New species of the genus *Microchelonus* related to *M. subcontractus* (Abdinbekova) from Russia and adjacent territories (Hymenoptera: Braconidae)

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Four new species of *Microchelonus* (*M. balkhashensis, M. nikolskajae, M. pini, M. uzbekistanicus* spp. n.) are described and illustrated. All of them have shortened radial cell; in this and some other characters, these species are related to *M. subcontractus* (Abdinbekova, 1971). *M. balkhashensis* is described from Kazakhstan, *M. nikolskajae* – from Tadjikistan, *M. pini* – from central part of European Russia, *M. uzbekistanicus* – from Uzbekistan.

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Four new species described in this paper are related to *M. subcontractus* (Abdinbekova, 1971) distributed in the south of European Russia, Caucasus, Kazakhstan, Middle Asia (Abdinbekova, 1971; Tobias, 1986, 2000). The type specimens of the new species are deposited at the Zoological Institute, St.Petersburg. The following abbreviations are used in the text: POL, postocellar line; OOL, ocular-ocellar line.

Microchelonus balkhashensis sp. n.
(Figs 1-3)

Holotype. ♂, **Kazakhstan,** *Taldy-Kurgan Prov.*, 30 km SW of Lepsy, sands Kushukzhal, 22.VI.1962 (Tobias).

Paratype. ♂, **Kazakhstan,** *Taldy-Kurgan Prov.*, shore of Balkhash Lake, near mouth of Ayaguz River, 20.VI.1962 (Tobias).

Description. Female. Body length 2.1 mm. Head oval in front view, strongly roundly narrowed behind eye in dorsal view, 1.1 times as wide as mesonotum, 1.2 times as wide as high, twice as wide as long. Transverse diameter of eye 1.5 times the length of temple. Ocellar triangle wider than OOL by diameter of ocellus. POL 2.5 times as long as ocellar diameter. Longitudinal diameter of eye 1.7 times the transverse diameter, equal to face width, 3 times as long as malar space. Face 1.85 times as wide as high, 1.3 times as high as clypeus. Maxillary palpi short, as long as height of face. Antenna thickened behind the middle, as long as head and mesosoma combined; 1st flagellar segment 2.5 times, 2nd twice, and 6th 1.5 times as long as wide; segments of apical half of antenna transverse, with deep excavation.

Mesosoma 1.3 times as long as high. Propodeum with weak transverse carina and a pair of little acute lateral tubercles. Radial cell twice as large as 2nd radiomedial cell. Pterostigma 2.5 times as long as metacarpus. 3rd abscissa of radial vein bended apically, 4 times as long as 1st abscissa, twice as long as 1st radiomedial vein; 1st abscissa as long as 2nd. Hind femora 3.5 times as long as wide. Hind tibia as long as hind tarsus, 5.5 times as long as wide. Inner spur of hind tibia half as long as hind basitarsus. Apical segment of hind tarsus as long as 3rd, shorter than 2nd segment. Carapace of metasoma oval, incurved apicoventrally in 0.1 of carapace length, 1.4 times as long as wide, 3 times as long as high. Ovipositor thin, half as long as hind basitarsus.

Head behind eye with smoothed granulate sculpture and faint transverse rugulae. Face concentrically rugulose. Mesonotum rugulose-punctate, before scutellum reticulate rugulose, with longitudinal folds predominant. Carapace with numerous thin longitudinal folds and granulate sculpture, apically with smoothed sculpture. Head and mesosoma black, metasoma and legs dark brown. Hind basitarsus yellowish. Basal half of wings light with pale yellow veins, apical half faintly infuscate with brown veins and pterostigma.

Comparison. M. balkhashensis sp. n. differs from *M. subcontractus* in the shorter radial cell, flagellar segments of apical half of antenna shorter and bearing deep excavation, shorter malar space, meso- and metasoma, thickened and completely dark hind tibia, and smaller body size. According the key of species with short malar space (Tobias, 1997a), *M. balkhashensis* is close to *M. brevigenis* Tobias, 1964 and differs in the more shortened radial cell, deeply excavated segments of apical half of antenna, and shorter metasoma. According to the key of species with shortened radial cell (Tobias, 1997b), *M. balkhashensis* is similar to *M. moscovitus* Tobias, 1997 and differs in the same characters as *M. brevigenis* and also in the less coarse and less dense sculpture of mesonotum.

Microchelonus nikolskajae sp. n.
(Figs 4-7)

Holotype. ♂, **Tadjikistan**, Khodzha-Obi-Gharm, southern slope of Ghissar Range, 12.VIII.1944 (Nikolskaja).

Paratypes. **Tadjikistan**, same locality, 1 ♀, 28.VII.1944; 1 ♂, 29.VII.1944; 1 ♂, 1.VIII.1944; 1 ♂, 2.VIII.1944; 1 ♂, 8.VIII.1944; 2 ♂, 11.VIII.1944; 2 ♂, 13.VIII.1944 (Nikolskaja); Dashti-Gurk (near Obihingou), southern slope of Peter the Great Range, 1 ♂, 31.VIII.1985 (Budrys).

Description. Female. Body length 2.8-3.5 mm. Head oval in front view, roundly narrowed behind eye in dorsal view, 1.1 times as wide as mesonotum, 1.9 times as wide as long, 1.2 times as wide as high. Temple in dorsal view as long as transversal diameter of eye. Ocellar triangle hardly wider than OOL. POL 3 times as long as ocellar diameter. Longitudinal diameter of eye 1.8 times as long as transverse diameter, equal to face width, 3 times as long as malar space. Face 1.7 times as wide as high, 1.5 times as high as clypeus. Maxillary palpi short, as long as face height. Antenna behind the middle faintly thickened, as long as head and mesosoma combined; 1st flagellar segment 2.5 times, 5th twice, and 7th 1.5 times as long as wide; segments of apical part of antenna as long as wide, or some of them transverse.

Mesosoma 1.4 times as long as high. Propodeum with transverse carina and a pair of small tubercles laterally. Radial cell 2.5 times as large as 2nd radiomedial cell, metacarpus 0.6-0.7 times as long as pterostigma. 3rd abscissa of radial vein 2.5-3 times as long as 1st abscissa, twice as long as 1st radiomadial vein; 1st abscissa 1.5-2 times as long as 2nd. Hind femur 3 times as long as wide, hind tibia longer than hind tarsus, 4.5 times as long as wide. Inner spur of hind tibia half as long as hind basitarsus. Apical segment of hind tarsus as long as 3rd segment, shorter than 2nd segment. Carapace of metasoma oval, sometimes faintly pointed apically, usually incurved apicoventrally in 0.1 of carapace length, 1.4-1.6 times as long as wide, 2.4-2.6 times as long as high. Ovipositor hidden or somewhat protruding, at most by length of 1st-4th segments of hind tarsus.

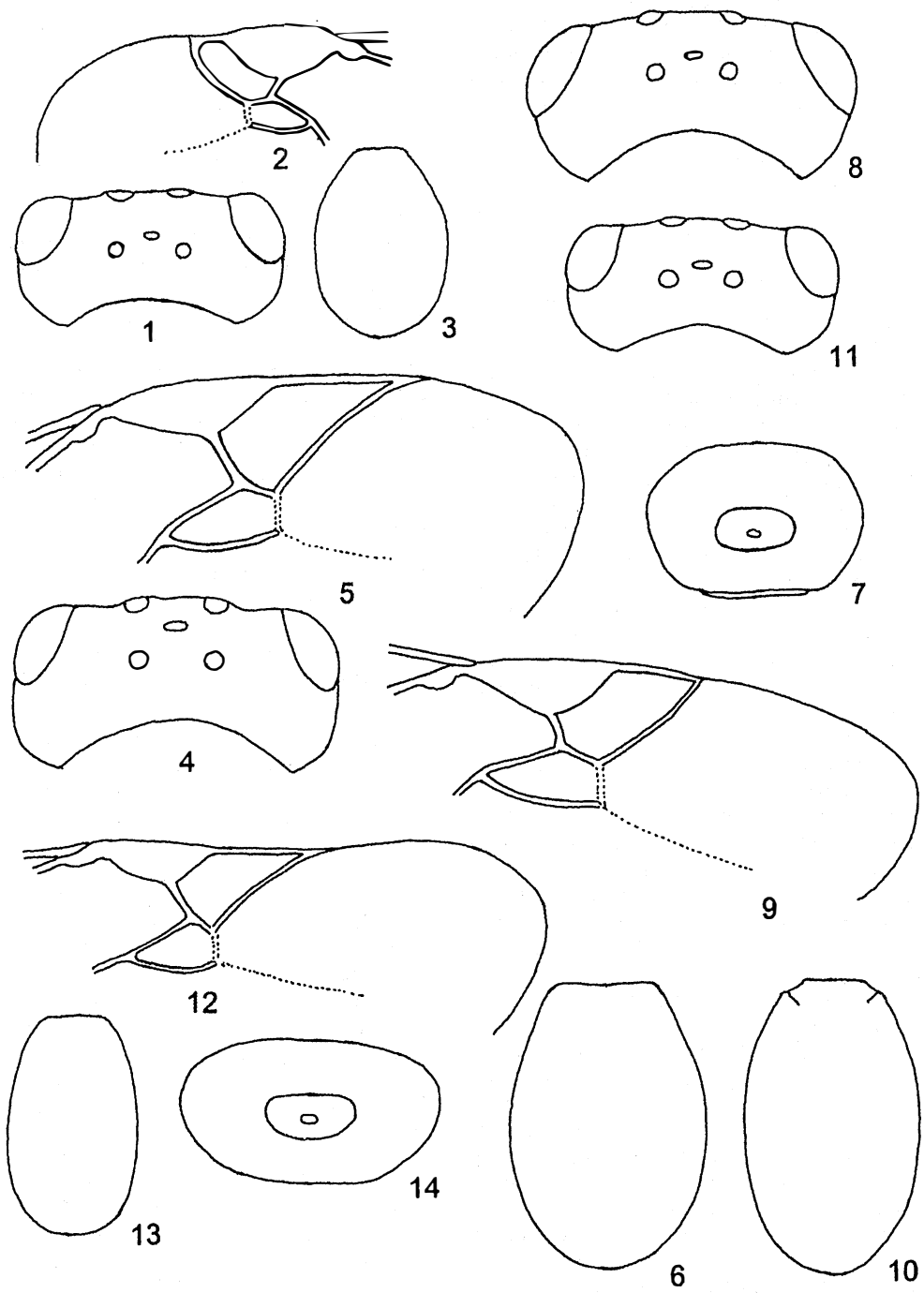
Vertex transversely striate behind ocelli. Face with arch-shaped concentric rugulae. Mesonotum rugulose-punctate, with smoothed sculpture, but longitudinally rugulose before scutellum. Scutellum rugose laterally, smooth medially. Carapace with faintly sinuous and anastomosed longitudinal folds. Body black. Fore tibia brownish yellow. Middle and hind tibiae yellow medially. Middle and hind basitarsi, except apical parts, yellow. Middle and hind tibiae apically and almost all tarsi brown. Wings basally light with yellowish veins, apically faintly infuscate with light brown pterostigma and veins.

Male. Body length 2.9 mm. Antenna with 23 segments. Folds of metasomal sculpture weaker than in female and present mainly in basal half of carapace. Metasoma 1.75 times as long as wide. 1st abscissa of radial vein as long as 2nd abscissa. Apical abdominal aperture oval, twice as wide as high, located in the middle of carapace apical part, 0.25 times as wide as carapace. Middle tubercle of apical aperture thin, about 0.3 times the height of aperture.

Comparison. M. nikolskajae sp. n. differs from *M. subcontractus* in the smoothed microsculpture of mesonotum and stronger rugose sculpture before scutellum, coarse longitudinal folds of carapace, thickened hind tibia and less shortened radial cell. According to the key to *Microchelonus* species with shortened radial cell from West Palaearctic (Tobias, 1997b), *M. nikolskajae* is similar to *M. brunniventris* Tobias, 1997 and differs in the narrower carapace with more strongly rugose sculpture, smoothed microsculpture of mesonotum with coarser rugosity before scutellum, and less shortened radial cell. According to the key of East-Palaearctic species of *Microchelonus* (Tobias, 2000), *M. nikolskajae* is close to *M. continens* Tobias, 1989 and differs in the shorter metasoma, smaller 2nd radiomedial cell, basal half of wings light and with yellow veins, and yellow hind basitarsus.

Etymology. The species is named after the excellent chalcidologist Maria Nikolaevna Nikolskaja, who collected the type series.

Remarks. One female (of 11.VIII.1944) is char-



Figs 1-14. *Microchelonus*. **1-3**, *M. balkhashensis* sp. n.: **1**, head, dorsal view; **2**, part of fore wing; **3**, metasoma (carapace), dorsal view. **4-7**, *M. nikolskajae* sp. n.: **4**, head, dorsal view; **5**, part of fore wing; **6**, metasoma (carapace), dorsal view; **7**, metasoma of male, caudal view. **8-10**, *M. pini* sp. n.: **8**, head, dorsal view; **9**, part of fore wing; **10**, metasoma (carapace), dorsal view. **11-14**, M. *uzbekistanicus* sp. n.: **11**, head, dorsal view; **12**, part of fore wing; **13**, metasoma (carapace), dorsal view; **14**, metasoma of male, caudal view.

acterized by the carapace of metasoma faintly pointed apically and hardly incurved apicoventrally; it is similar to *M. rimulosus* (Thomson, 1874), but differs in the shortened radial cell and shorter metasoma with less coarse sculpture.

Microchelonus pini sp. n.
(Figs 8-10)

Holotype. ♂, **Russia,** Vladimir, "kieferwald" [pine forest], 3.VII.1928 (V. Sokanovsky).

Paratype. ♂, **Russia,** Bryansk, 2.VI.1927 (V. Stark)/ Sokanovsky [crossed out], Bryansk/ *Chelonella sulcata* Nees, Ch. Ferriere det.

Description. Female. Body length 3-3.2 mm. Head oval in front view, roundly narrowed behind eyes in dorsal view, 1.2 times as wide as mesonotum, 2.1 times as wide as long, 1.2 times as wide as high. Length of temple equal to transverse diameter of eye. Ocellar triangle as wide as OOL. POL 2.5 times as long as ocellar diameter. Longitudinal diameter of eye 1.5 times as long as transversal diameter, twice as long as malar space, 0.85 times face width. Face 2.3 times as wide as high, 1.2 times as high as clypeus. Maxillary palpi as long as height of face and clypeus combined. Antenna as long as head, mesosoma and one-third of metasoma combined. 1st flagellar segment 3 times, 3rd 2.5 times and 6-8th twice as long as wide; segments of apical part of antenna 1.5 times as long as wide.

Mesosoma 1.3 times as long as high. Propodeum with transversal carina and a pair of acute lateral tubercles. Radial cell 1.5-2 times as large as 2nd radiomedial cell. Pterostigma 1.5 times as long as metacarpus. 3rd abscissa of radial vein faintly bended apically or rectilinear, 3 or 4 times as long as 1st abscissa, 1.3-1.8 times as long as 1st radiomedial vein; 1st abscissa as long as 2nd. Hind femur 3.5 times as long as wide. Hind tibia longer than hind tarsus, 5 times as long as wide. Inner spur of hind tibia 0.45 times as long as hind basitarsus. Apical segment of hind tarsus as long as 3rd segment, shorter than 2nd one. Carapace of metasoma oval, 1.6-1.65 times as long as wide, 3 times as long as high, incurved apicoventrally in 0.1 of carapace length. Ovipositor hidden.

Head behind ocelli faintly transversely rugulose and with dense granulate sculpture. Frons coarsely concentrically rugose; face concentrically rugulose and with granulate sculpture. Mesonotum densely rugulose-punctate, before scutellum reticulate rugose, with longitudinal folds dominant. Carapace rugulose-punctate, with granulate microsculpture, longitudinally rugulose, apical third only with granulate sculpture. Body black. Fore femora apically, fore tibiae and 1st basitarsi, except for apical parts, brown-yellow. Middle tibia yellow-brown. Hind tibia brown, with large yellow band. Wings finely infuscate, before basal vein light; pterostigma and veins brown, mediocubital and basal veins yellowish.

Comparison. M. pini sp. n. differs from *M. subcontractus* in the longer apical segments of antenna, coarser sculpture of frons and lateral parts of face. According to the key of West-Palaearctic species of *Microchelonus* (Tobias, 1986), *M. pini* is close to *M. caucasicus* (Abdinbekova, 1967) and differs in the shortened radial cell, shorter meso- and metasoma, and coarser sculpture of frons. According to the key of East-Palaearctic species of *Microchelonus* (Tobias, 2000), *M. pini* is similar to *M. inserenus* Tobias, 1989 and differs in the shorter meso- and metasoma, coarser sculpture of frons and lateral parts of face, and more distinct yellow band of hind tibia.

Microchelonus uzbekistanicus sp. n.
(Figs 11-14)

Holotype. ♂, **Uzbekistan,** Western Tien Shan (Chatkal Range), Gorno-Lesnoy Nature Reserve, near vill. Nevich, 7.VI.1963 (Tobias).

Paratypes. 2 ♀, **Uzbekistan,** ravine of Ugam River, 15 km upstream of Khumsan, 17.V.1963 (Tobias).

Description. Female. Body length 2.5 mm. Head oval in front view, roundly narrowed behind eyes in dorsal view, 1.2 times as wide as mesonotum. Transverse diameter of eye a little longer than temple length (9 : 8). Ocellar triangle wider than OOL by diameter of hind ocellus. POL 2.5 times as long as diameter of ocellus. Longitudinal diameter of eye 1.7 times its transverse diameter, 3 times as long as malar space, equal to face width. Face 1.7 times as wide as high, 1.5 times as high as clypeus. Maxillary palpi as long as height of face and clypeus combined. Antenna as long as head, mesosoma and one-third of metasoma combined. 1st flagellar segment 3 times, 3rd 2.5 times, 6-8th twice as long as wide. Segments of apical part of antenna 1.5 times as long as wide.

Mesosoma 1.3 times as long as high. Propodeum with transverse carina and a pair of acute tubercles laterally. Radial cell 1.5-2 times as large as 2nd radiomedial cell. Pterostigma 1.5 times as long as metacarpus. 3rd abscissa of radial vein bended apically, 3-4 times as long as 1st abscissa, 1.3-1.8 times as long as 1st radiomedial vein; 1st abscissa as long as 2nd. Hind femora 3.5 times as long as wide. Hind tibia longer than hind tarsus, 5 times as long as wide; inner tibial spur 0.45

times as long as hind basitarsus. Apical segment of hind tarsus as long as 3rd segment, shorter than 2nd one. Carapace of metasoma oval, incurved apically in 0.1 of carapace length, 1.6-1.65 times as long as wide.

Head behind ocelli with dense granulate sculpture and weakly transversely rugulose. Frons coarsely concentrically rugose. Mesonotum densely rugulose-punctate, before scutellum reticulate rugose, with longitudinal folds dominant. Carapace granulately sculptured and longitudinally rugulose, apical third of carapace only with granulate sculpture. Body black. Fore femora apically brown-yellow. Fore tibia yellow-brown. Middle tibia brown. Hind tibia brown, with slight yellowish band. All tarsi predominantly brown, while hind basitarsus, except for apical part, yellow. Wing finely infuscate with brown veins and pterostigma; basal half of wing light with pale yellow veins.

Male. Body length 2.8 mm. Apical abdominal aperture oval, twice as wide as high, situated in the middle and constituting one-third of width of apical part of carapace; middle tubercle of abdominal aperture thin.

Comparison. M. uzbekistanicus sp. n. differs from *M. subcontractus* in the shorter and bearing a deep excavation segments of apical half of flagellum, longer radial cell, smoothed sculpture of mesoscutum and scutellum, and thickened hind tibia. Among the species with short malar space (Tobias, 1997a), the described species is similar to *M. tadzhikistanicus* Tobias, 1997 and differs in the shorter segments of flagellum, smoothed and less deeply punctured mesonotum, and darker hind tibia. The male of *M. uzbekistanicus* is similar to *M. atripes* (Thomson, 1974) and differs in the less transverse apical abdominal aperture, shorter meso- and metasoma, smoothed sculpture of mesonotum and lighter hind tibia; female differs from *M. atripes* additionally in the flagellar segments shorter and not compressed laterally (according to the keys by Tobias, 1999, 2000).

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References

Abdinbekova, A.A. 1971. Braconids of the genus *Chelonus* Jurine (Hymenoptera, Braconidae) from Azerbaijan. *Entomol. Obozr.*, **50**(2): 392-403. (In Russian).

Tobias, V.I. 1986. Subfam. Cheloninae. In: Medvedev, G.S. (ed.) *Opredelitel' nasekomykh evropeyskoy chasti SSSR* [Keys to the insects of the European part of the USSR], **3**(4): 293-335. Nauka, Leningrad. (In Russian).

Tobias, V.I. 1997a. Species of the *Microchelonus contractus* group with very short malar spaces, from Russia and neighbouring territories (Hymenoptera: Braconidae). *Zoosyst. ross.*, **5**: 291-293.

Tobias, V.I. 1997b. *Microchelonus* species of the group *M. contractus* (Hymenoptera, Braconidae) with very short radial cell from southern Russia and adjacent territories. *Zool. Zh.*, **76**(6): 684-694. (In Russian).

Tobias, V.I. 1999. *Microchelonus* species related to *Microchelonus atripes* (Hymenoptera, Braconidae) from Western Palaearctic. *Zool. Zh.*, **78**(6): 697-708. (In Russian).

Tobias, V.I. 2000. Subfam. Cheloninae. In: Lehr, P.A. (ed.) *Opredelitel' nasekomykh Dalnego Vostoka Rossii* [Keys to the insects of the Russian Far East]. **4**(4): 426-571. Dal'nauka, Vladivostok. (In Russian).

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