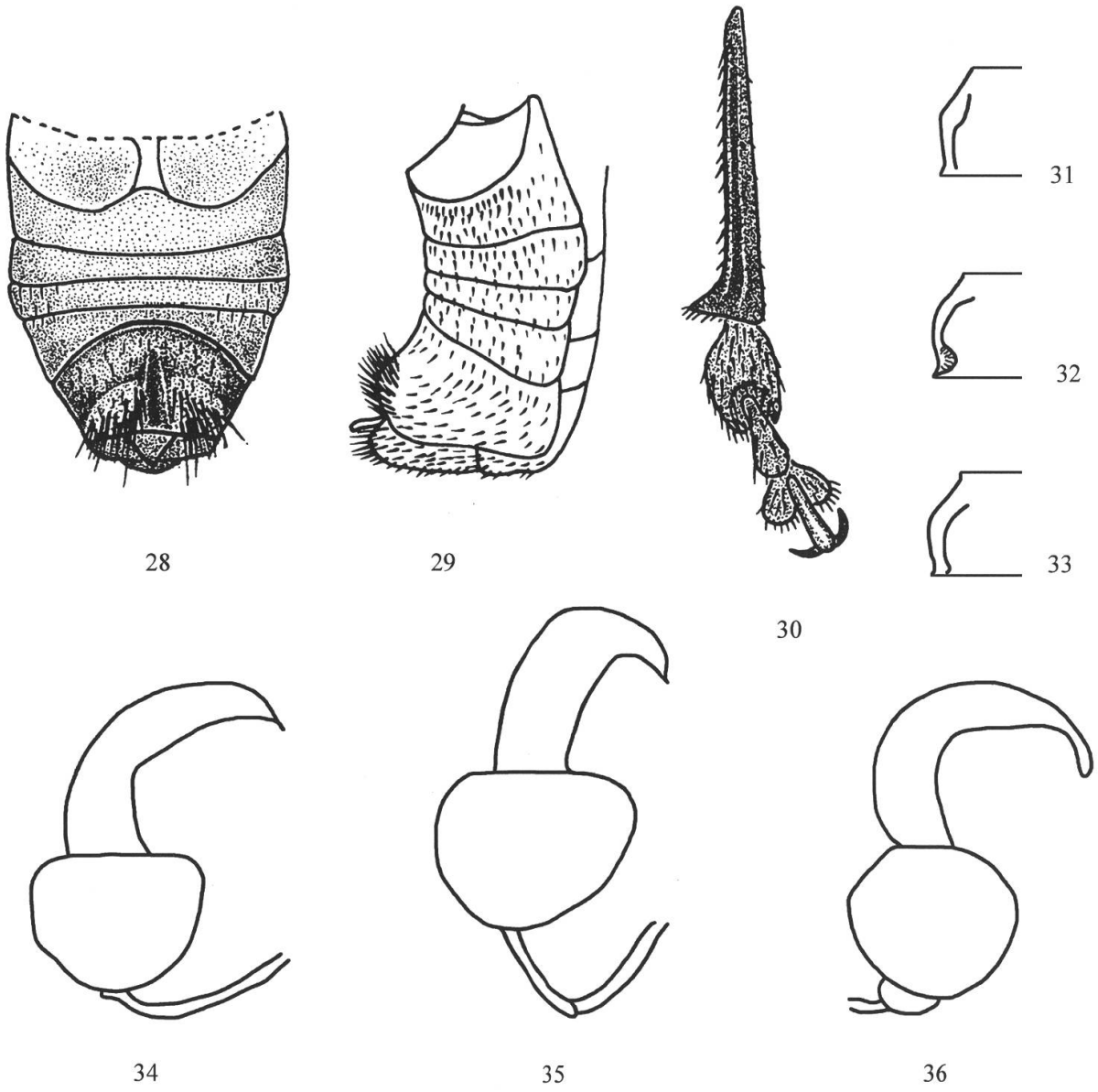
Differential diagnosis. Differs from all species of the genus in the sharp ridge on the sides of the elytra. This species, having almost closed coxal cavities, appears somewhat atypical for *Cneorane*; conversely, its spermatheca is practically same as in most species of this genus.

Cneorane bhutana sp.nov.

Material examined. Holotype (male): Bhutan, Chasilakha, 6425′[?], 1978, Doriee, Khandu [?collector], with Kimoto's label – *Cneorane varipes* Jacoby (NHMB).

Description. Black, head, three basal antennal segments, prothorax, femora and bases of tibiae of fore- and mid-legs reddish-fulvous, elytra violaceous black.

Body elongate, widening towards the rear. Head impunctate, clypeus short with straight anterior margin, interantennal space with narrow, low ridge, frontal tubercles convex, sharply delimited at the rear by a straight impression. Antennae reach beyond midpoint of elytra, proportions of segments: 11-4-9-10-10-9-10-9-9-9-11, preapical segments about three times as long as wide. Prothorax 1.4 times as wide as long, broadest in anterior third, with distinct anterior angles and produced posterior angles, side margin feebly arcuate, slightly emarginated before hind angles, surface lustrous, convex, impunctate, without impressed lines near lateral margin. Scutellum semicircular, impunctate. Elytra 1.5 times as long as wide, broadest in apical third, surface lustrous,



Figs 28–36. 28 –30. *C. feae* Jacoby: 28, 29 – abdomen ventral and lateral; 30 – anterior tibia and tarsus of male. Figs 31–33. Lateral margin of prothorax with impressions: 31 – *C. cariosipennis* Fairmaire; 32 – *C. femoralis* Jacoby; 33 – *C. intermedia* Fairmaire. 34–36. Spermatheca: 34 – *C. violaceipennis* Allard; 35 – *C. fokiensis* Weise; 36 – *C. sudha* Maulik.

with very slight basal convexity and postbasal impression, finely and not densely punctate, punctures on apical slope very faint, far from distinct, interspaces flat and mostly wider than diameter of punctures. Segment 1 of fore- and mid-legs stick-like, about 2.5 times as long as wide. Aedeagus (Fig. 22) very feebly curved in lateral view, its apex broadly rounded with a very short, small apical tip, underside broadly and deeply concave in apical part.

Length of body: 6.0 mm.

I also have a female from Nepal that might belong to this species, being of practically the same colour and structure of elytra apart from a distinctly punctate apical slope, but at the moment I prefer not to include it in paratypes.

Differential diagnosis. This species alike at *C. rugulipennis* Baly, 1866 and *Cneorane varipes* Jacoby, 1896 but differs in the sculpture of elytra and especially in the form of aedeagus, which has a broadly rounded apex with very short apical tip.

Cneorane modesta Jacoby, 1886

Remark. This species has all the formal characters of *Cneorane*, but differs from typical representatives of the genus in colour and an unusual structure of aedeagus, lacking the typical covering plate on the upperside. Possibly in future, after studying a good series of specimens, *C. modesta* might be removed to another genus.

Cneorane feae Jacoby, 1892 (comb. orig.)

Cneorane rubyana Maulik, 1936
Cassena rubyana: Kimoto, 1989

Remark. This species has closed anterior coxal and basal grooves on the prothorax, and because of these characters it was removed from genus *Cneorane* Baly, 1865 to *Cassena* (KIMOTO 1989). In strictly formal terms, this is correct, but this species differs from all species of *Cassena* and its generic position is far from clear. The basal grooves of the prothorax in this species are very slight and sometimes absent. It also differs from typical *Cneorane* Baly, 1865 in having closed anterior coxal cavities and brushes on the apex of the abdomen. *Cneorane rubyana* Maulik, 1936 is a synonym of *Cneorane feae* Jacoby, 1892 (MEDVEDEV 2002). I exclude this species from the genus *Cassena* and return it to *Cneorane*.

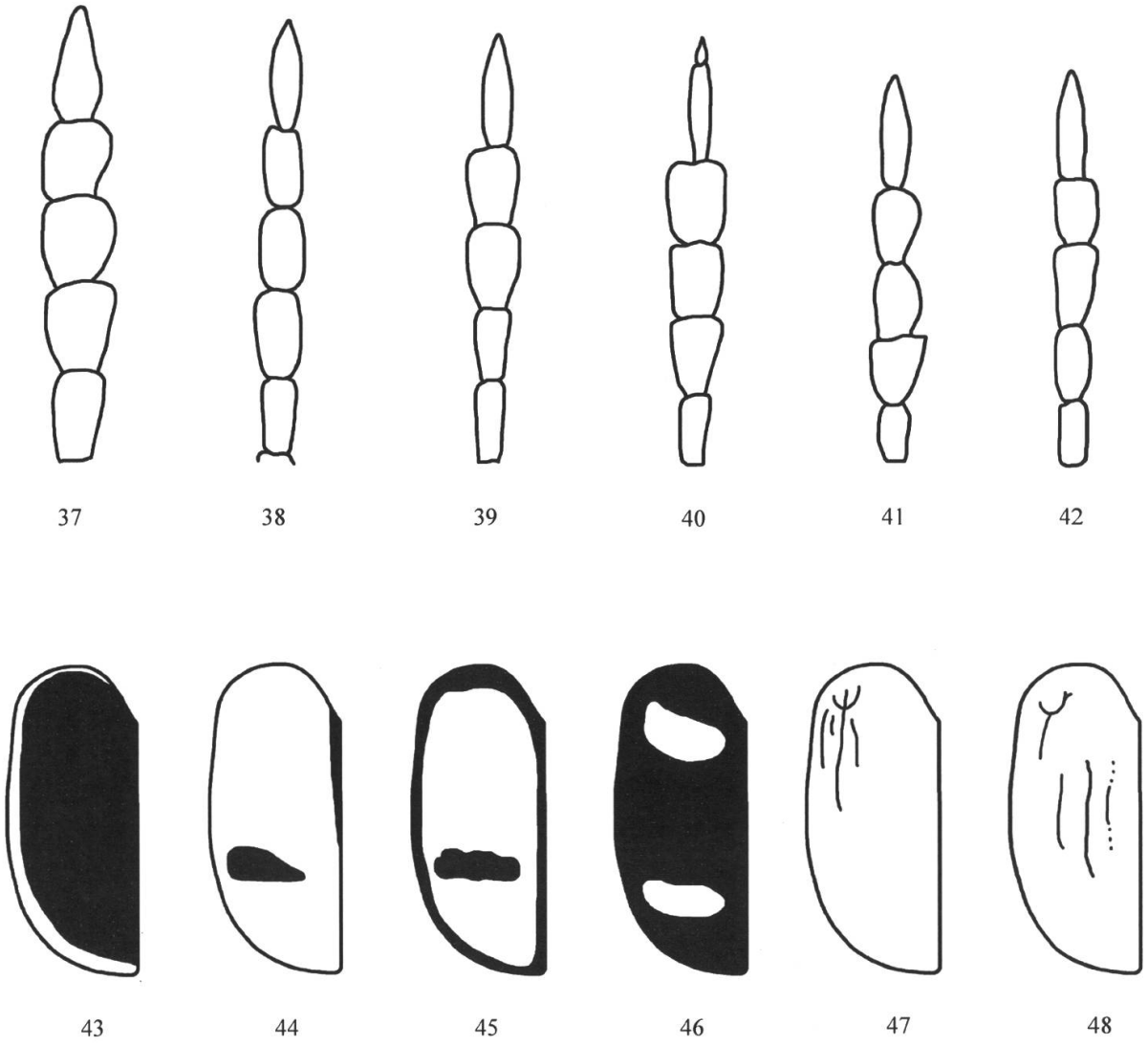
The specimens were collected in Vietnam on *Prunus walicii* and *Fabaceae*, but I am not sure that these are its actual food plants.

Cneorane cariosipennis Fairmaire, 1888

Remark on synonymy. *C. nigripennis* Laboissière, 1922 is without doubt a new synonym of *C. cariosipennis* Fairmaire, 1888. Nearly the only difference is the black colour of the elytra, but this is only a colour aberration, something that is also known in *C. cariosipennis*.

Cneorane cyanipennis Chûjô, 1938 valid species

Remark. This species from Taiwan was united with *C. violaceipennis* Allard (KIMOTO 1969), but differs from it in having black legs with red fore- and mid-femora (*C. femoralis* species group), smaller size, and another form of aedeagus. I studied two males kindly sent to me by Dr. H.Takizawa.

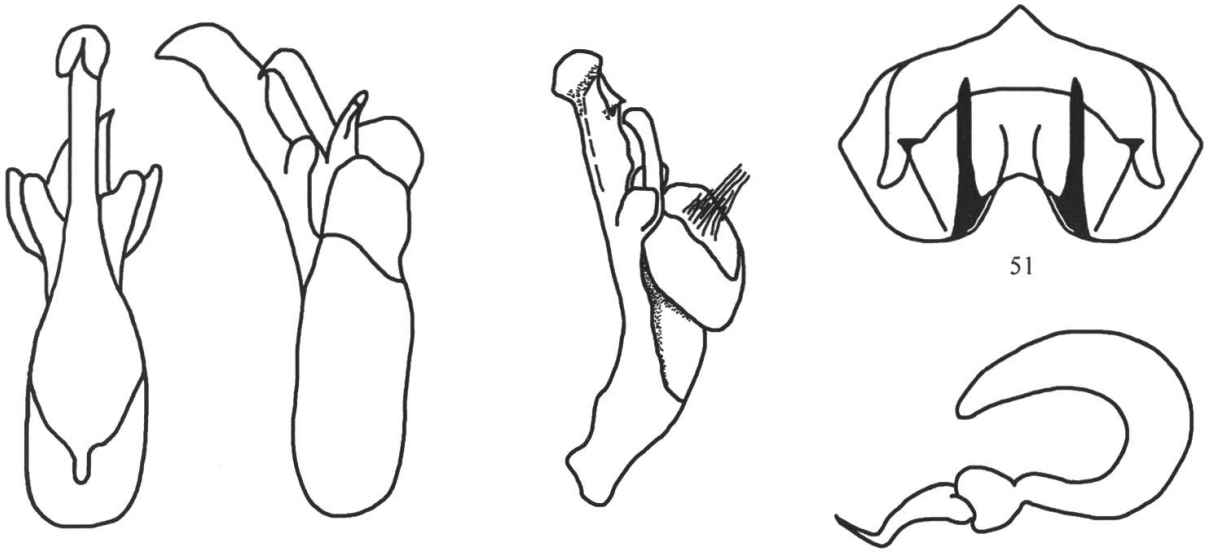


Figs 37–48. 37–42. Five apical antennal segments of males: 37 – *C. dilaticornis* Chen; 38 – *C. subaenea* Jacoby; 39–41 – *C. crassicornis* Fairmaire; 42 – *C. braeti* Duvivier. 43–46. Elytral pattern: 43 – *C. sprecherae* sp.nov.; 44–46 – *Liroetis ephippiata* (Laboissière). 47–48. Elytral sculpture: 47 – *C. costipennis* sp.nov.; 48 – *C. birmanica* Jacoby.

Species excluded from the *Cneorane*

Liroetis ephippiata (Laboissière, 1930) (comb.nov.)

Remark. *Cneorane ephippiata* already differs from other species of this genus in its fulvous elytra with black spots (Figs 44–46); it also has very narrow epipleurae, typical of the genus *Liroetis* Weise, 1889. Females of this species have a very complicated postpygidium with four acute teeth (Fig. 51). Spermatheca – Fig. 52. I have only females in my collection, so the aedeagus was studied and figured by my colleagues Dr. Eva Sprecher (Fig. 49) and Mr. Ron Beenen (Fig. 50). Its structure differs sharply from all *Cneorane*, but is typical of *Liroetis*. Because of all the characters mentioned above I place this species in the genus *Liroetis*.



49 50 51 52

Figs 49–52. *Liroetis ephippiata* Laboissière: 49 – aedeagus dorsal and lateral, by E. Sprecher; 50 – aedeagus lateraly by R. Beenen; 51 – postpygidium; 52 – spermatheca.

Charaea abdominalis (Jacoby, 1890) (comb.nov.)

Remark. *Cneorane abdominalis* Jacoby, 1890, the type of which was studied, must be placed in another genus, possibly *Charaea* Baly, 1878. The prothorax of this species is scarcely broader than long, with sides widened midway, anterior coxal cavities closed and a type of coloration unusual for *Cneorane*. Aedeagus – Fig. 25.

Hyphaenia borneensis (Jacoby, 1894) (comb.nov.)

Remark. *Cneorane borneensis* Jacoby, 1894 has several characters quite atypical of the genus *Cneorane*. The antennae of this species have basal segments practically glabrous and the following ones densely pubescent, with a few erect hairs; further, segments 2 and 3 are short and equal, while segment 4 is much longer than the two preceding combined; hind angles of prothorax broadly rounded; aedeagus very thin and curved twice in lateral view (Fig. 26), differing sharply from all known *Cneorane*. The type was studied. As a preliminary measure, I place it in the genus *Hyphaenia.*

Hyphaenia semipurpurea (Jacoby, 1884) (comb.nov.)

Remark. JACOBY (1884) placed this species in the genus *Cneorane*, with some doubt, and noted that he could not indicate any important characters to "justify the establishment of another genus for its reception", but also mentioned that it resembles the genus *Theopea* Baly, 1864. The male of this species has antennal segment 4 as long as the three preceding combined and the punctures of the elytra are partly arranged in semi-regular rows. I think that these characters are enough to exclude the species in question from *Cneorane*; it appears to be quite near *C. borneensis* Jacoby, 1894, mentioned above. Its aedeagus is also thin but not curved in lateral view (Fig. 27). The type was studied.

Acknowledgements

I am very grateful to Dr. Eva Sprecher, Dr. Haruo Takizawa, Dr. Jan Bezděk and Mr. Ron Beenen for their invaluable help in the preparation of this publication.

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Author's address:

Prof. Lev N. Medvedev
Institute for Problems of Ecology and Evolution
Russian Academy of Sciences
Leninsky prospect 33
Moscow 119071
RUSSIA

E-mail:lev.n.medvedev@mail.ru