

Five new species of the genera *Dryudella* Spinola and *Cerceris* Latreille (Hymenoptera, Sphecidae) from Kazakhstan and Kyrgyzstan

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At present the genus *Dryudella* Spinola comprises ca. 30 Palearctic species, mainly in arid areas (Bohart, Menke, 1976). In Middle Asia and Kazakhstan the genus was specially studied by V.V. Gussakovskij (1927), who noted 5 species including 2 ones described still by O. Radoszkowski (1877). The study of materials on this genus collected by the author in Kazakhstan and Middle Asia made it possible to describe 7 new species. The descriptions of four ones found in Kazakhstan are given below; the remainder Middle Asian species will be described separately in the "Entomological Review" ("Entomologicheskoe Obozrenie") (St.-Petersburg).

Twenty-four species of the genus *Cerceris* Latreille are registered in Kyrgyzstan (Kazenas, 1984, Kazenas, Zonstein, Milko, 1996). Study by the author of materials on this genus collected in republic in 1997-1999 by D.A. Milko, S.L. Zonstein and S. Ovchinnikov and transferred to the author for determination, has allowed revealing one species, new for a science. It concerns to the group *Cerceris rybyensis* and morphologically is very close to *C. sabulosa* Panzer and *C. rybyensis* L. Its complete description is resulted below.

Dryudella albohirsuta Kazenas, sp. n. (Figs. 1-4)

Material: 1 ♀ (holotype), Southeastern Kazakhstan, Ili River valley, 30 km S. of Koktal (Borokhudzir), 3 VII 1993, Kazenas. The holotype is deposited in the collection of the Zoological Institute of the Russian Academy of Sciences (St.-Petersburg).

Female. Median clypeal lobe with narrow tridentate lamellar projection in the middle of free margin (Fig. 1). Median lobe is separated from lateral ones by small tooth (Fig. 1). Frons regularly convex, with reticulate microsculpture and separate fine indistinctly limited punctures. 3rd antennal article ca 5 times longer than wide. An arrangement of ocelli as on Fig. 2. Dull strip near eyes small, comma-like bent. Pronotum almost dull, with dense reticulate microsculpture. Mesonotum glabrous, its most part smoothed, with indistinct microsculpture and sparse fine punctures, near its fore margin with more defined microsculpture, less brilliant. Longest erect setae equal or slightly longer than midocellar diameter. Mesopleuron moderately brilliant, with uniform rather dense medium-sized punctures and long light setae 2-2.5 times exceeding midocellar diameter). Scutellum smoothed and brilliant, with sparse punctures, near its hind margin on each side with gentle longitudinal ridges and reticulate microsculpture. Propodeal enclosure asetose, gently reticulately sculptured, with the tendency to form longitudinal, incorrectly bent ridges. Marginal cell short (Fig. 3). First recurrent vein runs into 2nd submarginal cell. Hind femur venter with long setae ca 1.5 times exceeding femoral width. Pygidial plate (Fig. 4) smoothed, brilliant, slightly flat-pressed. Body black. Mandibles reddish-brown. Clypeal foremargin and scape reddish-brown in front. Pronotal lobes brown. Tegulae and basal plates of wings dark-brown. Veins mainly dark-brown and brown, at the wing base yellowish-white. Pterostigma brownish-black. Subcosta before pterostigma yellowish-white. Apical cell area of forewing browned. Foretibiae in front, femoral apex, apex and base of tibiae, and the whole tarsus mostly reddish. Gaster black, partly brownish basally. Body length 7 mm.

Male: unknown.

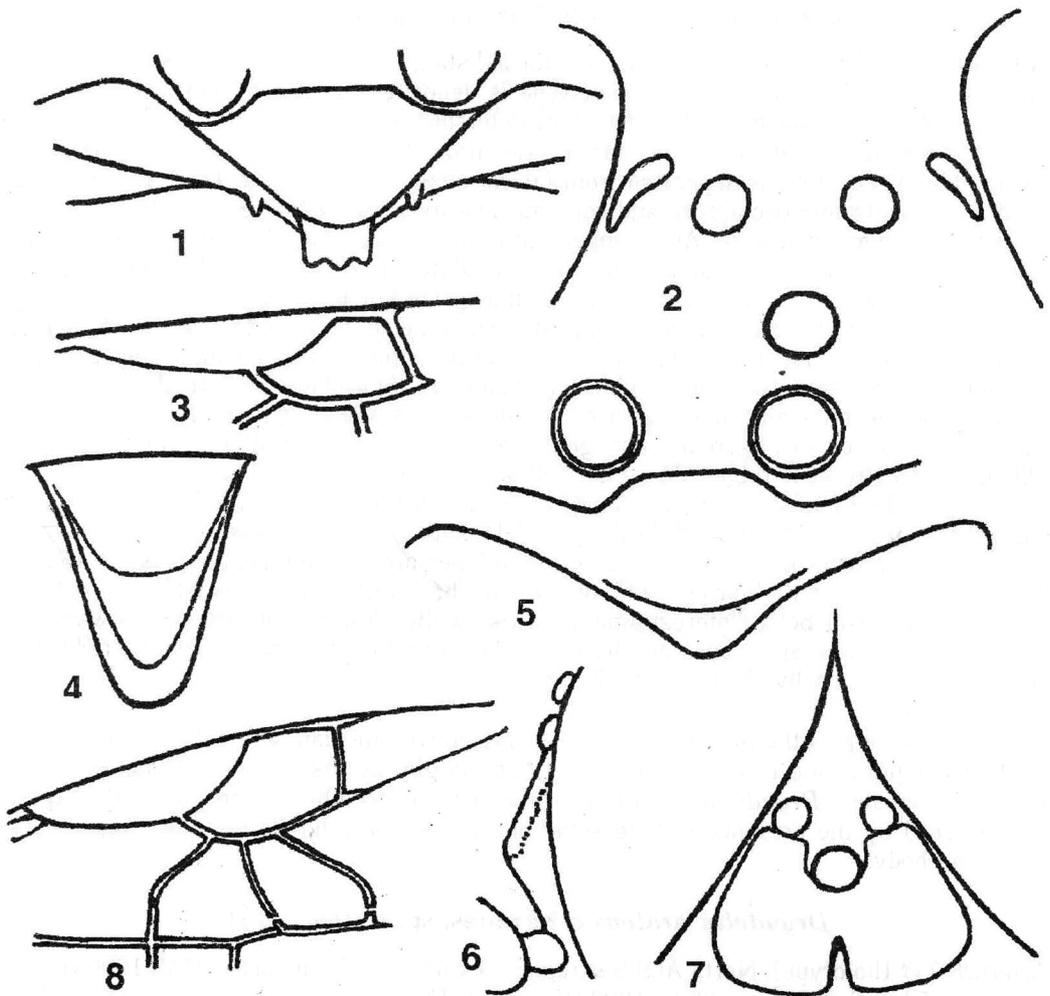
The species belong to the group *D. similis* having convex median lobe with narrow tridentate or bidentate lamellar projection in the middle of the free margin, asetose propodeal enclosure and short marginal cell in females. *Dryudella albohirsuta* Kazenas, sp. n. differs from the related species (*D. similis* Guss. etc.) by the presence of long setae on hind femora, details of colouring, vestiture and sculpture of the body.

Dryudella aralensis Kazenas, sp. n. (Figs. 5-8)

Material: 1 ♂ (holotype), North Aral Sea region, 9 km NW of Zhalanash, 22 VI 1990 (Kazenas); 1 ♂ (paratype), 5 km E of Akespe, 23 VI 1990 (Kazenas). The holotype is deposited in the collection of the Zoological Institute of the Russian Academy of Sciences (St.-Petersburg), the paratype – in the collection of the Institute of Zoology (Almaty).

Male. Median clypeal lobe strongly convex, smooth and brilliant, with fine sparse punctures, possessing angular projection (Fig. 5). Cheeks are a little wider than midocellus. 3rd antennal article almost 4 times longer than wide, 6th - 2.5 times, respectively. Frons strongly transverse roof-like convex, with narrow longitudinal depression in the middle. Top of eminence is located approximately in the middle of distance between antennal fossae and midocellus, looking from the side. (Fig. 6). Top surface of eminence smooth and brilliant, with a gentle reticulate microsculpture and separate fine points. Arrangement of ocelli as shown on Fig. 7. 6th-8th antennal articles with tyloids. Mesonotum with a gentle reticulate microsculpture and fine sparse punctures, more numerous distad; short light setae in the middle and on each side of its proximal half which is more or less smoothed. Propodeal enclosure semidull, with cellular microsculpture, naked, with separate slightly advanced gentle longitudinal ridges. Mesopleuron mostly glabrous, with reticulate microsculpture and separate fine punctures, above smoothed and brilliant. Gaster with reticulate microsculpture and separate fine points. Pygidial plate smoothed. Marginal and submarginal cells as shown on Fig. 8. Body black. Mandibles reddish-brown. Antennae black. Pronotal lobes dark-brown. Tegulae yellowish-white, black basally. Basal plates of wings and some veins at the base of wings yellowish-white. Veins dark-brown or brown basally. Pterostigma dark-brown, with small yellowish-white spot basally. Subcosta before pterostigma yellowish-white. Wings almost uniformly light brownish, but apical cell area is more browned. Gaster black, sterna and terga laterally reddish-brown partly. 1st tergum with a light yellow strip at the posterior margin. Legs black. Foretibiae and foretarsa brownish-red; besides foretibiae light-yellow basally. Mid- and hindtibiae in apical and basal parts and tarsi partly reddish. Body length 6.5-7.3 mm.

Female: unknown.



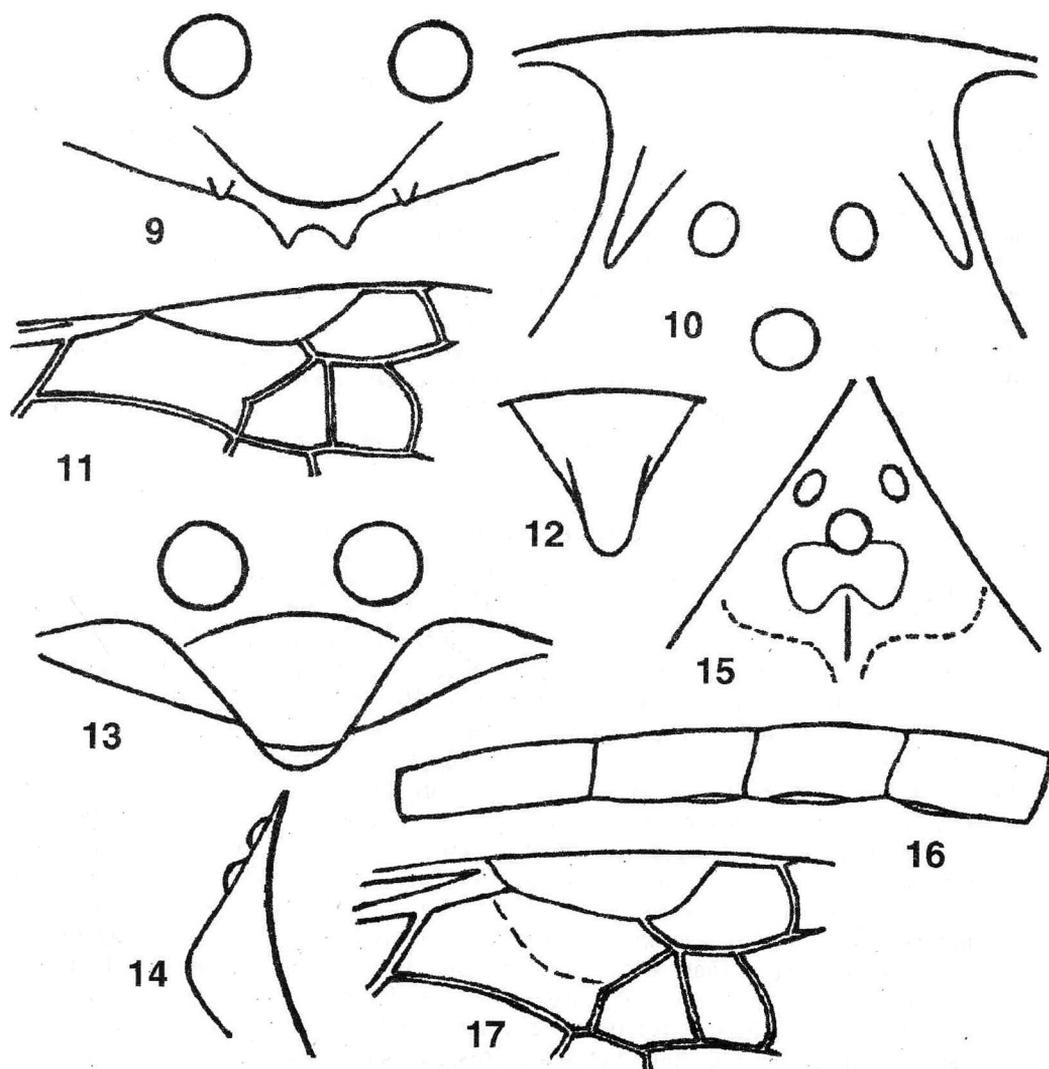
Figs. 1-8. *Dryudella albohirsuta* Kazenas, sp. n., ♀ (1-4) and *D. aralensis* Kazenas, sp. n., ♂ (5-8):
 1, 5 - clypeus; 2 - vertex with ocelli; 3 - pterostigma and marginal cell; 4 - pygidial plate; 6 - frons, lateral view;
 7 - ditto, frontal view; 8 - part of forewing with pterostigma, marginal and submarginal cells.

The species is close to *D. similis* (Guss.), but differs from the last by details of body colouring, in particular by presence of a yellowish-white cross strip at the posterior tergal margin, and also by shorter median clypeal lobe not extended into a thin lamella.

Dryudella bidens Kazenas, sp. n. (Figs. 9-12)

Material: 1 ♀ (holotype), Central Kazakhstan, 80 km E. of Dzhezkazgan, 27 V 1976 (Kazenas); paratypes: 1 ♀ - ibidem, together with holotype; 1 ♀ - 50 km N. of Aktogai, 16 VI 1978 (Kazenas). The holotype is deposited in the collection of the Zoological Institute of the Russian Academy of Sciences (St.-Petersburg), the paratypes - in the collection of the Institute of Zoology (Almaty).

Female. Median clypeal lobe slightly convex, smooth and brilliant, with sparse fine punctures, supplied with 2 teeth in the middle of free margin (Fig. 9). Lateral lobes with small tooth near the median lobe (Fig. 9). Frons glabrous and brilliant, without fine reticulate microsculpture, but with large sparse punctures and sparse micropunctures; short longitudinal sulcus in the middle. 3rd antennal article ca 4 times longer than its maximal width. Distance between hind ocelli is slightly wider than that between one of them and nearest eye (Fig. 10). Dull strips near eyes narrow, short, slightly depressed. Apex of head and mesonotum with long dark setae. Mesonotum glabrous and brilliant, with large sparse punctures and sparse micropunctures. Scutellum not depressed, with the same sculpture as



Figs. 9-17. *Dryudella bidens* Kazenas, sp. n., ♀ (9-12) and *D. dichoptica* Kazenas, sp. n., ♂ (13-17): 9, 13 - clypeus; 10 - vertex with ocelli; 11, 17 - part of forewing with pterostigma, marginal and submarginal cells; 12 - pygidial plate; 14 - frons, lateral view; 15 - ditto, frontal view; 16 - middle part of antenna.

mesonotum, but punctures are more fine. Propodeal enclosure gently reticulate-wrinkled, with irregular microsculpture, slightly brilliant, asetose. Mesopleura glabrous and brilliant, with sparse punctures and long dark setae. Hind tibiae and femora with long setae (longest ones almost equal to hind femoral width). Marginal cell short, on its fore margin much shorter than stigma (Fig. 11). Gaster glabrous and brilliant, with unequal sparse punctures and indistinct reticulate microsculpture. Pygidial plate widely triangular (Fig. 12), glabrous and brilliant, with indistinct microsculpture. Body black. Mandibles brown, partly reddish. Pronotal lobes dark-brown. Tegulae black-brown. Veins of wings brown or black-brown. Stigma dark brown. Forewings with uniform brownish shade. Legs black. Forefemoral apex and foretibiae in front dirty-yellowish-brown. Tarsi brown, partly reddish. Body length 5.3-6.2 mm.

Male: unknown.

D. bidens differs from all known species by the bidentate lamellar projection on the anterior clypeal margin.

***Dryudella dichoptica* Kazenas, sp. n. (Figs. 13-17)**

Material: 2 ♂ (including holotype), East Kazakhstan, 12 kms N. of Zharma (low foothills), 15 VI 1979 (Kazenas). The holotype is deposited in the collection of the Zoological Institute of Russian Academy of Sciences (St.-Petersburg), the paratype – in the collection of the Institute of Zoology (Almaty).

Male. Clypeus angulate, protruding in the middle of foremargin (Fig. 13). Eyes above leaky adjoin to each other (interval is approximately equal to diameter of hind ocellus). Head behind eyes rounded (not sharply breaking). 3rd antennal article ca 4 times as long as wide. Frontal lump (eminence) without sharp ridge, strongly convex, with longitudinal depression in the middle (Fig. 14). Arrangement of ocelli as shown on Fig. 15. Middle antennal articles with narrow tyloids (Fig. 16). Mesonotum and scutellum with scattered fine punctures, mostly glabrous and brilliant. Propodeal enclosure with cellular microsculpture, semidull, asetose. Mesopleura with reticulate microsculpture smoothed on the convex sides, with sparse punctures. Gaster with reticulate microsculpture and separate indistinct fine punctures. Marginal cell short (Fig. 17). Body black. Mandibles black, with small reddish spot in the middle. Antennae black. Frons with yellowish-white spot (Fig. 15). Fore- and midtibiae with a light yellow basal spot. Foretibiae brownish-red, reddish-yellow in front. Foretarsi red. Wings slightly brownish. Tegulae brown. Veins brown or dark-brown, yellowish-white at the base of wings. Vein proximally of stigma partly yellowish. Stigma brown. Body length 5.8-6 mm.

The new species belongs to the group *D. similis*. From the nearest congeners (*D. similis* Guss. etc.) differs by the leaky adjacent eyes, completely black body, brown tegulae, rounded apex of the head and short marginal cell.

***Cerceris milko* Kazenas, sp. n. (Fig. 18-27)**

Typical material: Southern Kyrgyzstan, Alaj Mts. (southern slope), Archalsu Rav., 16 km NWW Irkeshtam vill. 3150 m. 39°41'N72°50'E, 25.07.1998, 9 ♀, including holotype, 10 ♂. D.Milko leg.). The holotype is deposited in the Zoological Institute of the Russian Academy of Sciences (St.-Petersburg), paratypes - in Institute of Biology NAS of Kyrgyzstan (Bishkek), Institute of Zoology of Kazakhstan (Almaty) and Zoological Institute of RAS (St.-Petersburg).

Description. Female. Middle clypeal lobe in fore half concave (Fig. 18). Its free margin almost straight or slightly arched in middle, angulate laterally (Fig. 18, 19). Mandibles as in Fig. 20. Middle clypeal lobe mostly with non-uniform punctures, with more or less smoothed interstices between punctures, with rare micropunctures, richer laterally and above. Lateral clypeal lobes and lateral frontal surfaces with rather rich large punctures, rich micropunctures, semierect tomentum and erect setae. Midfrontal carina short, abruptly sloping at dorsal end, ending far from midocellus. Distance between hindocelli approximately 1.5 times less than distance between one of them and nearest eye. Antenna as in Fig. 20. Punctures on frons on an average 3 times less than foreocellar diameter. Longest erect setae on vertex almost 3 times longer than foreocellar diameter. Erect setae of head and thorax slightly sinuous (rippy bent). Mesonotum with rich large punctures (they slightly longitudinal lengthened, 2.5-4 times less than foreocellus). Interstices between punctures with indistinct microsculpture. Tegulae with several medium-sized indistinct punctures, with microsculpture. Propodeal enclosure more or less smoothed, basally ridged, with short ridges laterally, with indistinct microsculpture and fine indistinct punctures (Fig. 21). Anal cell of hindwing approximately 4.5 times longer than jugal lobe. Abdominal terga with rich large punctures. Punctures on 4th tergum 3-4 times less than foreocellus.

Sternum II basally with elevated plate whose posterior margin is sharply delimited (Fig. 22). Pygidial plate as in a Fig. 23. Forefemora on under surface with numerous erect long sinuous (rippy bent) setae. Mandibles largely, clypeus (except for brownish-black foremargin), middle of face with midfrontal carina, lateral frontal parts, scapus, lateral pronotal spots, tegulae largely, scutellum, large basal spot of 2nd tergum, 3rd and 5th terga almost all, narrow fascia of 4th tergum (Fig. 24), 3rd sternum largely yellow or reddish-yellow. Pedicellum in front dirty-yellow, behind black, flagellum in front yellowish-red, behind brown. Gaster largely brownish-red. 4th tergum in middle blackish-brown. Pygidial plate brownish-black. Gastral sterna largely brownish-red. Legs yellow, partly reddish. Length of body 10-11 mm.

Male. Middle clypeal lobe convex, with almost straight or slightly arcuate, laterally angulate foremargin (Fig. 25). Body sculpture almost as in female. Antenna as in Fig. 26. Rows of agglutinated hairs on clypeal foremargin approximately 1.6 times narrower than space between them (Fig. 25). Distance between hindocelli approximately 1.3-1.4 times narrower than distance between one of them and nearest eye. Propodeal enclosure more or less smoothed, basally with not rough longitudinal ridges, with rough lateral ridges. Pygidial plate as in Fig. 27. Colouring of body almost as in female, but gaster with less advanced red colouring. Tegulae largely yellow. 3rd and 6th terga almost all yellow, 2nd basally yellow, largely red, with brown spot in middle, 4th and 5th terga basally red, in middle black, behind with yellow fascia. Pygidium black, partly brownish apically. Legs largely yellow, coxae and foretrochanters black. Forefemora basally black and red. Length of body 9 mm.

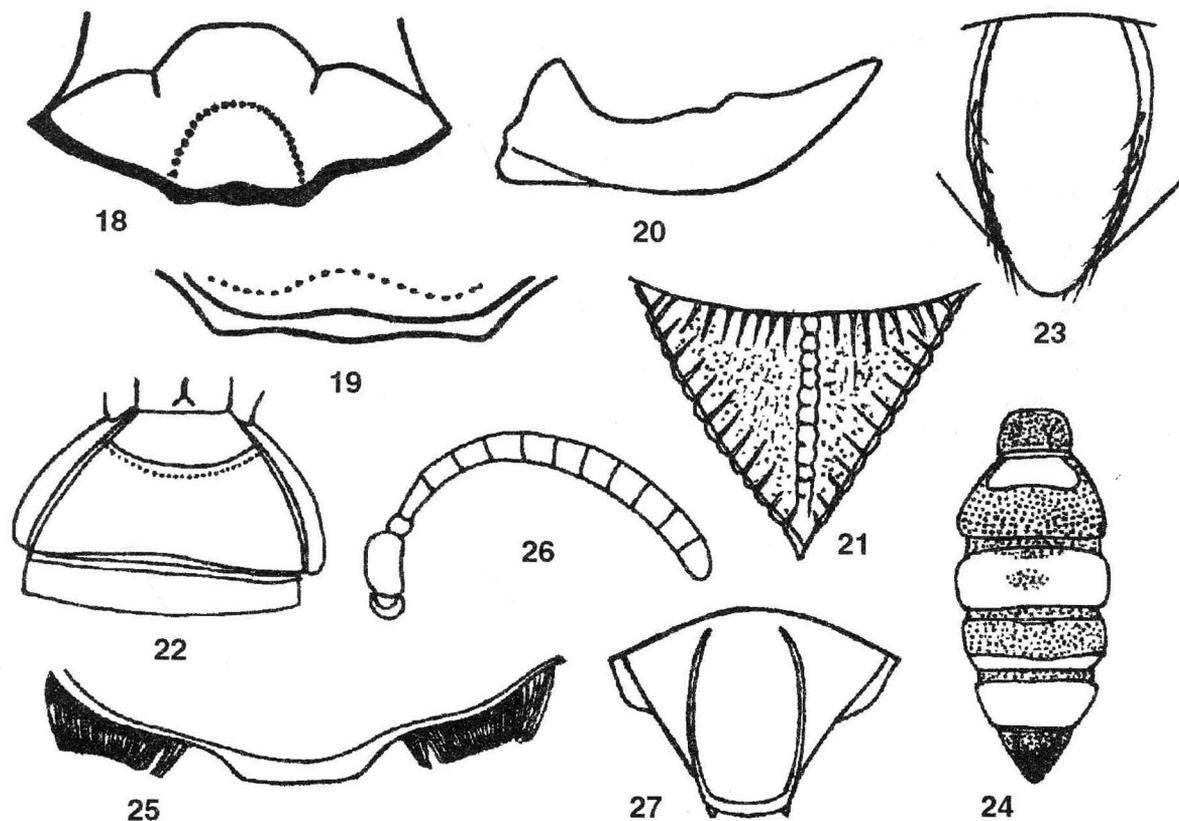


Fig. 18-27. *Cerceris milkoï* Kazenas, sp. n.: 18- clypeus in front, 19 - foremargin of middle clypeal lobe, 20 - mandible, 21 - propodeal enclosure, 22 - 2nd sternum, 23 - pygidial plate, 24 - gaster, 25 - foremargin of clypeus, 26 - antenna, 27 - pygidium, 1-7 - ♀, 8-10 - ♂.

The differential diagnosis. The species is closest to *C. sabulosa*, differs by presence of red colour in colouring of the gaster, sinuous (rippy bent) setae of a head, thorax and legs, and also by sculpture of the propodeal enclosure, details of colouring and sculpture of a body, wider fasciae of agglutinated setae on foremargin of clypeus in male and shorter jugal lobe of hindwing.

Ethymology. The species is named as a name of Kyrgyzstan hymenopterologist D.A.Milko.

References

- Bohart R.M., Menke A.S., 1976.** Sphecid wasps of the world. A generic revision. *Berkeley, Los Angeles, London*, 696 p.
- Gussakovskij V.V., 1927.** Les espèces paléarctiques du genre *Astutus* Latr. (Hymenoptera, Sphecidae). *Annu. Mus. Zool. Acad. Sci. URSS*, v. 28, pp. 265-296.
- Kazenas W.L., 1984.** Digger wasps of *Cerceris* in Middle Asia and Kazakhstan. *Alma-Ata, Science, KazSSR*, 232 p. (In Russian)
- Kazenas V.L., Zonstein S.L., Milko D.A., 1996.** Superfamily Sphecoidea – digger wasps. *Cadastre of the Genetic Fund of Kyrgyzstan*, v. 3, Bishkek, pp. 381-385. (In Russian)
- Radoszkowski O. 1877.** Sphegidae. *Voyage au Turkestan d'A.P.Fedchenko*, fasc. 14, tome 2, partie 5. (*Bull. Soc. Impér. Amis. Sci. Nat.* 26), pp. 1-87.

Резюме

Казенас В.Л. Пять новых видов из родов *Dryudella* Spinola и *Cerceris* Latreille (Hymenoptera, Sphecidae) из Казахстана и Кыргызстана.

Описываются 4 новых вида рода *Dryudella* Spinola из Казахстана. Все они относятся к группе *D. similis*, самки которой имеют выпуклую срединную лопасть наличника с узким трехзубцовым пластинчатым выступом в середине переднего края, голое срединное поле промежуточного сегмента и укороченную маргинальную ячейку. *Dryudella albohirsuta* Kazenas, sp. n. отличается от близких видов (*D. similis*, *D. picticornis* и др.) наличием длинных волосков на задних бедрах, деталями окраски, опушения и скульптуры тела. *Dryudella aralensis* Kazenas, sp. n. близок к *D. similis* (Guss.), но отличается деталями окраски тела, в частности, наличием желтовато-белой поперечной полосы у заднего края 1-го тергума, а также более коротким, не вытянутым в тонкое острие срединным выступом переднего края наличника. *Dryudella bidens* Kazenas, sp. n. от всех известных видов отличается двухзубцовым выступом переднего края наличника. *Dryudella dichoptica* Kazenas, sp. n. от ближайших видов (*D. similis*, *D. picticornis* и др.) отличается неплотно прилегающими друг к другу глазами, целиком черной окраской тела, бурыми тегулами, закругленным задним верхним краем головы и короткой маргинальной ячейкой.

В статье также описывается *Cerceris milko* Kazenas, sp. n. из Южного Кыргызстана (Алайский хребет). Новый вид наиболее близок к *C. sabulosa* Panzer, отличается наличием рыжего цвета в окраске брюшка, волнисто изогнутыми волосками головы, груди и ног, а также более нежной скульптурой срединного поля промежуточного сегмента, деталями окраски, более широкими перевязями склеенных волосков на переднем крае наличника самца и более короткой югальной лопастью заднего крыла.