

Crossocerus rasnitsyni, a new species of crabronid wasps from Southeast Kazakhstan (Hymenoptera: Crabronidae)

Crossocerus rasnitsyni — новый вид ос-крабронид из Юго-Восточного Казахстана (Hymenoptera: Crabronidae)

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КЛЮЧЕВЫЕ СЛОВА: Hymenoptera, Crabronidae, *Crossocerus*, новый вид.

ABSTRACT. A new species, *Crossocerus* (*Crossocerus*) *rasnitsyni* **sp.n.** is described from Southeast Kazakhstan (the Sholak Ridge). This species is the most closely related to *C. (C.) wesmaeli* (Vander Linden), but differs in having less developed yellow pattern of the body, shape of the clypeus, form and sculpture of the parietal area, shorter metasomal tergum I, and sculpture of the propodeal enclosure. The new species also differs from other similar species of *Crossocerus* s.str. by the absence of basal constriction on metasomal tergum II, structure of pronotum, unmodified male antenna and legs, particular structure and sculpture of the propodeal enclosure, absence of pubescence on the ventral surface of mesothorax, and details of body, antennal and leg coloration.

РЕЗЮМЕ. Описывается новый вид *Crossocerus* (*Crossocerus*) *rasnitsyni* **sp.n.** из Юго-Восточного Казахстана (хребет Шолак). Этот вид наиболее близок к *C. (C.) wesmaeli* (Vander Linden), но отличается от него менее развитым желтым рисунком тела, формой клипеуса, формой и скульптурой теменных площадок, более коротким I тергумом брюшка, скульптурой срединного поля проподоума. От ряда других близких видов *Crossocerus* s.str. новый вид отличается отсутствием перетяжки на II тергуме брюшка, строением переднеспинки, отсутствием модификаций в строении усиков и ног у самца, своеобразным строением и скульптурой срединного поля проподоума, отсутствием опушения низа среднегруди, деталями окраски тела, усиков и ног.

Introduction

Thirty-two species of the genus *Crossocerus* Lepelletier and Brullé, 1834 were recorded from Kazakhstan [Kazenas, 2002, 2007]. However, this is certainly not the final number of *Crossocerus* species from that ter-

ritory, because its fauna has been insufficiently studied. Consequently, there are many locations in Kazakhstan where collecting of digger wasps was never done. During his study of digger wasps in the “Altyn-emel” National Park in 2009–2010, the author of the present paper discovered a new species of *Crossocerus* that is described below.

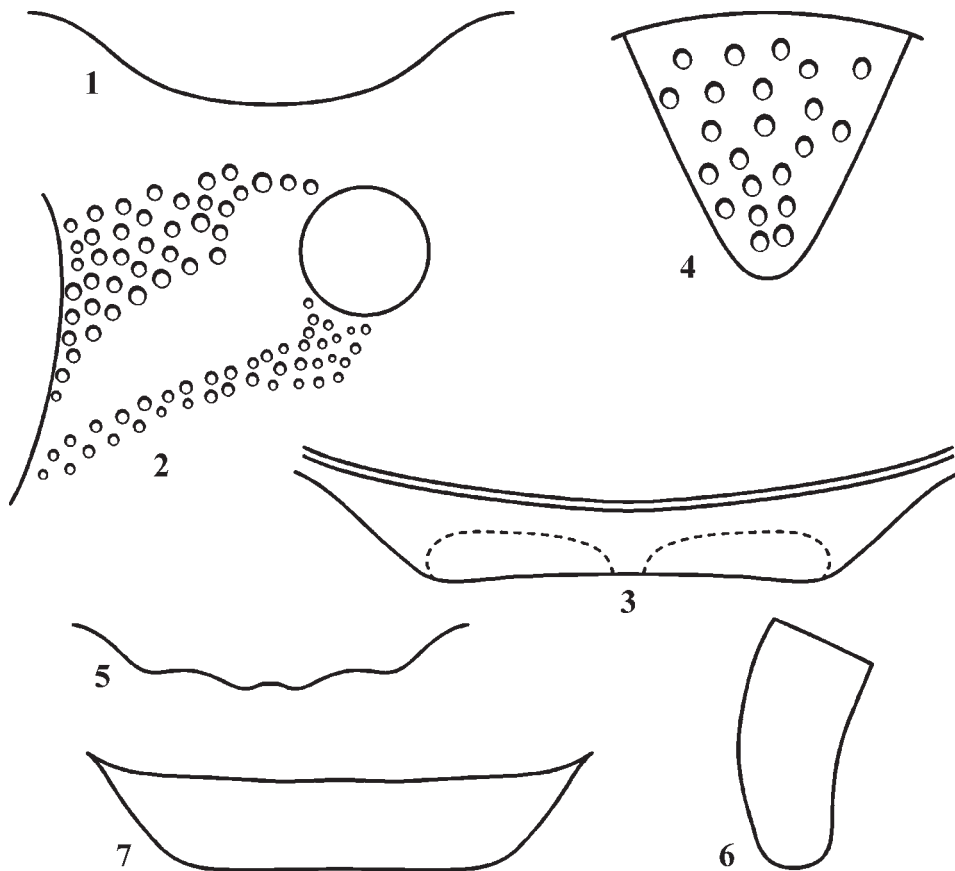
Taxonomic part

Crossocerus (*Crossocerus*) *rasnitsyni* **sp.n.**

Figs 1–7.

TYPE MATERIAL. Holotype: ♀, Southeast Kazakhstan, Sholak (= Chulak) Ridge, southern spur of Semirechensky (= Dzhungarsky) Ala Tau, Taygak Gorge, N 43°55'45"; E 77°52'13", 3.VI. 2010 (V.L. Kazenas). Paratypes: 2 ♂♂, 13 ♀♀, with same labels as holotype. The holotype and six paratypes (one male, five females) are deposited in the Zoological Institute of the Russian Academy of Sciences (St. Petersburg), seven paratypes (1 ♂, 6 ♀♀) — in the Institute of Zoology, Ministry of Education and Science of the Republic of Kazakhstan (Almaty).

DESCRIPTION. Female (holotype). Occipital carina not forming a closed ring, without apical tooth. Mandibles bidentate apically, without tooth on inner margin, almost completely yellow, except for reddish preapical part and brownish red apical teeth (in some paratypes, mandibles mostly light reddish brown). Clypeus not protruding, finely and densely punctate; diameter of nearly confluent punctures 6.0–8.0 times less than mid ocellus. Lower margin of clypeus slightly and almost regularly arcuate, almost straight medially (Fig. 1). Frons with dense and fine punctures (with their diameter less than half distance between them) and dense silvery pubescence on each side of smooth concavity around scape, with small medial fossa and a well-defined median furrow above them. Scape slightly flattened, black posteromedially, yellow anterolaterally. Flagellum dark brown. Dorsal surface of head densely and finely punctate; diameter of punctures less



Figs 1–7. *Crossocerus rasnitsyni* sp.n.: 1–4 — female, 5–7 — male. 1, 5 — lower margin of clypeus; 2 — lateral part of vertex; 3 — pronotum; 4 — pygidial plate; 6 — apical flagellomere; 7 — tergum VII.

Рис. 1–7. *Crossocerus rasnitsyni* sp.n.: 1–4 — самка, 5–7 — самец. 1, 5 — нижний край наличника; 2 — боковая часть темени; 3 — переднеспинка; 4 — пигидиальное поле; 6 — апикальный членик усиков; 7 — тергум VII.

than half distance between them and 6.0–8.0 times less than midocellar width; head slightly shining, with fine microsculpture. Distance between hind ocelli approximately equals ocello-ocular distance. Parietal area (Fig. 2) smooth, slightly impressed, smaller than ocellus. Pronotal collar short, 5.0 times as long as wide (Fig. 3), slightly impressed medially, with transverse carina and straight fore margin. Pronotal lobe light yellow, partly somewhat reddish. Punctures on scutum uniform, their diameter less than half distance between punctures and 6.0–7.0 times less than midocellar width; scutum with transverse posterior depression bearing short longitudinal ridges. Punctures on scutellum of the same size and density as those on scutum, punctures of posts-cutellum somewhat finer. Mesopleuron without tubercle before midcoxa, punctures on mesopleuron as large as those on scutum. Propodeal enclosure in middle on its convex part more or less smooth anteriorly, posteriorly with minute oblique ridges, anteriorly and laterally delimited by reticulate furrow; median furrow wide, with short transverse ridges. Legs black, with fore femur as well as fore and hind tibiae basally, fore femur apically, and most part of hind basitarsus pale yellow.

Tibial spurs yellow. Length of gastral tergum I approximately equals its maximum width. Gastral tergum II without basal constriction. Pygidial plate wide (Fig. 4), black, with large punctures. Length of holotype 6.0 mm (that of paratypes 5.8–6.2 mm).

Male. Lower margin of clypeus with well-defined lateral corner, forming short tooth (Fig. 5). First flagellomere 1.5 times as long as wide. Apical flagellomere slightly bent, rounded on top (Fig. 6). Mandible, frons, thorax (including propodeum) as in female. Length of gastral tergum I approximately equals its maximum width. Tergum VII with almost straight posterior margin (Fig. 7) covered with medium-sized punctures. Body black, with longitudinal stripe of scape, most part of mandibles, fore and mid femora, fore and mid tibiae basally, base of hind tibia, lateral spots on pronotum and tegular spot pale yellow. Length 5.5 mm.

DIAGNOSIS. The species belongs to the subgenus *Crossocerus* s.str., being most closely related to *C. (C.) wesmaeli* (Vander Linden, 1829). The two species share the following characters: foretibial spurs yellow; clypeus black; frons with small medial fossa; gastral tergum II without basal constriction; pygidial plate widely trian-

gular, black, with large punctures; mesopleuron without tubercle before midcoxa; scutum with transverse posterior depression that bears short longitudinal ridges; mandibles yellow. Unlike *C. wesmaeli*, *C. rasnitsyni* sp.n. has a small and smooth parietal area (Fig. 2; *C. wesmaeli* has large fovea with fine and dense microsculpture that equal in size to ocelli), less developed yellow pattern of body and legs, non-protruding clypeus with lower margin almost straight medially (in *C. wesmaeli* clypeus slightly protruding), tergum I as long as wide (in *C. wesmaeli*, length of tergum I 1.2 times its maximum width), as well as propodeal enclosure smooth anteriorly and finely ridged posteriorly (between the middle and lateral furrow). *C. (C.) rasnitsyni* sp.n. differs from other similar species of the subgenus *Crossocerus* by absence of basal constriction on tergum II, structure of pronotum, unmodified male antenna and legs, particular structure and sculpture of propodeal enclosure, absence of pubescence on the ventral sur-

face of mesothorax, absence of mesopleural tubercle, and details of body coloration.

ETYLOMOGY. The species is named after the outstanding Russian entomologist and palaeontologist, an expert on Hymenoptera, Prof. Alexandr Pavlovich Rasnitsyn.

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