

## ***Melitta udmurtica* SITDIKOV, 1986 (Apoidea: Melittidae), a new species for fauna of Central Europe**

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Abstract. First record of *Melitta udmurtica* SITDIKOV (Apoidea: Melittidae) from Central Europe is presented. Data on morphology (diagnosis and redescription), bionomics and distribution of the species are given.

Key words: Apoidea, Melittidae, *Melitta udmurtica*, bionomics, Central Europe, Poland.

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The present paper gives the diagnosis, redescription, bionomics and distribution of the new species of *Melitta* for fauna of Central Europe. Till now the species was known exclusively from four sites in Udmurtia (SITDIKOV 1986). RUSZKOWSKI, BILIŃSKI and KACZMARSKA (1988) gave information about specimens of *Melitta hispanica* FRIESE from Puławy (eastern Poland). Comparative study on the specimens shows that all specimens which were determined as *M. hispanica* FR., belong to *Melitta udmurtica* SITDIKOV. Data on the bionomics is given after RUSZKOWSKI et al. (1988). The measurement points are those used in Nomadini (Hymenoptera, Apoidea, Anthophoridae) of Poland (CELARY 1995). The following abbreviations are used: AL – length of abdomen; AW – width of abdomen; BL – total body length; E – distance between punctures, defined as a multiple puncture diameters; F – flagellomere; F<sub>w</sub> – width of flagellomeres; FL – length of face; FW – width of face; HL – length of head; HW – width of head; S – sternum; T – tergum.

**A c k n o w l e d g e m e n t s.** I would like to express my sincere thanks to Prof. RUSZKOWSKI and Dr. BILIŃSKI (Department of Apiculture of Institute of Pomology and Floriculture at Puławy, Poland) for the material loans.

### ***Melitta udmurtica* SITDIKOV, 1986**

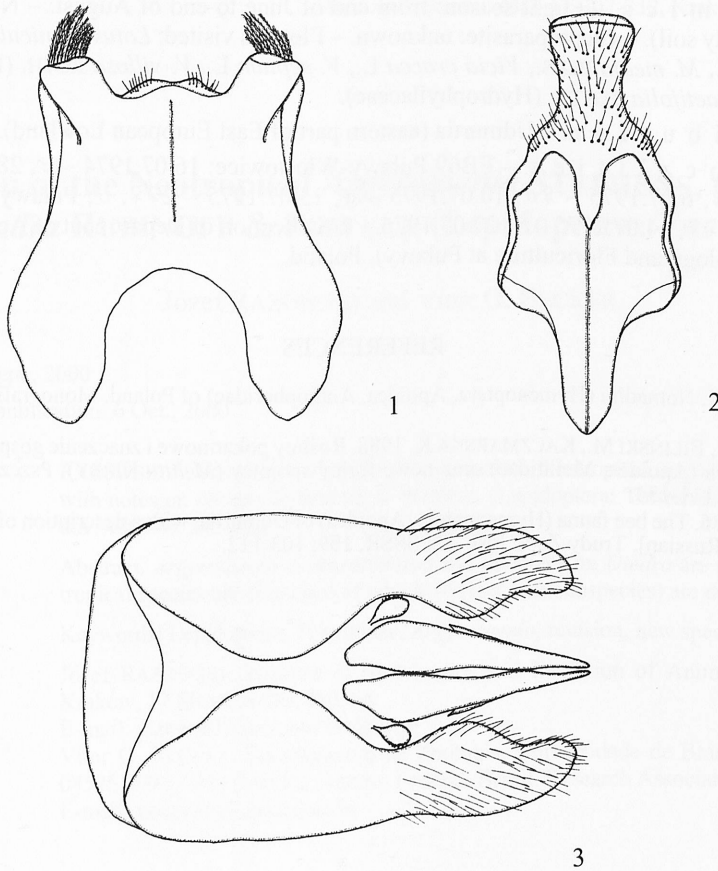
*Melitta udmurtica* SITDIKOV, 1986. Sist. Perep. Nasekom., 159: 108-110, ♀, ♂ (Holotype ♂; Loc. typ.: Russia: Udmurtia: Kilmez; Collection of Zoological Institute of Russian Academy of Sciences, St. Petersburg).

**D i a g n o s i s.** Females of *Melitta udmurtica* can be distinguished from those of other European species by the narrow malar area, the smooth mesonotum and mesoscutum with scattered punctuation in the middle (E = 1-6 – mesonotum, and E = 1-3 – scutellum), the rugose propodeal tri-

angle, the lateral parts of terga and sterna being covered with long and pale hairs, and the narrow bands of white hairs on the apical margins of  $T_{2-4}$ . Males can be separated from those of other European species by the cylindrical flagellomeres, the finely rugose propodeal triangle, the bands of pale hairs on the apical margins of  $T_{1-4}$ , and the structure of the genital capsule and  $S_7$  (Figs 2-3).

**Redescription.** Female. – Measurements and ratios: BL, 13-14 mm; AL, 7.5-8.0 mm; AW, 4.4 mm; HL, 3.0 mm; HW, 3.6 mm; FL, 2.5 mm; FW, 2.5 mm; length of  $F_1$ , 0.35-0.37 mm; length of  $F_2$ , 0.16-0.17 mm; length of  $F_3$ , 0.20-0.21 mm;  $F_W$ , 0.25-0.26 mm; number of hamuli, 14-16; HL : HW = 1 : 1.2; FL : FW = 1 : 1; AL : AW = 1 : 0.55-0.6;  $F_1 : F_2 : F_3 = 1 : 0.46 : 0.57$ . – Structure: Head somewhat wider than long, with indistinct microsculpture; vertex, genae and paracocular areas finely and closely punctured ( $E < 0.3$ ), except for the narrow stripes along inner margins of eyes; clypeus flattened and shining with coarser and scattered punctures ( $E = 0.3-3$ ), its apical margin impunctate; malar spaces very narrow;  $F_1$  equal to next two flagellomeres taken together,  $F_2$  0.46 length of  $F_1$ ,  $F_3$  1.24 length of  $F_2$ , median flagellomeres ( $F_{4-10}$ ) slightly longer than their width (sometimes almost as long as their width); scutum smooth and shining (without microsculpture) with scattered fine punctures in the middle ( $E = 1-6$ ), remainder of scutum finely and closely punctured ( $E < 0.3$ ); scutellum convex with fine scattered punctures in the middle ( $E = 1-3$ ), rest of scutellum fine and closely punctured ( $E 0.3$ ), space between punctures smooth and shining; metanotum very closely punctured ( $E < 0.3$ ), interpunctural space smooth and shining; mesopleurae and propodeum with microsculpture, finely and closely punctured ( $E < 0.3$ ); propodeal triangle rugose; abdomen with very indistinct microsculpture, slightly shining; terga with fine and scattered punctures ( $E = 0.3-3$ ), their apical margins impunctate; pygidial plate somewhat convex in the middle and narrow rounded apically; distitarsi swollen. – Integumental colouration: Head, scapes and pedicels of antennae, and thorax black; flagellar joints dark brown with yellowish-brown ventral surfaces; mandibles black with brown apical halves; terga black (sometimes with brown hue); sterna brown to dark brown; tegulae partly yellowish-brown; legs dark brown with yellowish-brown tarsomeres (last four) and yellowish spurs. – Pubescence: Head rather densely clothed with long and erect, whitish hairs, on vertex with black hairs intermixed; apical margin of clypeus with pecten consisting of a row of stout golden setae; scutum with dark brown to black pubescence in the middle, remaining parts densely covered with short and erect, yellow hairs; anterior halves of tegulae with subappressed and short, yellow hairs; pronotal lobes, scutellum, metanotum and the upper part of propodeum rather densely covered with relatively long and erect, yellow hairs; remainder of thorax covered with long and erect, white hairs;  $T_1$  with long and erect, whitish hair;  $T_{2-4}$  very sparsely clothed with very short, suberect, black hairs, and with narrow bands of whitish hairs on apical margins; prepygidial fimbria ( $T_5$ ) black in the middle and yellowish on sides; pygidial fimbria black;  $S_{1-6}$  with scattered, pale and rather long hairs, becoming more numerous and longer on apical margins of individual sterna; trochanters and femora with sparse, whitish, long and erect pubescence; tibiae and tarsi of fore and midlegs sparsely clothed with appressed brown-yellowish hairs; tibial scopa bright yellow with a few brownish-black hairs below basitibial plate; basitarsal scopa bright yellow; pencillus black.

Male. – Measurements and ratios: BL, 11.5-13 mm; AL, 6-7.5 mm; AW, 3.5 mm; HL, 2.7 mm; HW, 3.2 mm; FL, 2.2 mm; FW, 2.0 mm; length of  $F_1$ , 0.37-0.38 mm; length of  $F_2$ , 0.36-0.38 mm; length of  $F_3$ , 0.43-0.45 mm;  $F_W$ , 0.27-0.28 mm; number of hamuli 11-12; HL : HW = 1 : 1.2; FL : FW = 1 : 0.9; AL : AW = 1 : 0.46-0.58;  $F_1 : F_2 : F_3 = 1 : 1 : 1.18$ . – Structure: Head somewhat wider than long, with indistinct microsculpture; vertex and genae finely and closely punctured ( $E < 0.3$ ); paracocular areas with fine and somewhat scattered punctures ( $E = 0.3-1.5$ ); clypeus shining and closely punctured ( $E < 0.3$ ), its apical one-third impunctate; malar spaces narrow;  $F_1$  equal to  $F_2$ ,  $F_3$  1.18 length of  $F_2$ , median flagellomeres ( $F_{4-10}$ ) twice longer than their width, flagellar joints cylindrical; lateral parts of scutum, scutellum and metanotum very indistinctly microsculptured, finely and closely punctured ( $E < 0.3$ ); in the middle scutum and scutellum without microsculpture, and with scattered punctures ( $E = 0.3-1$ ), spaces between punctures shining; scutellum and metanotum with slightly coarser punctures; mesopleurae and propodeum microsculptured and closely punctured.



Figs 1-3. Male sterna 7-8 and genital capsule of *Melitta udmurtica* SITDIK.: 1 – seventh sternum in ventral view; 2 – eighth sternum in dorsal view; 3 – genital capsule in dorsal view.

tured ( $E < 0.3$ ); propodeal triangle indistinctly microsculptured, finely but distinctly rugose in upper half (longitudinally) and in the middle (transversely); abdomen without microsculpture, interpunctural space smooth and shining, terga with fine and scattered punctures ( $E = 0.3-3$ ), their apical margins impunctate; distitarsi swollen;  $S_{7-8}$  and genital capsule as in Figures 1-3. -Integumental colouration: Head, antennae, mandibles, thorax and abdomen black (abdomen sometimes with brown hue); apical tergal margins yellowish translucent; tegulae brown to yellow-brown; legs brown to dark brown except yellowish spurs. - Pubescence: Head densely covered with long and erect, yellowish hairs; dorsal surface of thorax and pronotal lobes densely clothed with relatively long and erect, yellowish hairs (scutum additionally with a few scattered black hairs in the middle); remainder of thorax with somewhat longer and whitish pubescence;  $T_{2-4}$  with subappressed apical bands of white-yellowish hairs; terga densely covered with long and erect hairs (on  $T_6$  suberect);  $T_{1-3}$  and distal two-thirds of  $T_4$  with white-yellowish pubescence, while proximal one-third of  $T_4$  and  $T_{5-6}$  with brown-black pubescence; sterna considerably sparser clothed with shorter and suberect, white-yellowish hairs; distal half of  $S_6$  with two lateral fringes of dark brown hairs; legs rather densely covered with relatively long and erect, white-yellowish hairs.

**B i o n o m i c s.** – Flight season: from end of June to end of August. – Nest: in ground (mainly in sandy soil). – Cleptoparasite: unknown. – Flowers visited: *Lotus corniculatus* L., *Medicago falcata* L., *M. media* PERS., *Vicia cracca* L., *V. sepium* L., *V. villosa* ROTH. (Fabaceae) and *Phacelia tanacetifolia* BENTH. (Hydrophyllaceae).

**D i s t r i b u t i o n.** – Udmurtia (eastern part of East European Lowland).

**N e w l o c a l i t i e s.** – EB69 Puławy-Włostowice: 16.07.1974 – ♂, 28.07.1974 – ♂, 16.08.1974 – ♀, 6.07.1975 – ♀♂, 10.07.1975 – ♂, 13.07.1975 – 2♀, ♂; Puławy Górna Niwa: 30.07.1974 – 2♀, 14.07.1975 – ♀, 27.07.1976 – ♀ (collection of Department of Apiculture of Institute of Pomology and Floriculture at Puławy), Poland.

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