

New braconids of the genus *Microchelonus* with yellow abdominal spots in the female, similar to *M. fenestratus* (Nees) (Hymenoptera: Braconidae)

V.I. Tobias

Tobias, V.I. 1997. New braconids of the genus *Microchelonus* with yellow abdominal spots in the female, similar to *M. fenestratus* (Nees) (Hymenoptera: Braconidae). *Zoosystematica Rossica*, 6(1/2): 297-301.

Four new species of *Microchelonus* (*M. chrysomacula*, *M. sochiensis*, *M. tedzhenicus*, *M. vitalii* spp. n.) and the male of *M. xanthozona* (Alexeev, 1971) are described and illustrated. All of them have yellow basal abdominal spots in females and usually also in males; in this and some other characters they are similar to *M. fenestratus* (Nees, 1816). Two of the four new species and the male of *M. xanthozona* are described from Turkmenistan, *M. sochiensis* from the Russian Black Sea coast, and *M. chrysomacula* from Mongolia.

V.I. Tobias, Zoological Institute, Russian Academy of Sciences, Universitetskaya nab. 1, St.Petersburg 199034, Russia.

The type specimens of the new species described in this paper and specimens of *M. xanthozona* are kept in the Zoological Institute, St.Petersburg.

Microchelonus sochiensis sp. n.

(Figs 1-4)

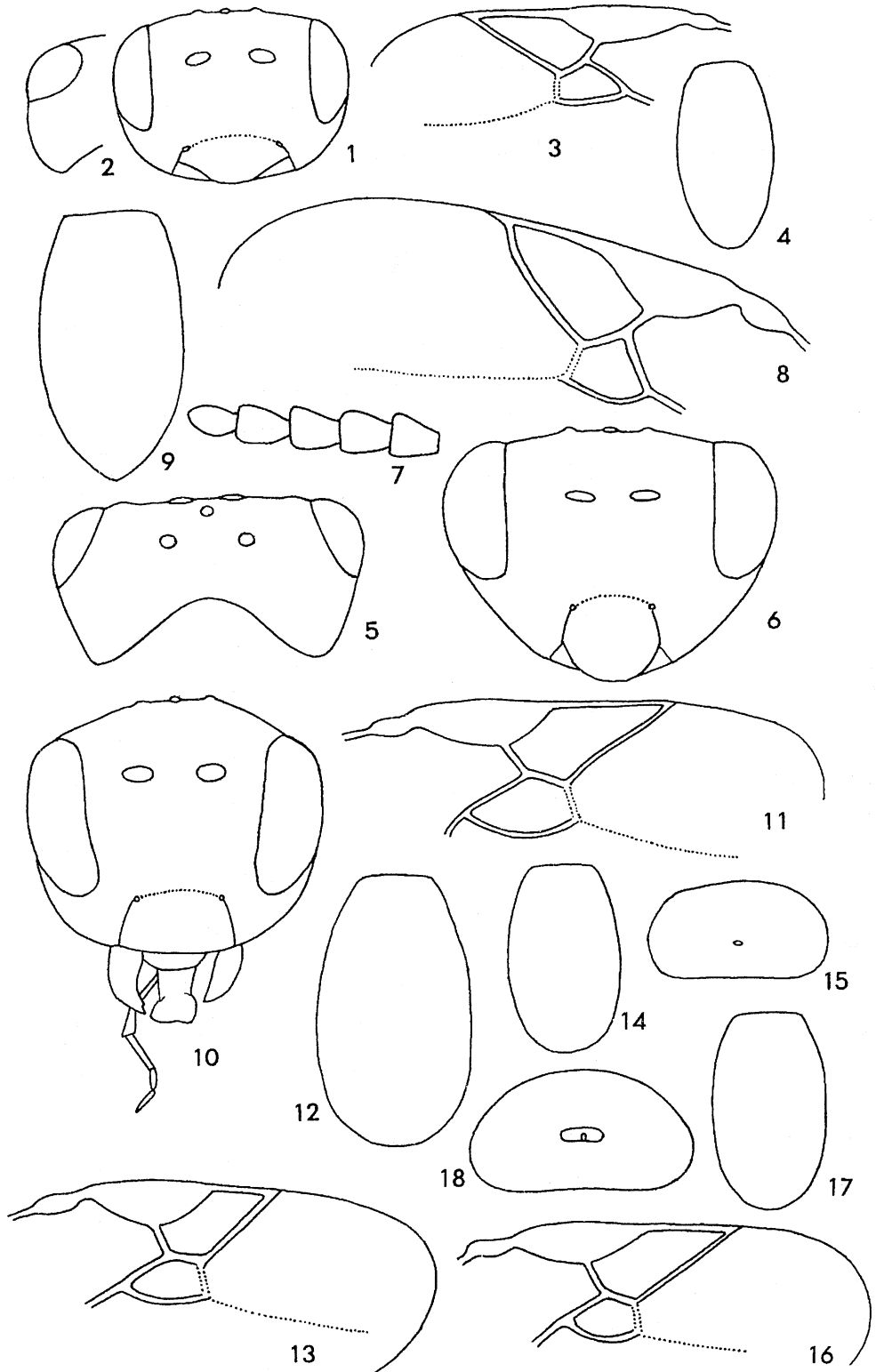
Holotype. ♀, **Russia**, Sochi, Lazarevskoe, terraces on slope, forest, 8-9.V. 1975 (V. Tobias).

Paratype. 1 ♀, same data as holotype.

Description. Female. Body length 2.9 mm. Head roundly narrowed behind eyes in dorsal view, 1.3 times as wide as mesonotum, 1.7 times as broad as long, in frontal view oval, as broad as high. Ocellar triangle as broad as OOL or wider than OOL by a diameter of ocellus. POL 3 times longer than diameter of posterior ocellus. Temple in dorsal view as long as eye, ventrally 1.2 times as long as transverse diameter of eye. Eye in lateral view 1.6 times as long as wide, 2.3 times as long as malar space. Face twice as broad as high, 1.4 times as broad as longitudinal diameter of eye, 1.5 times higher than clypeus. Maxillary palpi as long as height of face and clypeus combined. Antenna somewhat longer than head and thorax combined, thickened beyond middle, with excavate segments. First segment of flagellum 2.5 times as long as wide, preapical segments

quadrate. Thorax 1.5 times as long as high. Propodeum with weak transverse carina and a pair of small tubercles laterally. Radial cell 1.5-2 times greater than second radiomedial cell. Pterostigma 1.2-1.3 times as long as metacarp. Second sector of radial vein somewhat shorter than first, 4 times shorter than third, 2.5 times shorter than first radiomedial vein; third sector almost rectilinear. Distance from nervulus to basal vein 0.6 times nervulus length. Hind femur 3-3.5 times as long as broad. Internal spur of hind tibia half as long as first metatarsal segment. Apical segment of hind tarsus as long as third segment, shorter than second segment. Carapace of abdomen oval, apico-ventrally incurved in 0.1-0.2 of carapace length, 1.8-2 times as long as broad, 3 times as long as high. Ovipositor thin, as long as first and second segments of hind tarsus combined.

Face transversely striate, shining. Vertex behind ocelli finely transversely striate. Temple finely longitudinally striate. Clypeus finely punctate, shining. Mesonotum rugulose. Scutellum finely punctate or longitudinally striate, shining. Propodeum rugulose-punctate, with dense granulate microsculpture. Carapace rugulose-punctate, with granulate microsculpture, basal part of carapace longitudinally rugulose.



Body black. Basal third of carapace yellow. Palpi dark brown. Fore femora apically, fore and middle tibiae, basal 0.7 of hind tibiae and first segment of all tarsi, except for infuscation at apex, brown-yellow. Hind tibiae apically and most of tarsi brown. Wings faintly infuscate, but in basal half hyaline. Pterostigma and veins in apical half of fore wing brown; veins in basal half of wing yellowish.

Comparison. *M. sochiensis* sp. n. differs from *M. fenestratus* (Nees) in the shorter radial cell and more even sculpture of mesonotum without rugosity.

***Microchelonus tedzhenicus* sp. n.**

(Figs 5-9)

Holotype. ♀, Turkmenistan, Tedzhen, "kolkhoz Oktyabr", 13.IV.1968 (Y. Alexeev).

Description. Body length 4.2 mm. Head rectilinearly narrowed behind eyes, strongly, almost rectilinearly narrowed downwards, 1.3 times broader than mesonotum, 2.1 times as broad as long, 1.2 times as broad as high. In dorsal view, temple narrower than eye (13 : 15). Ocellar triangle longer by ocellar diameter than OOL. POL 3 times longer than diameter of ocellus. Eye in lateral view 1.7 times as long as wide, 2.2 times as long as malar space, 1.2 times shorter than face width. Face 2.15 times as wide as high, 1.3 times as high as clypeus. Inner margins of eyes parallel. Maxillary palpi short, somewhat longer than height of face. Antenna as long as head and thorax combined, with preapical segments strongly narrowed basally and flattened dorsally. First flagellar segment 3 times as long as broad. Thorax 1.3 times as long as high. Propodeum without transverse carina, with a pair of rectangular tubercles laterally. Radial cell of fore wing twice greater than second radiomedial cell. Pterostigma twice as long as radial cell along metacarp. Second radiomedial cell short. Second sector of radial vein slightly longer than first, 3.5 times shorter than third, twice shorter than second radiomedial vein. Distance from nervulus to basal vein equal to nervulus length. Hind femur 3.5 times as long as broad. Internal spur of hind tibia

slightly less than half as long as first metatarsal segment. Carapace of abdomen faintly pointed apically, 1.8 times as long as broad, 2.8 times as long as maximum height, apically incurved for a length of first segment of middle tarsus. Ovipositor short.

Head behind ocelli transversely rugulose. Temple longitudinally rugulose, shining. Face finely, transversely, undulately rugulose. Clypeus finely punctate, shining. Mesonotum roughly sculptured. Scutellum faintly sculptured, shining. Propodeum areolate-rugulose, with distinct longitudinal elements of sculpture. Carapace longitudinally undulately rugulose basally, finely rugulose apically.

Body black. Carapace with a pair of small yellow spots separated by their length from its base. Tegulae, fore and middle legs, except coxae and trochanters, and hind femora yellowish apically. Hind femora dark brown. Hind tibiae with large yellow band, brown apically. Wings finely infuscate. Pterostigma and veins brown, but mediocubital vein yellowish.

Comparison. *M. tedzhenicus* sp. n. differs from *M. fenestratus* (Nees) in the shorter radial and radiomedial cells, head rectilinearly narrowed behind eyes and downwards, apically pointed carapace of abdomen, preapical segments of antennae strongly narrowed basally, yellow tegulae and small yellow abdominal spots separated from the base of carapace.

***Microchelonus vitalii* sp. n.**

(Figs 10-12)

Holotype. ♀, Turkmenistan, Kopetdag, Ilay-Kala, 25.VI.1972 (Tanasijtshuk).

Paratype. 1 ♀, Turkmenistan, Kara-Kala, valley of river Sumbar, 5.VI.1993 (Perepetshaenko).

Description. Female. Body length 3.3-4.1 mm. Head roundly narrowed behind eyes in dorsal view, 1.15-1.2 times as wide as mesonotum, 1.7-1.8 times as broad as long, in frontal view oval, 1.2 times as broad as high. Ocellar triangle as broad as OOL. POL 3-4 times diameter of posterior ocellus. Temple somewhat shorter than eye. Eye in lateral view 1.6 times as long as wide, 3.5 times as

Figs 1-18. *Microchelonus*. 1-4, *M. sochiensis*; 5-9, *M. tedzhenicus*; 10-12, *M. vitalii*; 13-15, *M. chrysomacula*; 16-18, *M. xanthozona*; 1, 6, 10, head, frontal view; 2, part of head, dorsal view; 3, 8, 11, 13, 16, part of fore wing; 4, 9, 12, 14, carapace of female abdomen, dorsal view; 5, head, dorsal view; 7, apical part of antenna; 15, 18, carapace of male, caudal view; 17, carapace of male, dorsal view.

long as malar space. Face 1.65-1.75 times as broad as high, 1.3-1.5 times higher than clypeus. Labio-maxillary complex protruding. Maxillary palpi almost as long as face and clypeus combined. Antenna as long as head and thorax combined; segments of apical part of flagellum weakly moniliform, depressed dorsoventrally, as long as wide. First segment of flagellum 3-3.5 times as long as wide. Thorax 1.4-1.5 times as long as high. Propodeum with weak transverse carina and a pair of obtuse tubercles laterally. Radial cell of fore wing 1.5 times greater than second radiomedial cell. Second segment of radial vein somewhat longer than first, 1.7-1.8 times shorter than first radiomedial vein, third segment 3 times as long as second, slightly S-shaped or rectilinear. Distance from nervulus to basal vein 0.8-0.9 nervulus length. Hind femur 3-3.5 times as long as wide. Internal spur of hind tibia somewhat shorter than half of first metatarsal segment. Apical segment of hind tarsus as long as third segment, considerably shorter than second. Carapace of abdomen oval, apically incurved at a combined length of second and third segment of hind tarsus, 1.7 times as long as wide, 2.5-2.7 times as long as high. Ovipositor slightly protruded or hidden.

Face irregularly rugose centrally, transversely rugose laterally. Vertex behind ocelli undulately transversely rugose. Temple near eye longitudinally undulately rugose, near occipital carina rugulose. Disc of mesonotum and scutellum rugose-punctate, with longitudinal wrinkles in front of scutellum. Propodeum areolate-rugulose, in hind half longitudinally rugulose near abdominal opening. Carapace longitudinally rugose, apically longitudinally rugulose.

Body black. Basal third of carapace yellow. Apical part of fore and middle femora, fore and middle tibiae and basal half of fore and middle tarsi yellow-brown or all tarsi and apical part of middle tibiae brown. First segment of hind tarsus sometimes yellow. Wings infusate, in basal half hyaline. Pterostigma and most of veins brown; veins in basal half of wings yellow.

Comparison. *M. vitalii* sp. n. differs from *M. fenestratus* (Nees) in the coarse sculpture of head and thorax, shorter carapace of abdomen, shorter malar space, and less developed temple.

Etymology. The species is named for Vitalij Tanasijtshuk who collected the holotype.

***Microchelonus chrysomacula* sp. n.**

(Figs 13-15)

Holotype. ♀, Mongolia, Kobdo [Hovd] Aimak, Bulgan River, 25 km NNW of Bulgan, 26.VII.1978 (Kozlov).

Paratypes. Mongolia: 1 ♀, 1 ♂, Khentei Aimak, 15 km N of Buyant, 31.VII.1971 (Kozlov); 1 ♂, Kobdo [Hovd] Aimak, Ulyastain-gol River, 25 km N of Bulgan, 31.VII.1970 (Kozlov).

Description. Female. Body length 4.4 mm. Head somewhat broader than mesonotum, roundly narrowed behind eyes, twice as broad as long. Temple as long as transverse diameter of eye. Longitudinal diameter of eye 1.5 times as long as transverse diameter, twice as long as malar space, 1.2 times shorter than width of face. Face 2.3 times as broad as high. Height of clypeus 0.9 face height. Antenna as long as head and thorax combined. First segment of flagellum 2.5 times as long as wide; preapical segments subquadrate, partly with excavation. Thorax 1.5 times as long as high. Propodeum with transverse carina and a pair of small tubercles laterally. Radial cell of fore wing twice as large as second radiomedial cell. Pterostigma twice as long as radial cell along metacarp. Second sector of radial vein as long as first, 3 times shorter than third, twice shorter than first radiomedial vein. Distance from nervulus to basal vein 0.5 nervulus length. Hind femur 3.5 times as long as wide. Internal spur of hind tibia somewhat shorter than half of first metatarsal segment. Apical segment of hind tarsus as long as third segment or somewhat longer, shorter than second segment. Carapace of abdomen oval, 1.7-1.75 times as long as broad, 3 times as long as maximum height (near apical third), apically incurved in 0.23-0.26 of its length. Ovipositor thin, short.

Vertex behind ocelli transversely rugulose; face irregularly rugulose; temple longitudinally striate. Mesonotum punctulate, dull, areolate-rugulose, with pronounced longitudinal elements of sculpture posteriorly. Propodeum rugulose-punctulate. Carapace rugulose-punctate, with longitudinal wrinkles along the entire surface.

Body black. Tegulae and basal third of carapace yellow. Fore and middle legs brown-yellow, but coxae brown. Hind coxae black. Hind femora yellow-brown. Hind tibia brown-yellow, apically brown. Apical part of hind tarsus infusate, first segment yellow. Apical half of fore wing faintly infusate, with pterostigma and veins brown-yel-

low (holotype!) or yellowish brown. Basal half of wings hyaline, with pale yellow veins.

Male. Body length 3-3.2 mm. Antenna as long as head and thorax combined, with 20 segments. Carapace 1.8-1.9 times as long as broad, with a pair of yellow lateral spots basally. Apical abdominal aperture punctiform.

Remarks and comparison. The female of *M. chrysomacula* sp. n. is very similar to that of *M. xanthozona* (Alexeev), and the male of *M. chrysomacula* was described by Tobias (1989) as that of *M. xanthozona*. The actual male of *M. xanthozona* described in this paper differs in the bean-shaped apical abdominal aperture, coarse sculpture of face and absence of yellow basal spots at carapace. *M. chrysomacula* sp. n. differs from *M. fenestratus* (Nees) in the shortened radial cell and yellow tegulae.

***Microchelonus xanthozona* (Alexeev, 1971)**
(Figs 16-18)

Alexeev, 1971: 413, ♀ (*Chelonus*); nec Tobias, 1989: 486, ♂.

Material. **Turkmenistan:** 1 ♀ (holotype), Tedzhen, 19.V.1968 (Alexeev); **Uzbekistan:** 1 ♀, Ayakguzhumdy, 40 km E of Dzhangildy, ex cocoon of *Pempelia hieroglyphella* Rag., 10.V.1969 (Falkovitsh); **Kazakhstan:** 1 ♂, Mangyshlak Prov., Tougik, valley of river Tougik, 19.V.1977 (Richter).

Description. Head roundly narrowed behind eyes, 1.1 times as wide as mesonotum in dorsal view, 1.75 times as broad as long, 1.2 times as broad as high. Temple 1.6 times shorter than eye in dorsal view, 1.7 times shorter than transverse diameter of eye. Ocellar triangle wider than OOL by diameter of ocellus. POL 3 times longer than diameter of ocellus. Eye in lateral view 1.5 times as long as wide, 2.5 times as long as malar space. Face 2.3 times as broad as high, 1.3 times as broad as longitudinal diameter of eye, somewhat higher than clypeus. Maxillary palpi somewhat shorter than face and clypeus combined. Antenna somewhat longer than head and thorax combined, with 20 segments. First segment of flagellum 2.5 times as long as wide; penultimate segment 1.3 times as long as wide. Thorax 1.5 times as long as high. Propodeum with weak transverse carina and a pair of small tubercles laterally. Radial cell of fore wing approximately twice greater than second radiomedial cell. Pterostigma 1.3 times

as long as metacarp (in female twice as long as metacarp). Second sector of radial vein somewhat longer than first, 3 times shorter than third, 1.5 times shorter than first radiomedial vein. Distance from nervulus to basal vein 0.5 nervulus length. Hind femur 3 times as long as wide. Internal spur of hind tibia as long as 0.4 first metatarsal segment. Apical segment of hind tarsus longer than third, shorter than second. Carapace of abdomen oval, apically incurved in 0.2 of its length, 1.7 times as long as broad. Apical abdominal aperture 0.2 of carapace width, 3 times as wide as high.

Head behind ocelli transversely rugulose. Face rugose. Clypeus finely punctulate, smooth. Temple rugulose-punctate. Mesonotum roughly, irregularly punctate, almost without microsculpture, shining, before scutellum areolate-rugulose. Scutellum finely punctulate, smooth. Carapace rugulose-punctate, with longitudinally undulate and anastomosing wrinkles along the entire surface.

Body black. Carapace without yellow basal spots (in distinction to female). Tegulae, apical part of fore femur and fore tibia brown-yellow. Hind tibia yellowish, apically brown. All tarsi brownish. Wings slightly infumate. Pterostigma brown. Veins in apical half of fore wing brownish, in basal part of wing yellowish.

Comparison. *M. xanthozona* differs from *M. fenestratus* (Nees) in the coarse sculpture of the face, smoothed microsculpture of mesonotum, and brown-yellow (in female yellow) tegulae.

Acknowledgements

The work was fulfilled using scientific collections of the Zoological Institute, Russian Academy of Sciences, which obtain financial support from the Science and Technology State Committee of Russian Federation (Reg. No. 97-03-16).

References

- Alexeev, Y.I. 1971. New species of braconids (Hymenoptera, Braconidae) from Turkmenia. *Entomol. Obozr.*, **50**(2): 404-415. (In Russian).
Tobias, V.I. 1989. Braconid wasps of the genus *Microchelonus* (Hymenoptera, Braconidae) of Mongolia. *Nasekomye Mongolii*, **10**: 413-505. (In Russian).

Received 3 March 1997