

New species of fungus gnats of the genus *Mycetophila* Meig. (Diptera, Mycetophilidae)

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Zaitzev, A. I. 1998. New species of fungus gnats of the genus *Mycetophila* Meig. (Diptera, Mycetophilidae). *Int. J. Dipterol. Res.*, 9(2): 79–84.

Descriptions of *Mycetophila subnigrofusca* sp. n. and *M. sororia* sp. n. from Altai Mts., *M. hilcersidae* sp. n. from Primorsky Terr., *M. blagoderovi* sp. n. and *M. enthea* sp. n. from Sakhalin I., *M. parata* sp. n. from Kuril Is., *M. artyomi* sp. n. from Sakhalin I. and Altai Mts. are given. + *pseudofornicata*

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Key words. Diptera, Mycetophilidae, *Mycetophila*, new species.

Introduction

Through examination of the material on Mycetophilidae collected by author and Dr. V. Blagoderov (Palaeontological Institute, Moscow) in various parts of Russia revealed 7 new species of *Mycetophila* Meig. The type material is deposited in A. N. Severtsov Institute of Ecology and Evolution (IEE, Moscow).

Mycetophila parata A. Zaitzev, sp. n. (Figs 1, 3)

Holotype. ♂, Russia, Kuril Is., Kunashir I., 5.VII.1977, A. Zaitzev leg.

Paratype. ♂, with the same data (IEE).

Description. Male. Head dark brown; clypeus brown, palpi and mouth parts yellow; antennae brown, scape and pedicel yellow, first flagellomere with yellow basal part and dark brown ring, sixth flagellomere 2 times as long as wide. Mesonotum light brown with 3 dark stripes more or less fused behind; scutellum mostly dark brown with yellow median apical area; propleura brown with 3 strong bristles. Wing length 5.0 mm; wing with a distinct central spot; preapical spot starting at *C* well past tip of *R*₁ filling apex of cell *R*₁, proximal part ex-

tending to *Cu*₁, *R* with 10 setulae below, *R*₁ with 35 setulae below. *M* before *rm* without setulae below and above; ratio of *rm*: *M* petiole 1.5. Legs mostly yellow; hind coxae brownish from behind; mid and hind femora brownish below; mid tibia with 3 *a*, 1 *ad*, 6 *d*, 5–6 *p*, 2 *v*; first two rows of anterior setulae dark brown; hind tibia with 7 *a*, 4–5 strong *d* (with 4 shorter erect bristles interspersed with longer ones), 6 *p*; anterior setulae dark brown. Abdomen dark brown; tergite II–VI with narrow yellowish apical bands; genitalia brown.

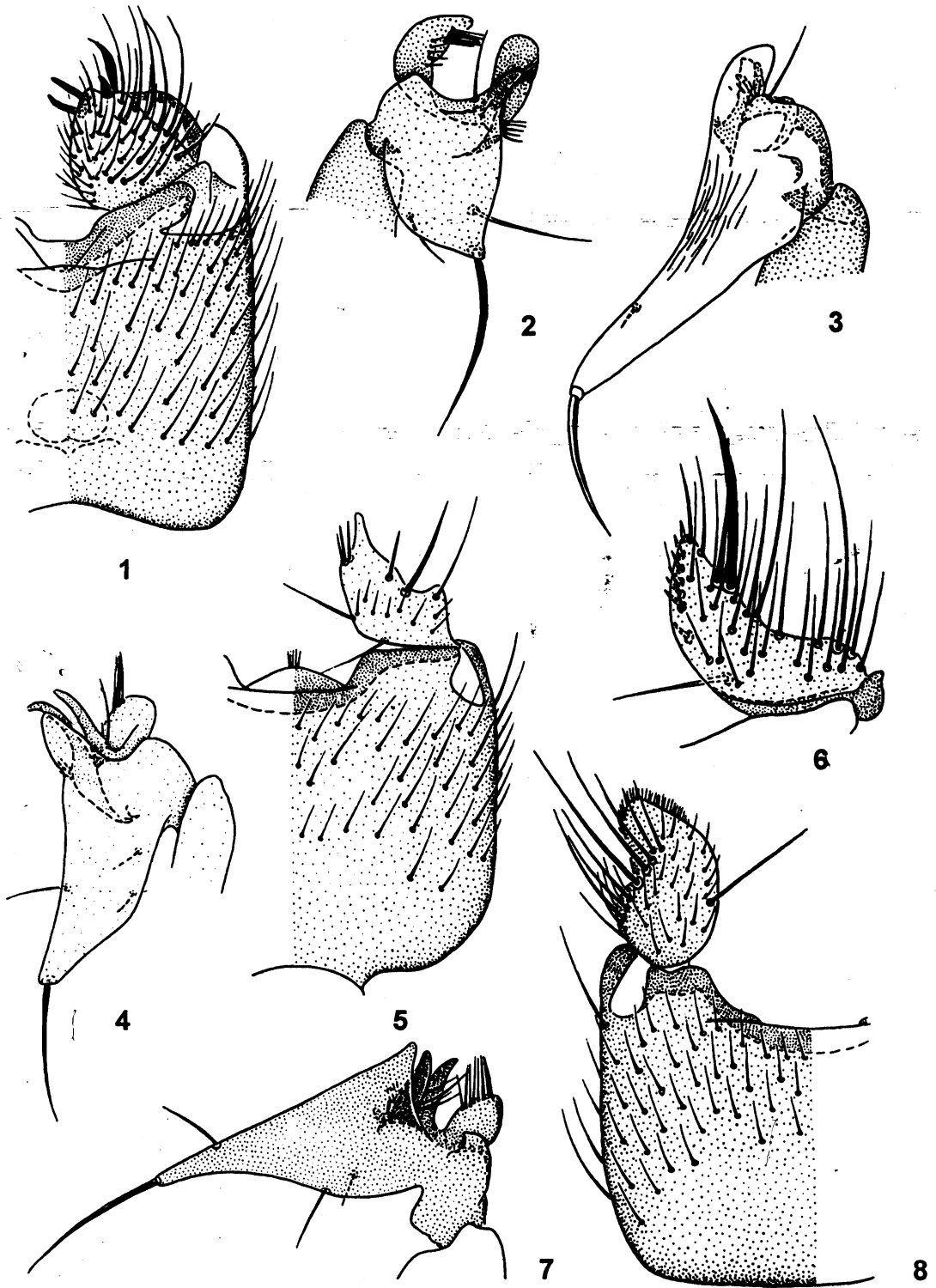
Female unknown.

Remarks. According to the key by Laffoon (1957) *M. parata* runs to his group "F" and is close to Palearctic *M. fraterna* Winn., *M. ornata* Winn., *M. nigrofusca* Dzied. and Nearctic *M. bohartorum* (Laff.), *M. clavata* (Van Duzee), *M. nepaea* (Laff.), but differs distinctly in the structure of genitalia.

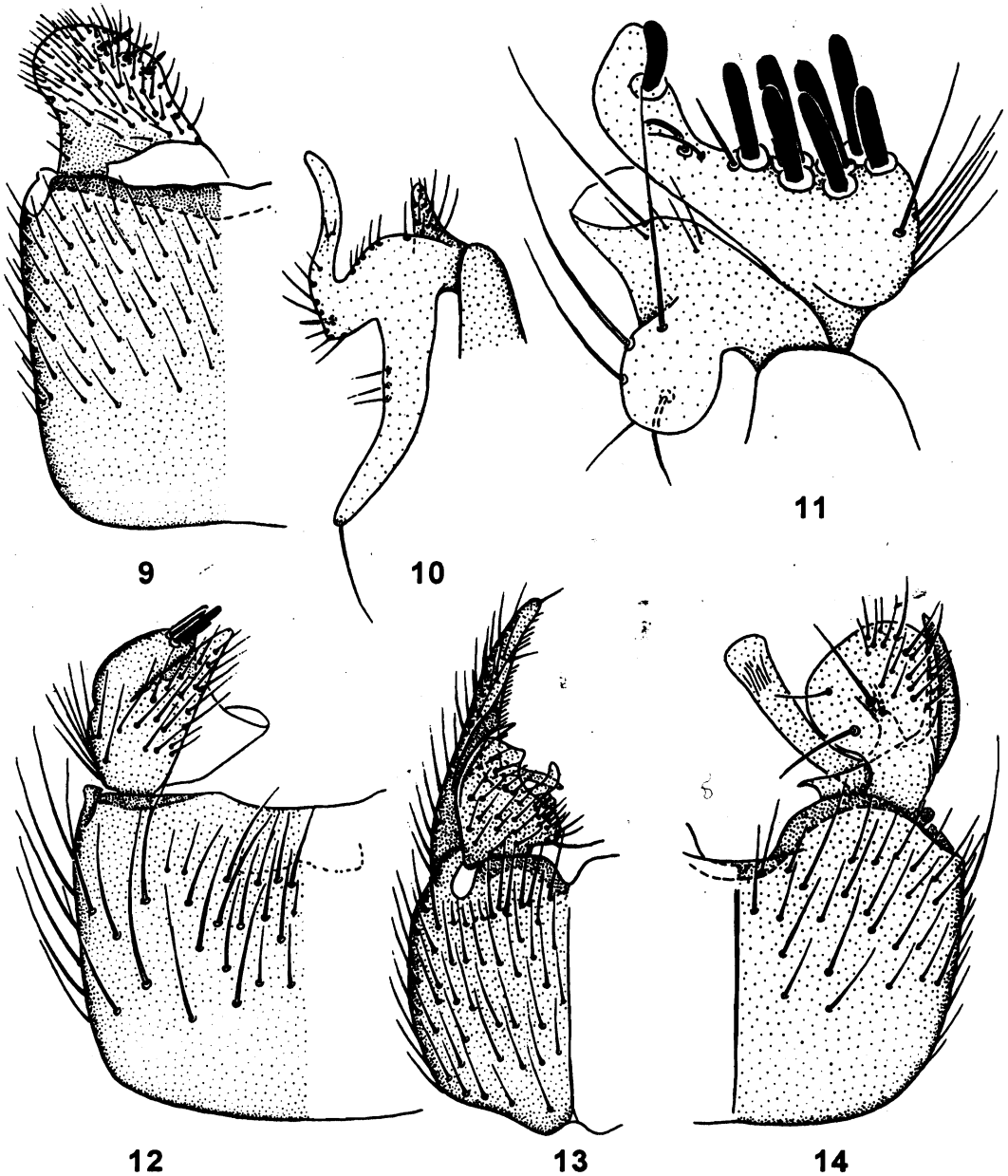
Mycetophila subnigrofusca A. Zaitzev, sp.n. (Figs 4, 6)

Holotype. ♂, Russia, Altai Mts., Teletskoe Lake, Artybash, 22–24.VI.1981, Zaitzev leg. (IEE).

Description. Male. Head dark brown; clypeus brown, palpi and mouth parts yellow, antennae dark brown, scape, pedicel and basal half of first flagel-

Figs 1—8. *Mycetophila*.

1, 3, *M. parata* sp. n.: 1, male genitalia, ventral view; 3, dorsal lobe of the gonostylus. 2, 5, *M. sororia* sp. n.: 2, dorsal lobe of the gonostylus; 5, male genitalia, ventral view. 4, 6, *M. subnigrofusca* sp. n.: 4, dorsal lobe of the gonostylus; 6, ventral lobe of the gonostylus. 7, 8, *M. blagoderovi* sp. n.: 7, dorsal lobe of the gonostylus; 8, male genitalia, ventral view.



Figs 9—14. *Mycetophila*.

9, 10, *M. cuthea* sp. n.: 9, male genitalia, ventral view; 10, dorsal lobe of the gonostylus. 11, 12, *M. arryomi* sp. n.: 11, dorsal lobe of the gonostylus; 12, male genitalia, ventral view. 13, *M. pseudoforcipata* sp. n.: male genitalia, ventral view. 14, *M. hilcersidae* sp. n.: male genitalia, ventral view.

lomere yellow, sixth flagellomere as long as wide. Mesonotum light brown with 3 dark separate stripes; scutellum mostly dark brown with yellow median apical area; propleura dark brown with 3 strong bristles. Wing length 3.5 mm; wing with a distinct central spot; preapical spot starting at *C* well past tip of *R*₁, filling apex of cell *R*₁, proximal part ex-

tending at least to *M*₁. *R* with 9 setulae below, *R*₁ with 25 setulae below, *M* before *rm* without setulae below and above, ratio of *rm* : *m* petiole 1.4. Legs mostly yellowish; hind coxae brown near base; mid and hind femora brownish below, with dark brown apical band; mid tibia with 3 *a*, 1 *ad*, 4 *d*, 4 *p*, 2 *v*, first two rows of anterior setulae dark brown; hind

tibia with 6 *a*, 5 strong *d* (with 4 shorter erect bristles interspersed with longer ones), 3 *p*, anterior setulae dark brown. Abdomen dark brown; genitalia brown.

Female unknown.

Remarks. *M. subnigrofusca* is close to *M. nigrofusca* Dzied., from which it can be easily separated by ventral lobe of gonostylus bearing row of short spines on inner surface.

Mycetophila blagoderovi A. Zaitzev, sp. n.
(Figs 7, 8)

Holotype. ♂, Russia, Sakhalin I., Nayba Riv., 12 km upper Bykov, 16.VIII.1991, Blagoderov leg. (IEE).

Description. Male. Head dark brown; clypeus brown, palpi and mouth parts yellow; antennae brown, scape, pedicel and first flagellomere yellow, sixth flagellomere about as long as wide. Mesonotum yellow with 3 dark brown fused stripes; scutellum mostly dark brown with somewhat paler median apical area. Wing length 3.5 mm; wing with a distinct central spot; preapical spot starting at *C* well past tip of *R*₁, filling apex of cell *R*₁, proximal part extending to *M*₁; *R* with 11 setulae below. *R*₁ with 25 setulae below. *M* before *rm* without setulae below and above; ratio of *rm*: *M* petiole 1.2. Legs mostly yellow; hind femur dark brown apically; mid tibia with 3 *a*, 1 *ad*, 5 *d*, 3 *p*, 3 *v*, first two rows of anterior setulae dark brown; hind tibia with 7 *a*, 5 strong *d* (with 3 shorter erect bristles interspersed with longer ones), 4 *p*, anterior setulae dark brown. Abdomen dark brown, genitalia brown.

Female unknown.

Remarks. The male genitalia of new species are similar to those of Nearctic *M. nepaea* (Laff.), but the basal setulose part of ventral lobe of gonostylus is ovate in *M. blagoderovi*.

Mycetophila sororia A. Zaitzev, sp. n.
(Figs 2, 5)

Holotype. ♂, Russia, Altai, Teletskoe Lake, Artybash, 9.VII.1981, Zaitzev leg. (IEE).

Description. Head dark brown; clypeus brown, palpi and mouth parts yellow; antennae dark brown, scape, pedicel and first flagellomere yellow, sixth flagellomere about 2 times as long as wide. Mesonotum shining, dark brown with very small yellow humeral spots and yellow posterolateral area; scutellum mostly dark brown with yellow median apical area; propleura dark brown with 3 strong

bristles. Wing length 4.2 mm; wing with a distinct central spot; preapical spot starting at *C* well past tip of *R*₁, filling apex of cell *R*₁, proximal part extending to *M*₁; *R* with 13 setulae below, *R*₁ with 25 setulae below, *M* before *rm* without setulae below and above; ratio of *rm*: *M* petiole 2.5. Legs yellow; mid and hind femora dark brown apically; mid tibia with 3 *a*, 1 *ad*, 6 *d*, 3 *p*, 4 *v*, first two rows of anterior setulae dark brown; hind tibia with 8 *a*, 5 strong *d* (with 5 shorter erect bristles interspersed with longer ones), 5 *p*, first row of anterior setulae dark brown, second row of anterior setulae dark brown at least apical 1/3 of tibia. Abdomen dark brown, tergite II—IV with narrow yellow apical bands; genitalia dark brown.

Female unknown.

Remarks. *M. sororia* is close to *M. nigrofusca* Dzied., from which it is distinguished in the shape of the ventral and dorsal lobes of gonostylus.

Mycetophila hilversidae A. Zaitzev, sp. n.
(Fig. 14)

Holotype. ♂, Russia, Primorsky Terr., Ussuri Reserve, 11.V.1962, Mamaeva leg. (IEE).

Description. Male. Head dark brown; clypeus brown, palpi and mouth parts yellow, antennae brown, sixth flagellomere about 1.2 times as long as wide. Mesonotum dark brown with yellow humeral spots; scutellum dark brown; propleura brown with two strong bristles. Wing length 3.2 mm; wing with a distinct central spot; preapical spot starting at *C* just beyond tip of *R*₁, filling apex of cell *R*₁, proximal part extending to *M*₁; *R* with 11 setulae below, *R*₁ with 20 setulae below; *M* before *rm* without setulae below and above; ratio of *rm*: *M* petiole 1.1. Legs mostly yellow; mid tibia with 2 *a*, 1 *ad*, 4 *d*, 2 *p*, 3 *v*, first two rows of anterior setulae dark brown; hind tibia with 7 *a*, 4 strong *d* (with 2 shorter erect bristles interspersed with longer ones), 1 *p*; hind tibial anterior setulae dark brown. Abdomen dark brown; abdominal sternites II and III each with a pair of long median apical bristles; genitalia brown.

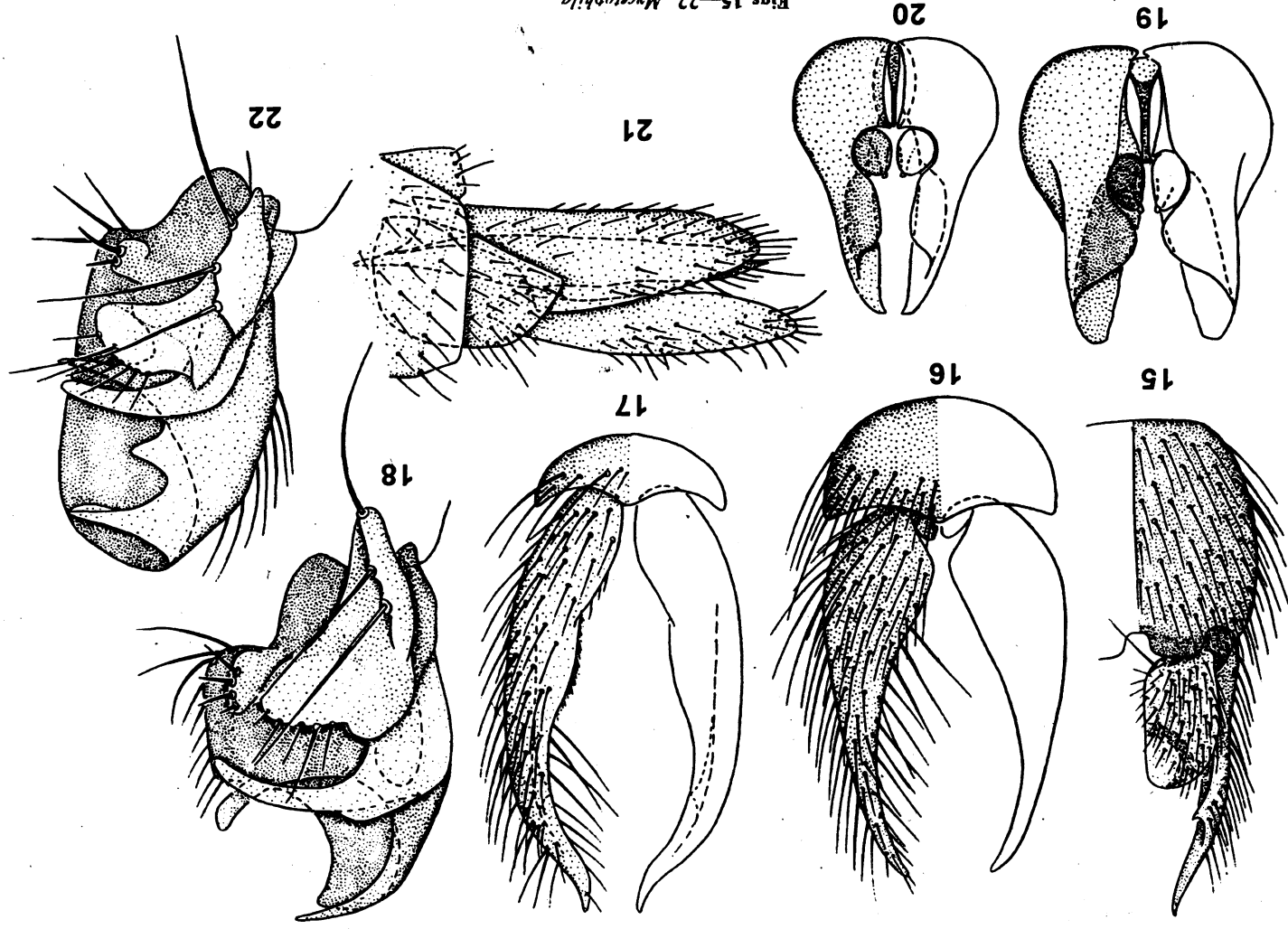
Female unknown.

Remarks. *M. hilversidae* belongs to *pictula*-group. According to the key by Laffoon (1957) it runs to *M. pictula* Meig. [= *M. bimaculata* (Fabr.)], from which it differs distinctly in details of gonostylus structure.

Mycetophila artyomi A. Zaitzev, sp. n.
(Figs 11, 12)

Holotype. ♂, Russia, Sakhalin I., Nayba Riv., 12 km upper Bykov, 16.VIII.1991, Blagoderov.

Paratype. ♂, Russia, Altai Mts., Teletskoe Lake, Artybash, 10.V.1982, Zaitzev leg. (IEE).



Figs 15—22. *Mycetophila*.

15, 17, 20, 22, *M. forficripata* Lund.: 15, male genitalia, ventral view; 17, tergite IX with cerci; 20, aedeagus; 22, ventral lobe of the gonostylus from inner side. 16, 18, 19, 21, *M. pseudoforicripata* sp. n.: 16, tergite IX with cerci; 18, ventral lobe of the gonostylus from inner side; 19, aedeagus; 21, ovipositor, lateral view.

Description. Male. Head dark brown; clypeus brown. palpi and mouth parts yellow, antennae dark brown. scape and pedicel yellow, sixth flagellomere about as long as wide. Mesonotum dark brown with yellow humeral spots; scutellum dark brown, propleura brown with 3 strong bristles. Wing length 2.6 mm; wing with a distinct central spot; preapical spot starting at *C* just beyond tip of R_1 , filling apex of cell R_1 , proximal part ending between R_5 and M_1 or extending to M_1 ; R with 15 setulae below; R_1 with 18 setulae below; ratio *rm*: M petiole 1.1. Legs mostly yellow; hind femur dark brown apically; mid tibia with 2 *a*, 5 *d*, 3 *p*, 2 *v*, first two rows of anterior setulae dark brown; hind tibia with 5 *a*, 5 strong *d* (with 1—2 shorter erect bristles interspersed with longer ones), 1 *p*, anterior setulae dark brown. Abdomen and genitalia dark brown.

Female unknown.

Remarks. According to the key by Laffoon (1957) *M. arytomi* runs to a group species "C" and resembles *M. scotica* Edw., but differs distinctly in the structure of gonostylus.

***Mycetophila enthea* A. Zaitzev, sp. n.**

(Figs 9, 10)

Holotype. ♂, Russia, Sakhalin I., Nayba Riv., 7 km. upper Bykov, 24.VIII.1991, Blagoderov (IEE).

Description. Male. Head dark brown; clypeus light brown; palpi and mouth parts yellow; antennae dark brown. scape and pedicel yellow, sixth flagellomere about as long as wide. Mesonotum pruinose, dark brown with small yellow humeral spots; scutellum mostly dark brown with yellow median apical area; propleura dark brown with 3 strong bristles. Wing length 3.6 mm; wing with a distinct central spot; preapical spot not contacting apex of R_1 , filling apex of cell R_1 , proximal part extending to M_1 ; R with 12 setulae below; R_1 with 28 setulae below; M before *rm* without setulae below and above, ratio *rm*: M petiole 1.5. Legs mostly yellow; hind femur dark brown apically; mid tibia with 3 *a*, 1 *ad*, 5 *d*, 5 *p*, 2 *v*, first two rows of anterior setulae dark brown, hind tibia with 6 *a*, 6 *d*, 3 *p*, first row of anterior setulae dark brown on apical 1/3 of tibia. Abdomen dark brown, genitalia brown.

Female unknown.

Remarks. This species belongs to Laffoon's group "F". From other species *M. enthea* differs in very characteristic structure of dorsal and ventral lobe of gonostylus.

***Mycetophila pseudoforcipata* A. Zaitzev, sp. n.**
(Figs 13, 16, 18, 19, 21)

Holotype. ♂, Russia, Moscow Proc., Krasnaya Pakhra, 25.V.1988, Zaitzev leg. (IEE).

Paratypes. 2♂, 1♀, with same data; 1♂, Russia, Kostroma Reg., Ugory, 17.VI.1982, Esenin leg.; 4♂, 2♀, Russia, Altai, Teletskoe Lake, Artybash, 30.IV.1982, Zaitzev leg., 1♂, the same locality, 9.VII.1981, Zaitzev leg., 5♂, 2♀, Russia, Kuril Is., Kunashir I., 9.VI.1977, Zaitzev leg.; 2♂, the same locality, 24.VI.1977, Zaitzev leg. (IEE).

Description. Male. Head dark brown; clypeus brown; palpi and mouth parts yellow; antennae dark brown, scapus and pedicel yellow; sixth flagellomere 1.2 times as long as wide. Mesonotum dark brown with yellow humeral spots, scutellum dark brown; propleura dark brown with 4 strong bristles. Wing length 3.2—3.5 mm, wing with a distinct central spot; preapical spot not contacting apex of R_1 , filling apex of cell R_1 , proximal part extending to middle of cell R_5 ; R with 10—13 setulae below; R_1 with 20—21 setulae below, M before *rm* without setae below and above; ratio of *rm*: M petiole 1.2. Legs mostly yellow; hind femur dark brown apically; mid tibia with 3 *a*, 1 *ad*, 6 *d*, 3 *p*, 2 *v*, first two rows of anterior setulae dark brown; hind tibia with 7 *a*, 5 strong *d* (with 4—5 shorter erect bristles interspersed with longer ones), 1 *p*; first row of anterior setulae dark brown, second row of anterior setulae dark brown at least apical 1/3 of tibia. Abdomen and genitalia dark brown.

Female. Very similar to male. Cerci one-segmented.

Remarks. This species is close to *M. forcipata* Lund. (Figs 15, 17, 20, 22), from which it differs in the shape of ventral lobe of gonostylus and in the structure of cerci and aedeagus. The structure of the ovipositor of *M. pseudoforcipata* is very similar to the same of *M. forcipata* Lund. figured by P. Chandler (1977), but there are small differences in the shape of the cerci.

Biology. This species reared from the fruit bodies of *Piptoporus betulinus*.

Acknowledgements

This research was financially supported by grant from State Program "Biodiversity" (code 74).

References

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Received 16.VI.1998