

*With kind regards  
J. Macá*

ANNOTATIONES  
ZOOLOGICAE  
et  
BOTANICAE

210

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# ANNOTATIONES ZOOLOGICAE et BOTANICAE

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Slovenské národné múzeum — Prírodovedné múzeum

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February 28, 1992

No. 210

## ADDITION TO THE FAUNA OF DROSOPHILIDAE, CAMILLIDAE, CURTONOTIDAE, AND CAMPICHOETIDAE (DIPTERA) OF SOVIET MIDDLE ASIA

J a n M á c a

**Summary.** *Drosophila* (*Spinodrosophila*) *secunda* sp. n. and new male of *D.* (s. str.) *avicennai* M á c a, 1988 are described from the Uzbek SSR. Further eleven species of Drosophilidae are given from this territory, six of them for the first time. First records of Camillidae (one species) and Campichoetidae (three species) are also given from this territory and the locality of *Curtonotum anus* (M e i g e n) is quoted for the first time from Soviet Middle Asia.

In the previous paper (M á c a, 1988) survey of the Drosophilidae from Soviet Middle Asia has been given. Recently I obtained additional interesting material of Drosophilidae and some related families which is presented here. The specimens were collected by Drs. M. Barták and K. Špatenka, research workers of the Research Institute of Fodder Industry, Pečky near Praha.

### Material and methods

Morphologic details were studied on pinned specimens; in males, preparations of terminalia were made when necessary; they were mounted to a tube with glycerine on the same pin. As for the abbreviations of the wing indices, the paper of M á c a (1980) was followed. Distribution of the species in question was summarized in pertinent sections of the Catalogue of Palaearctic Diptera (B ä c h l i & R o c h a P i t é, 1984; P a p p 1984a, b, c). Examined localities not quoted by M á c a (1988) and their geographic coordinates are as follows: Amankutan (1300 m) — 39.19 N/ 66.55 E; Bolshoi Chimgan in Chatkalski khrebet (1800 m) — 41.37 N/ 69.57 E; Chimgan, damp meadow (800 m) — 41.37 N/ 70.00 E; Chimgan, damp valley (1200 m) — 41.37 N/ 70.02 E; Chimgan, alpine meadow (1800 m)

— 41.37 N/ 70.06 E; Chinaz — 40.53 N/ 68.43 E; Kara Artscha (2750 m) — 41.31 N/ 69.51 E; Karamazar — 41.32 N/ 69.48 E; Zeravshan — 39.38 N/ 67.08 E. All localities are on the territory of the Uzbek SSR, mostly in the mountains Chatkalski khrebet (incorrectly spelled Chaikalski khrebet by M á c a, 1988, p. 8), except of Chinaz (which is South of Tashkent), Amankutan and Zeravshan (both Southeast of Samarkand).

### Drosophilidae

#### *Leucophenga maculata* (D u f o u r, 1839)

M a t e r i a l s t u d i e d: Tashkent, 10. 5. 1989, 1 ♂, Barták leg.

#### *Scaptomyza (Parascaptomyza) pallida* (Z e t t e r s t e d t, 1847)

M a t e r i a l s t u d i e d: Bolshoi Chimgan, 22.—24. 7. 1987, 1 ♀, Špatenka leg. Tashkent, 16. 5. 1989, 1 ♂, 19. 5. 1989, 2 ♂, 1 ♀, Barták leg. Chimgan, damp valley, 18. 5. 1989 — 2 ♂, 2 ♀, Barták leg. Chimgan, alpine meadow, 18. 5. 1989 — 1 ♀, Barták leg.

#### *Scaptomyza* (s. str.) *graminum* (F a l l é n, 1823)

M a t e r i a l s t u d i e d: Tashkent, 16. 5. 1989 — 1 ♀, 19. 5. 1989, 1 ♂, 1 ♀. Chirchik, 19. 5. 1989, 1 ♂. Chimgan, damp valley, 18. 5. 1989, 1 ♂. Aktash, 17. 5. 1989, 2 ♂, 1 ♀. Zeravshan, 24. 5. 1989, 1 ♂. All Barták leg.

#### *Scaptomyza* (s. str.) *flava* (F a l l é n, 1823)

M a t e r i a l s t u d i e d: Tashkent, 16. 5. 1989, 5 ♂, 5 ♀, Barták leg.

N o t e: First record from Soviet Middle Asia. Both yellow and brown form were present in the material.

#### *Lordiphosa andalusiaca* (Strobl, 1906)

M a t e r i a l s t u d i e d: Tashkent, 16. 5. 1989, 5 ♂, 3 ♀, 19. 5. 1989, 1 ♀, Barták leg.

N o t e: First record from Soviet Middle Asia. Generic status of *Lordiphosa* B a s d e n, 1961 is accepted according to G r i m a l d i (1990 and personal communication).

#### *Drosophila (Sophophora) subobscura* C o l l i n i n G o r d o n, 1936

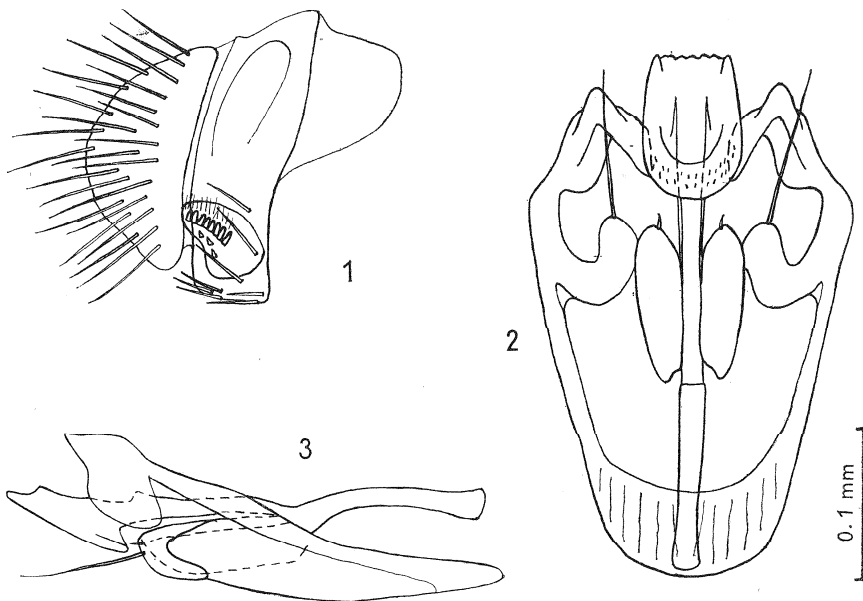
M a t e r i a l s t u d i e d: Zeravshan, 24. 5. 1989, 7 ♂, 6 ♀. Chinaz, 20. 5. 1989, 1 ♀. All leg. Barták.

N o t e: First record from Soviet Middle Asia.

#### *Dorsophila (Dorsilopha) busckii* C o q u i l l e t t, 1901

M a t e r i a l s t u d i e d: Tashkent, 16. 5. 1989, 1 ♀, 19. 5. 1989, 2 ♀, leg. Barták.

N o t e: First record from Soviet Middle Asia.



Figs. 1—3. *Drosophila avicennai* (Kara Artscha): 1 — Periphallie organs, 2 — Phallic organs, ventral aspect, 3 — Phallic organs, lateral aspect

*Drosophila* (s. str.) *transversa* Fallén, 1823

Material studied: Tashkent, 16. 5. 1989, 1 ♂, 2 ♀, 19. 5. 1989, 2 ♂, 2 ♀. Zeravshan, 24. 5. 1989, 1 ♂, 3 ♀. All leg. Barták.

*Drosophila* (s. str.) sp.\* close to *metakuntzei* Okada, 1973

Material studied: Zeravshan, 24. 5. 1989, 1 ♂.

Note: First record from Soviet Middle Asia. There are minor differences from the *D. metakuntzei*: abdominal dark bands (each side) deeply concave to divided, hypandrium proximally narrowed, surstylus with 17 blunt teeth.

*Drosophila* (s. str.) *avicennai* Mác a, 1988

Material studied: Kara Artscha, 22. 6. 1986, 1 ♂, 2 ♀, Špatenka leg. Aktash, 17. 5. 1989, 1 ♀, leg. Barták. Zeravshan, 24. 5. 1989, 1 ♀, leg. Barták. Amankutan, 23. 5. 1989, 3 ♂, leg. Barták.

Only the differences from the original description are given.

♂ (new male): Epanthrium (Fig. 1) with huge apodeme, lower part with inward directed strong bristles. Anal lamellae big, separated from epanthrium, with ordinary bristles. Surstylus inwardly directed, with a row of eight teeth and three additional tooth-shaped bristles. Phallic organs

\* *D. sannio* Gornostaev, 1991, *Ent. obozr.*, 70: 486.

(Figs. 2—3): Aedeagus slender, apically dilated in a form of shield, somewhat like in *D. kuntzei* Roser. Apodeme not conspicuously swollen. Anterior paramere with one short seta. Caudal margin of hypandrium with a long bristle on each side, ventral fragma narrowed basally. Posterior paramere paired.

Note: Relationships of *D. avicennai* within the subgenus *Drosophila* s. str., even the relations to other species possessing supernumerary dorso-central bristles, remain uncertain. *Drosophila grandis* Kikkawa & Peng, 1938 should be excluded from the key of *Drosophila* (s. str.) species which possess supernumerary dorso-central bristles (Máca, 1988); according to Okada & Carson (1983) it belongs to *Zaprionus*. The couplet 8- of the abovementioned key ("*Drosophila* species 5" of Beppu et al., 1977) concerns *D. calidata* Takada, Beppu & Toda, 1979, ungrouped species showing affinities to *Hirtodrosophila*. Several additional species, not mentioned in the key, e. g. the recently described *D. bivibrissae* Toda, 1988 and *D. hyperpolychaeta* Okada, 1988, possess the character of supernumerary dorsocentrals.

*Drosophila* (s. str.) *funnebris* (Fabricius, 1787)

Material studied: Chimgan, damp meadow, 18. 5. 1989, 1 ♀, Barták leg.

*Drosophila* (s. str.) *immigrans* Sturtevant, 1921

Material studied: Tashkent, 19. 5. 1989, 1 ♀, Barták leg.

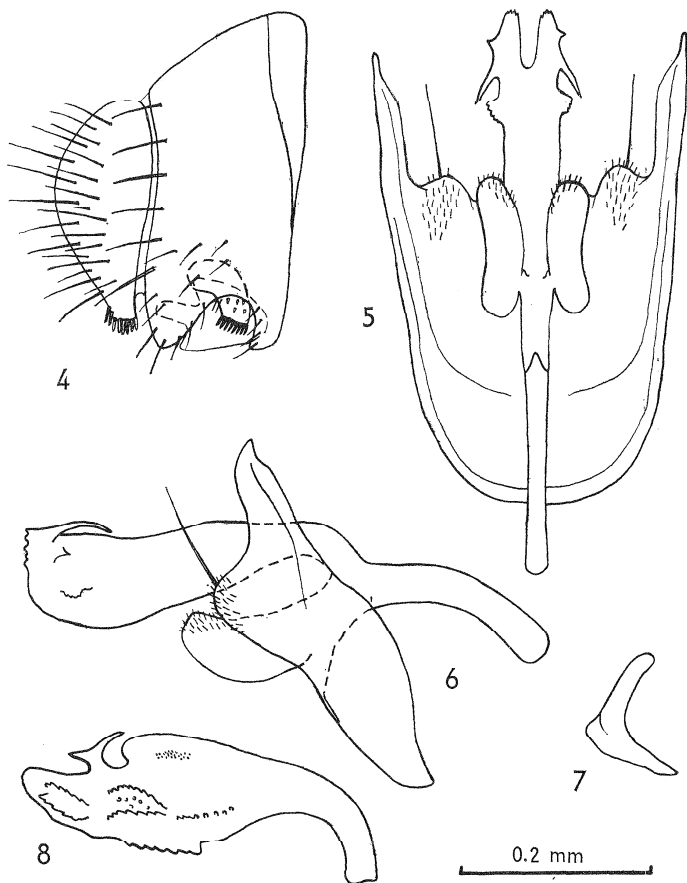
Note: First record from Soviet Middle Asia.

*Drosophila* (*Spinodrosophila*) *secunda* sp. n.

Material studied: **Holotype**, male. Kara Artscha, 22. 6. 1986, Špatenka leg.

The new species differs from *D. nigrosparsa* Strobl, the only species previously known in the *nigrosparsa*-group and the subgenus *Spinodrosophila*, by some characters of male terminalia, lacking thornlike prominence of male hind basitarsus, somewhat different arrangement of the branches of arista, higher c-index etc. See Basden (1961) for comparison. Lateral aspect of the aedeagus of *D. nigrosparsa* is supplemented here (Fig. 8); except of the material from the Krkonoše Mts. in Czecho-Slovakia, specimens from Malans in Switzerland, were compared and no substantial differences were found. Indeed, I consider *D. secunda* a member of *nigrosparsa*-group. Common characters of the species of this group are discussed below (see Note).

♂: Frons widened posteriorly, dark tan with silvery grey pollinosity. A moderately wide strip along lower margin of frons orange. Narrow, anteriorly somewhat widened dark brown strips originating laterad from the ocellar triangle, widened and convergent below but ending separately into the orange strip along lower margin of frons. Anterior orbital bristle twice longer than the posterior one, which is as long as the middle orbital



Figs. 4—7. *Drosophila secunda* (Holotype): 4 — Peripheral phallic organs, 5 — Phallic organs, ventral aspect, 6 — Phallic organs, lateral aspect, 7 — Ejaculatory apodeme. Fig. 8. *Drosophila nigrosparsa* (Černá Studnice, Krkonoše Mts.), aedeagus, lateral aspect

bristle. Ocellar bristle long (1.7 length of the anterior orbital bristle), reaching almost to the anterior margin of frons. Postverticals crossed. Inner and outer verticals subequal, about as long as the anterior orbital bristle. Lower third of frons with ten conspicuous interfrontal hairs. Six lower fronto-orbital hairs each side. Eyes dark reddish brown, with pale pilosity. Gena brownish, buccal angle  $\frac{1}{3}$  width of eye. Peristomal bristles in two rows. 2nd peristomal bristle half as long as the vibrissa. Face dark greyish brown, carina high, nose-like. Arista with two dorsal branches and one ventral branch in the basal half, with two shorter branches (one dorsal, one ventral) in the apical half. Occiput flat, with two rows of postoculars. Proboscis not very well discernible, probably rudimentary.

Thorax grey, medial line with brownish strip, which is well developed up to the scuto-scutellar suture; there is an interrupted brown strip in the dorsocentral line and another one (less distinct) between dorsocentral and notopleural line. Four lines of acrostichals, with some additional bristles medially to the dorsocentral line. Anterior dorsocentrals 0.31 mm, posterior dorsocentrals 0.52 mm. One humeral bristle; two notopleurals, the anterior stronger; one presutural, two supraalar and only one visible postalar bristle. Scutellum grey, pollinose, with indistinct brown patch in middle. Scutellars subequal, about as long as posterior dorsocentrals; anterior pair parallel, posterior pair crossed. Pleura grey, pollinose. Sternopleurals as described by *Basden* (1961) for *D. nigrosparsa*. Wing length 2.9 mm. Veins yellowish, anterior crossvein (ta) indistinctly darkened, posterior crossvein without dark clouding. Two bristles at the distal break of costa. C-i 4.4, 4v-i 1.9, 5x-i 0.9, 4C-i 0.7, Ac-i 2.1, Cx-i 0.7, M-i 0.4, C<sub>3</sub> fringe 0.4. Legs pale yellowish brown; all coxae, apices of femora (3rd femora less so) and the ultimate tarsal joint of all legs darkened, grey. Preapicals on all tibiae, apicals on middle. 1st tarsus longer than the 1st tibia, basitarsus as long as 2nd and 3rd segments together. Hind basitarsus as long as the 2nd and 3rd segments together, too. Ventral surface of hind basitarsus with short stiff hairs, which are longer than the width of basitarsus; without thorn-like appendage.

Abdominal tergites unicolorously brownish-grey, sternites of the same colour. Periphallic organs (Fig. 4): Epandrium evenly wide, lower part bristled, lower margin strongly concave, its posterior part with a flap covering base of surstylus. Anal lamella separated from the epandrium, narrowed ventrad and with peg-like bristles below. Clasper with 8 teeth in a row and some shorter tooth-shaped bristles on outer surface. Decasternum arrow-shaped. Phallic organs (Figs. 5—6): Aedeagus longer than the apodeme, apically bifid, with one recurved spur, a short thorn and a fin-like appendage each side. Apodeme not swollen. Vertical rod bulky, anterior paramere with fine hairs apically. Caudal margin of hypandrium with long bristle and a cluster of fine short hairs (each side), ventral fragment U-shaped (not dilated paramedially as in *D. nigrosparsa*). Posterior paramere lacking. Ejaculatory apodeme (Fig. 7) of the shape usual for the species of the subgenus *Drosophila*, s. str., as surveyed by *Throckmorton* (1962).

Note: Dr. K. Beppu (Nagano, Japan) drew my attention to the species *Drosophila maculinotata* *Okada*, 1956 (originally described in *Drosophila* s. str., *funebri*-group), which is without doubt closely related to the *nigrosparsa*-group. Contrary to *D. nigrosparsa* and *D. secunda*, the arista of *D. maculinotata* is bifurcated apically and with more than one ventral branch, aedeagus is more slender and anal lamella has two types of spines. There are some additional common characters of all three species in question, e. g. one humeral bristle, base of surstylus covered by a flap, aedeagus possessing recurved spurs, strong vertical rod and short apodeme, and me-



sonotum with somewhat *repleta*-like coloration. However, these characters do not seem to justify the subgenus *Spinodrosophila* very firmly. Sporadic chromosomal studies may indicate relationship of *nigrosarsa*-group to *funebri*-group (B a s d e n, 1961, p. 173), but more further information should be gathered.

### Camillidae

✓ *Camilla flavicauda* D u d a, 1922

Material studied: Samarkand, 22. 5. 1989, 1 ♀. Zeravshan, 24. 5. 1989, 1 ♂. Both Barták leg.

Note: The female belongs to the typical form with 5th abdominal tergite yellow; the conspecificity of male specimen was confirmed by the study of terminalia. First records from Soviet Middle Asia.

### Curtonotidae

✓ *Curtonotum anus* (M e i g e n, 1830)

Material studied: Chirchik, 19. 5. 1989, 1 ♂, 1 ♀, Barták leg.

Note: This species was given from Soviet Middle Asia by S t a c k e l b e r g (1970) without mentioning concrete locality.

### Campichoetidae

✓ *Campichoeta zernyi* D u d a, 1934

Material studied: Zeravshan, 21.—22. 5. 1989, 1 ♂, 24. 5. 1989, 1 ♀. Tashkent, 19. 5. 1989, 1 ♂, 1 ♀. Karamazar, 18. 5. 1989, 1 ♀. All Barták leg.

Note: First records from Soviet Middle Asia.

✓ *Campichoeta punctum* (M e i g e n, 1830)

Material studied: Zeravshan, 21.—22. 5. 1989, 1 ♂, 5 ♀. 24. 5. 1989, 2 ♂. Aktash, 17. 5. 1989, 1 ♂, 1 ♀. Tashkent, 19. 5. 1989, 1 ♂. All Barták leg.

Note: First records from Soviet Middle Asia. It is not excluded that some females might belong to the following species. *C. grandiloba*; the females of these two species cannot be always distinguished (C h a n d l e r, 1987).

✓ *Campichoeta grandiloba* M c A l p i n e, 1962

Material studied: Zeravshan, 24. 5. 1989, 1 ♂, 1 ♀, Barták leg.

Note: First record from Soviet Middle Asia.

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