

## New Phaeogenini species from Russian Far East (Insecta, Hymenoptera, Ichneumonidae, Ichneumoninae)

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### Abstract

*Dicaelotus gilvusniger* sp. n. and *Dicaelotus coriaceuator* sp. n. from the tribe Phaeogenini (Ichneumoninae) are described from Primorsky Territory, Russian Far East.

*Dicaelotus gilvusniger* sp. n. ♂, is separated from the related species, *Dicaelotus pictus* (SCHMIEDEKNECHT, 1903) ♂, by morphological and colour characters. *Dicaelotus coriaceuator* sp. n. ♂ mainly differs from *Dicaelotus punctiventris* (THOMSON, 1891) ♂ by a conspicuous coriaceous sculpture of the metasoma.

### Introduction

Only six species of the genus *Dicaelotus* WESMAEL, [1845 ] are known from the Eastern Palearctic region: *Dicaelotus cameroni* BRIDGMAN, 1881, *D. chinensis* ROMAN, 1936, *D. crassifemur* THOMSON, 1891, *D. kriebaumeri* (HOLMGREN, 1890), *D. parvulus* (GRAVENHORST, 1829) and *D. pumilus* (GRAVENHORST, 1829). With the description of two new *Dicaelotus* species in this work, the number is increased to eight species. V. E. GOKHMAN described new Phaeogenini species from the Russian Far East in 1993, but no species belonging to the genus *Dicaelotus*.

### Methods

Illustrations were made through an auto assembly process with analySIS soft imaging system and combineZM and then edited with Photoshop CS6.

Institutional acronyms:

BMNH: The the Natural History Museum, London;

ZSM: Zoologische Staatssammlung München.

### Taxonomy

***Dicaelotus gilvusniger* sp. n.** (Figs 1-3)

**Holotype:** ♂, Russian Far East, Primorskii krai, Lazovski: Zapovednik, c. 170 km E Vladivostok, Korpad, 43° 17' 15'' N 134° 07' 10'' E, 526m 4-24.Viii. 2001, Mountain top. Malaise trap 487. M. Quest coll. BMNH(E) 2009-59 (coll. BMNH).

**Paratypes:** 18 ♂, same data as holotype (BMNH) 5 ♂, same data as holotype (ZSM).

**Male:** Body length 5,0-6,8 mm.

**Head** (Figs 2, 3). Shining. Supra-antennal fovea scarcely concave, densely punctate. Frons densely punctate, weak horizontal striae. Face densely punctate with sparce horizontal striae. Supraclypeal area not distinctly pronounced, punctate and with sparce fine striae, not separated from clypeus by a groove. Clypeus weakly convex, shining, sparsely punctate. Lower mandible tooth very short, distinctly shorter than upper tooth. Malar space as long as base of mandible. Vertex broad, shining, densely punctate. Temple broad, shining, densely punctate. Genal carina meeting hypostomal carina directly at base of mandible. Flagellum (Fig. 1) 24-27 segments, tyloids on flagellar segments 8-16 (8-14, 8-15).

**Thorax** (Figs 1, 3). Pronotal collar short. Mesoscutum shining, densely punctate. Notaulus as short impression. Scutellum without lateral carinae, shining, sparsely punctate. Pronotum smoothly shining, scarcely punctate, apical part with transverse striae. Humeral bar punctate and coriaceous. Mesopleuron shining, densely reticulate punctate. Sternaulus with shallow impression on anterior third of mesopleuron. Prepectus shining, punctate. Propleuron densely punctate.



Fig. 1: *Dicaelotus gilvusniger* sp. n., lateral view.



Fig. 3: *Dicaelotus gilvusniger* sp. n., dorsal view.

**Colour** (Figs 1-3). Black. Face, clypeus, mandibles, palpi, frontal orbits, spot on vertex, malar space, lower part of temple yellow. Flagellum yellowish. Pronotal collar, humeral bar, ventral strip of pronotum, subtegular ridge, tegula, base of wings yellow. Ventral spot on sternaulus and hind corner of mesopleuron, propleuron yellow. Mesosternum yellow ventrally (sometimes lower part of mesopleuron and mesosternum entirely yellow). Scutellum, postscutellum, hind corner of area dentipara and area metapleuralis yellow. Area posteroexterna yellow (yellow pattern of body may sometimes be reduced). Legs reddish, ventrally yellowish. Coxae and trochanters yellow (hind coxa sometimes basally blackish). Metasoma tergites laterally narrowly and sternites entirely yellow. Tergites with a small yellow anterior and a broader posterior band.



Fig. 2: *Dicaelotus gilvusniger* sp. n., head, frontal view.

**Propodeum** (Fig. 3). Shining. Area basalis short, smooth. Area superomedia as wide as long, heart-shaped, smooth. Costula in middle of area superomedia. Area petiolaris small, shallowly concave with strong transverse striae. Areae superoexterna smooth, scarcely punctate. Area dentipara shining, reticulate punctate. Area posteroexterna with irregular striae. Area spiracularis reticulate punctate. Spiracle small, round. Area metapleuralis shining, densely reticulate punctate. Area coxalis shining, densely reticulate punctate.

**Wings.** Areolet pentagonal. Hind wing nervellus (Cu + cu-a) about vertical. Cu (discoidella) weak.

**Legs.** Smoothly shining, weakly punctate. Coxae and trochanters smoothly shining and weakly punctate. Tibia and tarsus dull.

**Metasoma** (Figs 1, 3). Shining. Postpetiolus smoothly shining, lateral parts weakly punctate. Tergite 2 a little longer than wide, shining, densely reticulate punctate. Thyridium non-existent. Tergites 3-4 transverse, shining, densely reticulate punctate. Tergites 5-7 more smoothly shining, scarcely punctate.



Fig. 4: *Dicaelotus coriaceuator* sp. n., lateral view.

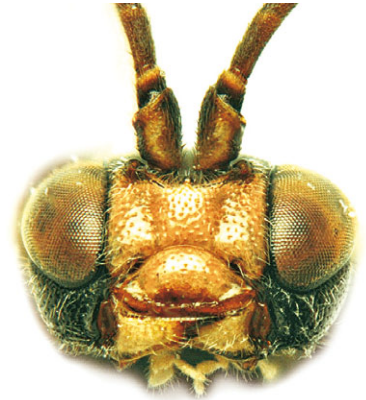


Fig. 5: *Dicaelotus coriaceuator* sp. n., head, frontal view.



Fig. 6: *Dicaelotus coriaceuator* sp. n., dorsal view.



Fig. 7: *Dicaelotus coriaceuator* sp. n., metasoma, dorsal view

**Colour variation.** Black: Face, clypeus, mandibles, palpi yellow. Flagellum yellowish. Scapus, pedicellus yellow ventrally. Collare, short spot on humeral bar, subtegular ridge, tegula, base of wings, scutellum laterally yellow. Propodeum completely black.

**Female.** Unknown.

#### Differential diagnosis

*Dicaelotus gilvusniger* sp. n. ♂, is separated from *Dicaelotus pictus* (SCHMIEDEKNECHT, 1903) ♂, by the following combination of characters: face relatively flat, temple narrow, mandible narrower (in *pictus* face convex, temple broad, mandibles wide). Punctuation coarse and strong (in *pictus* punctuation weaker and finer). Area petiolaris narrow (in *pictus* broad). The body colour is black and yellow (in *pictus* the body colour is black and white). Vertex with yellow spot (in *pictus* vertex black). Base of hind tibia black (in *pictus* base of hind tibia white). Propodeum mostly yellow (in *pictus* propodeum black, rarely a very small bright spot on the area posteroexterna). Metasomal tergites laterally yellow and with broader yellow posterior bands apically (in *pictus* metasomal tergites laterally black and without broad yellow band apically).

**Etymology.** The name *Dicaelotus gilvusniger* sp. n. is derived from the yellow and black colour pattern.

***Dicaelotus coriaceator* sp. n.** (Figs 4-7)

**Holotype:** ♂, Russian Far East, Primorskii krai, Lazovski: Zapovednik, c. 170 km E Vladivostok, Korpad, 43° 17' 15'' N 134° 07' 10'' E, 526m 4-24.Viii. 2001, Mountain top. Malaise trap 487. M. Quest coll. BMNH(E) 2009-59 (BMNH)

**Paratypes:** 4 ♂, same data as holotype (BMNH). 2 ♂, same data as holotype (ZSM). 1 ♂ Russian Far East, Primorskii krai, Lazovski: Zapovednik, c. 170 km E Vladivostok, Ta-Chingousa, 43° 00' 42'' N 134° 07' 34'' E, 0m 28.Viii. – 16.IX 2001, Sandy coast. Malaise trap 494a. M. Quest coll. BMNH(E) 2009-59 (BMNH).

**Male:** Body length 4,4-7,6 mm.

**Head** (Figs 4-6). Shining. Supra-antennal fovea concave with transverse striae. Frons densely punctate. Face weakly punctate. Supraclypeal area distinctly raised, a little longer than broad, punctate, separated from clypeus by a deep groove. Clypeus convex, shining, sparsely punctate, apically with a coarse impression. Lower mandible tooth short, distinctly shorter than upper tooth. Malar space very short. Vertex shining, scarcely punctate. Temple broad, shining, with widely spaced punctures. Hypostomal carina very strongly raised behind mandible base, gena strongly excavate. Flagellum (Fig. 4) with 23-26 segments, tyloids on flagellar segments 6-11(7-10).

**Thorax** (Figs 4, 7). Pronotal collar short. Mesoscutum shining, densely punctate. Notaulus as very short impression. Scutellum with lateral carinae, shining, weakly punctate. Pronotum smoothly shining, scarcely punctate, apical part with transverse striae. Humeral bar densely, coarsely punctate. Mesopleuron shining, densely punctate. Sternaulus deeply impressed on anterior third of mesopleuron. Prepectus coriaceous, densely punctate. Propleuron smooth, sparsely punctate.

**Propodeum** (Fig. 6). Shining. Area basalis short, rugose sculptured. Area superomedia about as wide as long, heart-shaped, shining, coriaceous. Costula at anterior third of area superomedia. Area petiolaris small, concave, with strong transverse striae and coriaceous. Areae superoexterna smooth, with sparse, fine punctures. Area dentipara shining reticulate punctate. Area posteroexterna with irregular striae. Area spiracularis reticulate punctate. Spiracle small, round. Area metapleuralis shining, densely punctate. Area coxalis shining, punctate.

**Wings.** Areolet pentagonal. Nervellus (Cu + cu-a) about vertical.

**Legs.** Smoothly shining, weakly punctulate. Coxae and trochanters smoothly shining and weakly punctulate. Tibia and tarsus dull.

**Metasoma** (Figs 4, 7). Dull. Petiolus smoothly shining, sparsely punctate. Postpetiolus smoothly shining, weak longitudinal striae, weakly coriaceous. Tergite 2 a little longer than wide. Tergites 2-4 with very conspicuous coriaceous sculpture, dull, tergite 2 with the weakly defined punctures very widely spaced, punctures of tergites 3 and 4 more widely spaced. Thyridium non-existent. Tergites 3-4 transverse. Tergites 5-7 more smoothly shining, scarcely punctate.

**Colour** (Figs 4-7). Black. Face, clypeus, mandibles, palpi, sometimes ventrally on scapus yellow. Clypeus apically and teeth of mandibles brownish. Flagellum ventrally light brownish, dorsally brown. Pronotal collar dorsally, hind corner of pronotum, subtegular ridge, tegula, base of wings yellow. Legs light reddish to yellowish. Coxae and trochanters yellow (hind coxae basally sometimes brownish). Metasomal tergites laterally narrowly and sternites entirely yellow. Tergites brown with small yellow apical bands.

**Female.** Unknown.

**Differential diagnosis**

*Dicaelotus coriaceator* sp. n. ♂, is separated from *Dicaelotus punctiventris* (THOMSON, 1891) ♂, by the following combination of characters: face and frons shining, weakly punctate, supraclypeal area distinctly raised, temple with widely spaced punctures. Flagellum 23-26 segments (in *punctiventris* face and frons more coriaceous, finely, densely punctate, supraclypeal area weakly raised, temple densely punctate, flagellum 19-21 segments). Area superomedia about as long as wide (in *punctiventris* area superomedia longer than wide). Metasoma with conspicuous coriaceous sculpture (in *punctiventris* densely punctate). Postpetiolus slender (in *punctiventris* broad). Humeral bar black. Metasomal tergites with small yellow bands apically (in *punctiventris* humeral bar yellow, metasoma tergites black and without yellow bands apically).

**Etymology.** The name *Dicaelotus coriaceator* sp. n. is derived from the coarsely coriaceous metasoma.

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