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A Review of the Genus *Cnastis* TOWNES (Hymenoptera, Ichneumonidae) and a Key to the Palearctic Species

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Abstract: The first record of genus *Cnastis* TOWNES is reported for the western palearctic region. A new *Cnastis* species from Bulgaria has been described. Two other subspecies are redescribed. A key for identification of palearctic species is proposed.

Introduction

The genus *Cnastis* TOWNES was known until now to comprise 4 species: two from Japan, one from the Philippines with two subspecies, and one from India, Malaysia and Indonesia (GUPTA 1980 & 1985). An undescribed male specimen from Borneo is preserved in the British Museum of Natural History (FITTON in litt.) As far as they are known the specimens are rare in collections as most of the Neoxoridini. One female from Bulgaria, which does not fit to any known species, was collected around timber material and it is described below as a new species. This is the first report of the genus from the western palearctic region.

***Cnastis* TOWNES**

Cnastis TOWNES 1957 - Proc. Ent. Soc. Washington 59: 19.

Type species: *Neoxorides longicaudis longicaudis* BALTAZAR.

***Cnastis longicaudis longicaudis* (BALTAZAR 1955)**

Neoxorides longicaudis longicaudis BALTAZAR 1955. - Philippine J. Sci. 83: 420.

Type ♀, Mt. Banahao, Philippine, P. I. Baker (? leg.), Nat. Mus. Nat. Hist., Smiths. Inst. Washington, type Nr. 62498, examined.

Body length 17,6 mm. Head widened behind eyes. Vertex sharp laterally with almost egg-shaped swellings. Frons with lateral protuberances. Postannellus 4,9 as long as wide (flagellum miss after 6th segment). Inner face orbita strongly converged ventrally.

Face square, with longitudinal carina in the middle, coarsely wrinkled and punctured. Gena 0,25 as long as base of mandible, mat in upper 2/3. Occipital carina reaches genal carina far behind the base of the mandible.

Mesoscutum smooth and lucious, densely and coarsely punctured, with distinct notauli. Lateral part of mesoscutum weakly projected in front and laterally. Collar projected laterally. Mesopleurum coarse and moderately dense punctured, lucious. Front wing with antefurcal nervulus at about the half of its lenght, parallel vein below middle of postnervulus. Legs very slender, front tibia with row of 5 bristles on its front surface, hind femur 7,1 as long as wide, correlation between hind tarsal segments as 78:41:22:6:15. Metapleurum and propodeum very densely punctured, the latter without areolation, abdominal tergites punctured.

Black; face, frontal and vertex orbita almost to the occipital carina, palpi, two spots on mesoscutum, scutellum and postscutellum, a longitudinal spot on mesopleurum and spots on propodeum yellow; front and middle coxa yellow with black spots on apical upper surface, hind coxa black with yellow spots on basal half; legs yellow, second hind trochanters almost entirely darkened, apical third of hind femur, base and apical half of hind tibia and greater part of last tarsal segment black, middle tibia from above and middle tarsus darkened; abdominal tergites apically with wide yellow transversal apical stripe; base of antenna from below and hind half of gena reddish.

Distribution: Luzon - Philippine.

Cnastis longicaudis mindanaensis (BALTAZAR 1955)

Neoxorides longicaudis mindanaensis BALTAZAR 1955 - Philippine J. Sci. 83: 420.

Type ♀, Butuan, Mindanao, Philippine, P. I. Baker (? leg.), Nat. Mus. Nat. Hist., Smiths. Inst. Washington, type Nr. 62499, examined.

Front wing 11,7 mm, ovipositor sheath 17,6 mm long. Head enlarged, widened behind. Frons concave at the antennal sockets, smooth, lucious, rare and fine punctured from behind, with more distinct lateral protuberances in the middle lateral part. Postannellus 5,5 as long as wide, preapical segments almost square (the top of flagellum missing after 26th segment). The basal 9 segments black, first and second one from below and 10th and following segments white. Inner face orbita strongly converged ventrally. Face square, with longitudinal carina in the middle, coarsely wrinkled and punctured. Gena 0,25 as long as base of mandible, mat in upper 2/3. Occipital carina reaching genal carina far behind base of mandible.

Mesoscutum dense and coarse punctured, with distinct notauli, smooth and lucious. Lateral part of mesoscutum egg-shaped projected in front and laterally. Collar projected laterally. Mesopleurum coarse and moderately dense punctured, lucious. Front wing with strongly antefurcal nervulus (more than the half of its lenght), parallel

vein below middle of postnervulus. Legs very slender, front tibia with row of 4-5 bristles on its front surface, hind femur 6,7 as long as wide, correlation between hind tarsal segments as 61:33:18:5:14. Metapleurum and propodeum very dense punctured, the latter without areolation, abdominal tergites punctured.

Black; face, frontal and vertex orbita widely almost to the occipital carina, palpi, prothorax in front, a X-shaped spot on mesonothum, scutellum and postscutellum, tegula, subtegular carina, a spot below it and legs yellow, hind coxa from below and in part laterally black, middle coxa with black spots laterally, second hind trochanters, apical third of hind femur, base and apical 1/2 of hind tibia darkened; abdominal tergites apically with wide yellow transversal apical stripe, front and middle femur with brownish longitudinal stripe from above.

Distribution: Mindanao - Philippine.

***Cnastis vittata* (MORLEY 1913)**

Eugalta vittata MORLEY 1913 - Fauna British India, Hymenoptera 3 (1): 74.

Type ♀, India - Sikkim (London), not seen.

GUPTA (1980) redescribed the species and reported new records from India. Without examination material of *Cnastis longicaudis* (BALTAZAR) he assumed identity between them. Having in mind the description of *C. vittata* (MORLEY) and examination of the types of *C. longicaudis longicaudis* (BALTAZAR) and *C. longicaudis mindanaensis* (BALTAZAR) I suppose validity of each one of them. The final answer could be given after having seen all types.

Distribution: India -Sikkim, Malaysia - Sabah, and Indonesia - Sulawesi.

***Cnastis assimilis* (UCHIDA 1928)**

Xorides assimilis UCHIDA 1928 - J. Fac. Agr. Hokkaido Imp. Univ. 25: 26.

Type ♀, Hokkaido, July 25, 1926 (Sapporo), not seen.

Distribution: Hokkaido - Japan.

***Cnastis vulgaris* (UCHIDA 1928)**

Xorides vulgaris UCHIDA 1928 - J. Fac. Agr. Hokkaido Imp. Univ. 25: 27.

Type ♀, ? Hokkaido, (Sapporo), not seen.

Distribution: Hokkaido (Sapporo, Jozankei, Aoyama, Ishikiriyama) and Honshu - Japan.

KASPARYAN (1976) proposed a key for the two palearctic species.

***Cnastis bulgaricus* sp. nov.**

Holotype ♀, Sofia, Bulgaria, 12.06.1992, around timber material, leg. P. Mitov, in author's collection.

Female. Front wing 8,6 mm long. Head widened behind (Fig. 1). Flagellum weakly widened apically, with 33 segments. First segment 3,1 as long as wide, third segment 5,0 as long as wide, apical segments square. Face convergents down (Fig. 2). Thorax elongated, flattened dorsoventrally, dense punctured. Mesoscutum three-lobed, with deep notaulus. Nervulus weakly postfurcal (Fig. 3). Front femur widened apically, front tibia with row of 6 stout bristles on front surface. Middle tarsal claws with supplement tooth (Fig. 4 and 5). Claws of hind tarsus not longer than these of middle one. Correlation between hind tarsal segments as 95:55:32:15:20. Propodeum without areolation, with oval spiracle. First tergite entirely, basal half of II-IV tergites transversally striated. Last tergite visible (Fig. 6). Ovipositor as long as front wing from base to end of pterostigma.

Black; pedicellus and postannellus from below, palpi, tegula, base of pterostigma, mesepimeron and front tibia partly yellowish; hind corner of pronotum and legs reddish; front and middle trochanters with blackish spots, hind trochanters, tibia and tarsal segments black.

It is distinguished from all known species by postfurcal nervulus, lack of yellow marks on head and different colouration of the body.

The situation of the nervulus in Pimplinae is a very constant parameter and serves for distinguishing *Townesia* OZOLS from other Ephialtini with long ovipositor sheath. After having seen all species of *Cnastis* it would be possible to separate the above described species in a new genus.

Key for identification of the Palearctic species

- 1 Front wing with postfurcal nervulus, head without yellow marks
..... *Cnastis bulgaricus* sp. nov.
- Front wing with antefurcal nervulus, head with yellow marks
- 2 Flagellum without white ring. Hind leg black, basal half of trochanters and femur red.....
..... *Cnastis vulgaris* UCHIDA
- Flagellum with white ring. Hind coxa, trochanters and tibia dark brown, except in the base; Femur red, tarsus and tibia basally white, base of coxa from above with white spot..... *Cnastis assimilis* UCHIDA

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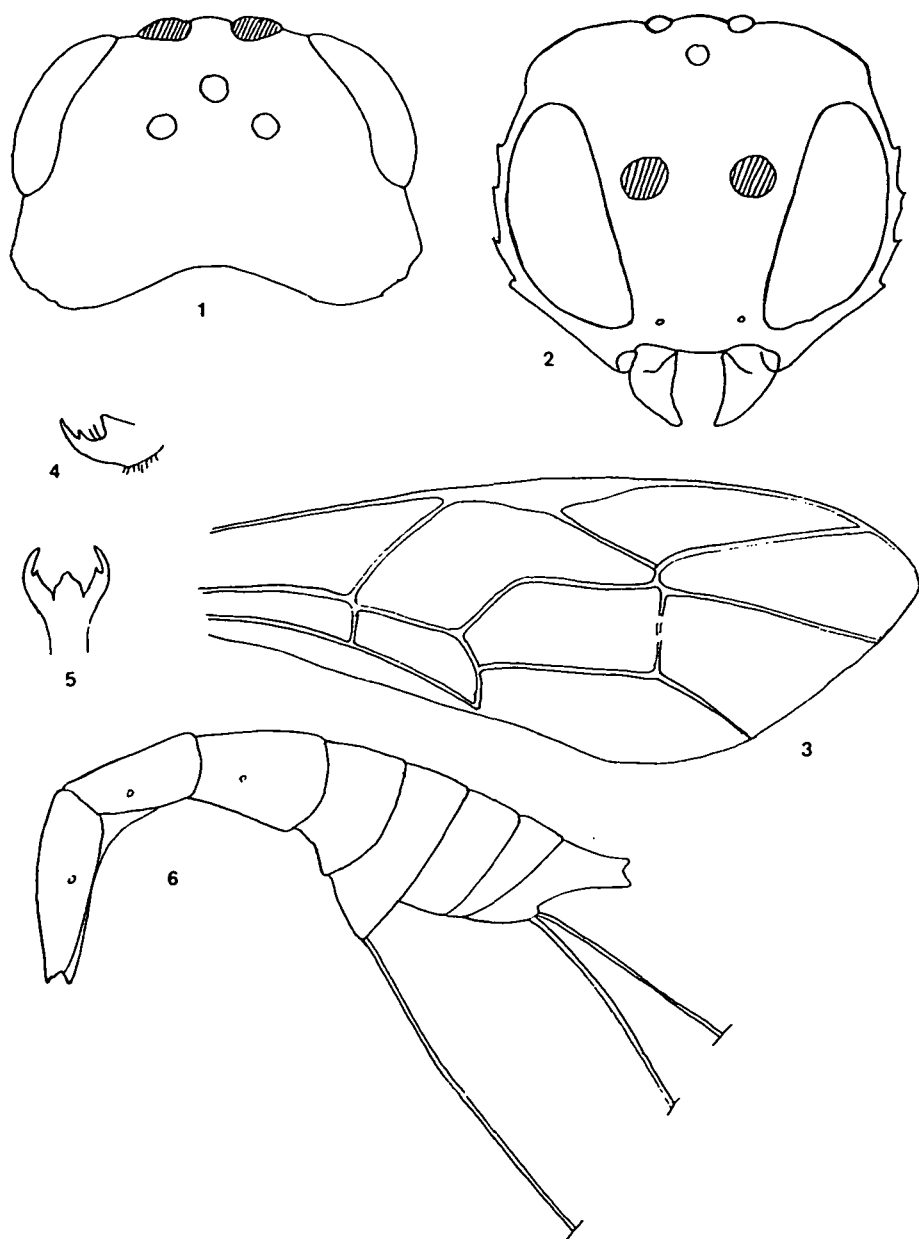


Fig. 1-6: *Cnastis bulgaricus* sp. nov. - 1: Head from above; 2: Head in front; 3: Front wing; 4: Middle tarsal claw laterally; 5: Middle tarsal claws ventrally; 6: Abdomen laterally.

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