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New data on the fungus gnats from the Russian Far East

(Diptera: Sciaroidea)

Contributions to the knowledge of East Palaearctic insects (4)

With 16 figures

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Abstract

The present publication summarizes records of eleven species of fungus gnats (Sciaroidea: Ditomyiidae, Keroplatidae, Mycetophilidae) which were collected in the Russian Far East (Primorskiy Krai) during the second expedition of the German Entomological Institute¹. The following seven species are new to science: *Ditomyia klimovae* sp. n., *Orfelia subnigricornis* sp. n., *O. ussuriensis* sp. n., *Neoplatyura cornuta* sp. n., *Urytalpa attenuata* sp. n., *Neoempheria aperta* sp. n., *Trichonta subterminalis* sp. n. *Megophthalmidia takagii* SASAKAWA is recorded from Russia for the first time.

Zusammenfassung

Die vorliegende Publikation faßt die Funddaten von elf Pilzmückenarten (Sciaroidea: Ditomyiidae, Keroplatidae, Mycetophilidae) zusammen, die während der zweiten Expedition des Deutschen Entomologischen Instituts in den Fernen Osten Rußlands (Primorskiy Krai)¹ gesammelt wurden. Davon werden 7 Arten neu beschrieben: *Ditomyia klimovae* sp. n., *Orfelia subnigricornis* sp. n., *O. ussuriensis* sp. n., *Neoplatyura cornuta* sp. n., *Urytalpa attenuata* sp. n., *Neoempheria aperta* sp. n., *Trichonta subterminalis* sp. n. *Megophthalmidia takagii* SASAKAWA wird zum ersten Mal aus Rußland gemeldet.

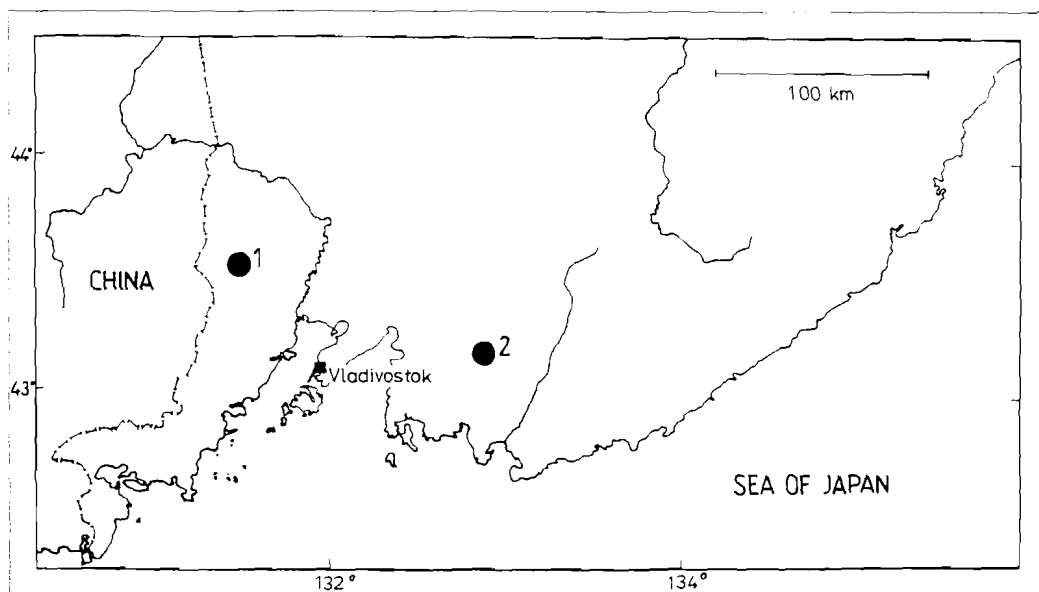
Резюме

Публикуется список данных об одиннадцать видах грибных комаров (Sciaroidea: Ditomyiidae, Keroplatidae, Mycetophilidae), собранных во время второй экспедиции Немецкого Энтомологического Института на Дальний Восток Российской Федерации (Приморский край)¹. Из них семь новых видов впервые описываются: *Ditomyia klimovae* sp. n., *Orfelia subnigricornis* sp. n., *Orfelia ussuriensis* sp. n., *Neoplatyura cornuta* sp. n., *Urytalpa attenuata* sp. n., *Neoempheria aperta* sp. n., *Trichonta subterminalis* sp. n. *Megophthalmidia takagii* SASAKAWA названа для Российской Федерации.

¹This expedition was supported by a grant of the Deutsche Forschungsgemeinschaft No. Ga 437/2-1.

Introduction

In spring and summer 1993 the German Entomological Institute (Deutsches Entomologisches Institut, Eberswalde) carried out two expeditions to Khabarovskiy Kray and Primorskiy Kray in the Russian Far East. During the second expedition CHRISTIAN KUTZSCHER collected twelve male specimens of Ditomyiidae, Keroplatidae, and Mycetophilidae by Malaise traps in Primorskiy Kray. The collecting localities are situated in valleys near Anisimovka and Krounovka (see map). The lowland of Anisimovka close to the river Sukhodol mainly consists of herbaceous vegetation and some scattered lime-trees (*Tilia spec.*) and ash-trees (*Fraxinus spec.*). Specimens from Krounovka were collected on a small glade surrounded by ashes, birches (*Betula spec.*), and oaks (*Quercus spec.*).



Map of Southern Primorie: 1 Krounovka; 2 Anisimovka.

List of collected specimens

Family Ditomyiidae

1. *Symmerus brevicornis* OKADA, 1939

[J. Fac. Agric. Hokkaido (imp.) Univ., 42: 287]

Material examined: 1 ♂, Russia: Primorskiy kray, Anisimovka, Sukhodol river, 50 km SE Artyom, 43.1° N 132.5° E, 6.-10.VIII.1993, leg. C. KUTZSCHER (colletion DEI Eberswalde).
Distribution: Russia: Khabarovskiy kray, Primorskiy kray, I. Sakhalin, Kuril Is.; Japan.

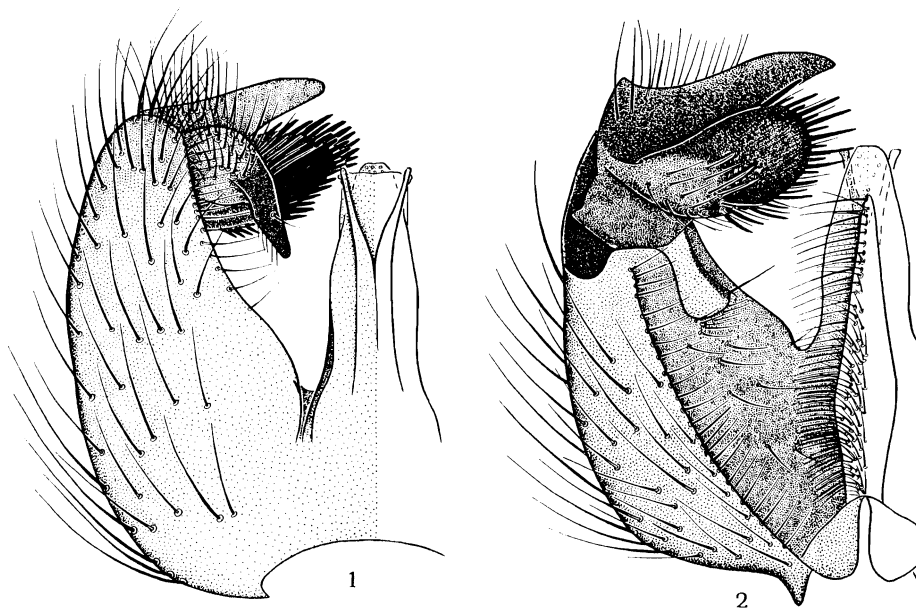
2. *Ditomyia klimovae* sp. n.

Material examined: Holotype: ♂, Russia: Primorskiy kray, Anisimovka, Sukhodol river, 50 km SE Artyom, 43.1° N 132.5° E, 200 m, 6.-10.VIII.1993, leg. C. KUTZSCHER (collection A.N. SEVERTZOV Institute, Moscow).

Male. Head dark brown. Clypeus short, light brown. Mouthparts brown. Palpi four segmented. Basal segment very small. Second segment swollen. Antennae dark brown with scape and pedicel yellow. Median flagellar segments about equally long and broad. Penultimate segment elongate, last segment minute, spherical. Thorax dark brown. Mesonotum with distinct yellow humeral spots. Scutellum with 8 medial bristles. Mediotergite brown with yellow lateral parts. Propleura yellow. Lateral parts of mesothorax brown. Sternopleura with light upper part. Wing length - 4.5 mm. Membrane darkend. Costa not extending beyond the tip of R_5 . R_4 straight. Legs yellow. Fore tibia about 1.6 times the length of fore basitarsus. Tibia II with 5a, 1d, 9p, tibia III with 9ad, 8d, 11pd, 8p. Abdomen dark brown. Genitalia brown. Ventral part of gonostyle with stout black spines (figs 1-2). Dorsal part of aedeagal complex bifurcate (fig. 1).

Female unknown.

Remarks. *D. klimovae* sp. n. is close to *D. carinata* ZAITZEV from which it is distinguished by the structure of the gonostyle.



Figs 1-2 Male genitalia of *Ditomyia klimovae* sp. n. (1 dorsal, 2 ventral).

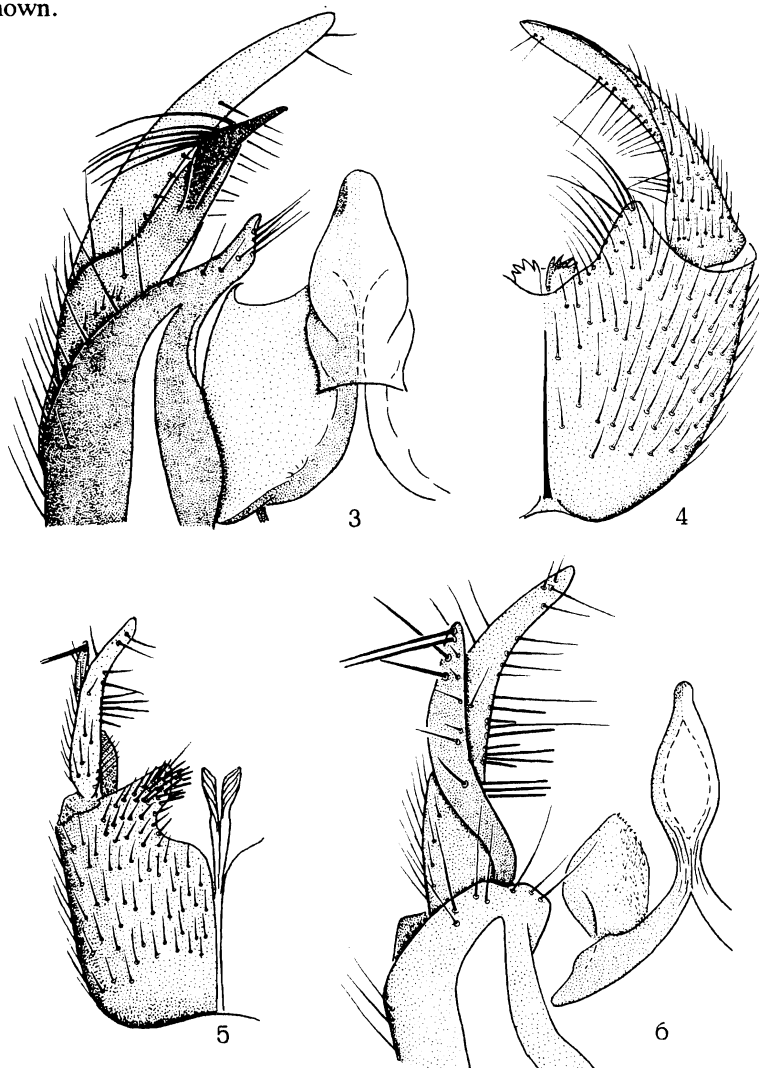
Family Keroplatidae

3. *Orfelia subnigricornis* sp. n.

Material examined: Holotype ♂, Russia: Primorskiy kray, Krounovka, Medveditsa river, 40 km SW Ussuriysk, 43.3° N 131.15° E, 250 m, 2.-6.VIII.1993, leg. C. KUTZSCHER (collection A.N. SEVERTZOV Institute, Moscow).

Male. Head yellow. Vertex dark brown. Clypeus and mouthparts yellow. Palpal segments elongate with dark bristles. Antennae light brown with scape and pedicel yellow. Median flagellar segments 1.4 times as broad as long. Thorax yellow. Mesonotum shining with short dark bristles. Scutellum with row of short medial bristles. Wing length - 3.8 mm. Membrane with dark apical part. Costa extending beyond the tip of R_5 . R_4 short. Distance from R_1 to R_4 about 3 times the length of R_4 . Halteres yellow. Legs yellow. Fore basitarsus about 1.2 the times length of fore tibia. Tibia II with 1a, 1pd, 8p, tibia III with 1a, 1ad, 3d, 8p. Abdomen brown, with dense dark bristles. Tergites V and VI dark brown. Genitalia (figs 3-4) light brown. Aedeagus pear-shaped. Dorsal process of gonocoxite with several bristles near the tip. Dorsal part of gonostyle with group of long dark bristles.

Female unknown.



Figs 3-6 Male genitalia: *Orfelia subnigricornis* sp. n. (3 dorsal, 4 ventral); *Orfelia ussuriensis* sp. n. (5 ventral, 6 dorsal).

Remarks. *O. subnigricornis* sp. n. is close to *O. nigricornis* (FABRICIUS) and *O. krivosheinae* ZAITZEV, from which it is distinguished by the form of the aedeagus, the gonostyle and the process of gonocoxite.

4. *Orfelia ussuriensis* sp. n.

Material examined: Holotype - ♂, Russia: Primorskiy kray, Krounovka, Medveditsa river, 40 km SW Ussuriysk, 43.3° N 131.15° E, 250 m, 2.-6.VIII.1993, leg. C. KUTZSCHER (collection A.N. SEVERTZOV Institute, Moscow).

Male. Head yellow. Vertex dark brown. Clypeus and mouthparts yellow. Palpal segments elongate. Antennae brown with scape and pedicel yellow. Median flagellar segments 1.4 times as broad as long. Thorax yellow. Mesonotum shining with short dark bristles. Wing length - 3.5 mm. Apical part of wing faintly clouded. Costa extending 1/3 the distance from R_5 to M_1 . R_4 short. Distance from R_1 to R_4 about 6 times the length of R_4 . Halteres yellow. Legs yellow. Fore basitarsus slightly longer than fore tibia. Tibia II with 6a, 4d, 4pd, 8p, tibia III with 7ad, 5p. Abdomen light brown with dark bristles. Tergites V and VI dark brown. Genitalia light brown. Aedeagus elongated (fig. 6). Apical parts of gonocoxites in ventral view with dark spines (fig.5).
Female unknown.

Remarks. *O. ussuriensis* sp. n. is close to *O. discoloria* (MEIGEN) and *O. amurensis* ZAITZEV, from which it is distinguished by the form of the aedeagus and by the structure of the gonostyle.

5. *Neoplatyura cornuta* sp. n.

Material examined: Holotype - ♂, Russia: Primorskiy kray, Krounovka, Medveditsa river, 40 km SW Ussuriysk, 43.3° N 131.15° E, 250 m, 2.-6.VIII.1993, leg. C. KUTZSCHER (collection A.N. SEVERTZOV Institute, Moscow).

Male. Head yellow. Vertex dark brown. Clypeus and mouthparts yellow. Palpal segments elongate. Antennae light brown. Median flagellar segments 1.1 times as long as broad. Thorax yellow. Mesonotum shining with 3 rows of dark bristles. Wing length - 3.5 mm. Membrane transparent, without dark spots. Costa extending half the distance from R_5 to M_1 . The distance from R_1 to R_4 about 1.5 times the length of R_4 . Halteres yellow. Legs yellow. Fore tibia slightly longer than fore basitarsus. Tibia II with 3a, 1ad, 7d, 5v, 1v, tibia III with 17a, 2ad, 7d, 6pd, 16p, 2v. Abdomen brown with dark bristles. Genitalia brown. Cerci elongate (fig. 7). Apex of ventral part of gonostyle pointed (fig. 10).

Female unknown.

Remarks. *N. cornuta* sp. n. is close to *N. flava* (MACQUART), from which it is distinguished by the colour of the abdomen and by the structure of the genitalia.

6. *Urytalpa attenuata* sp. n.

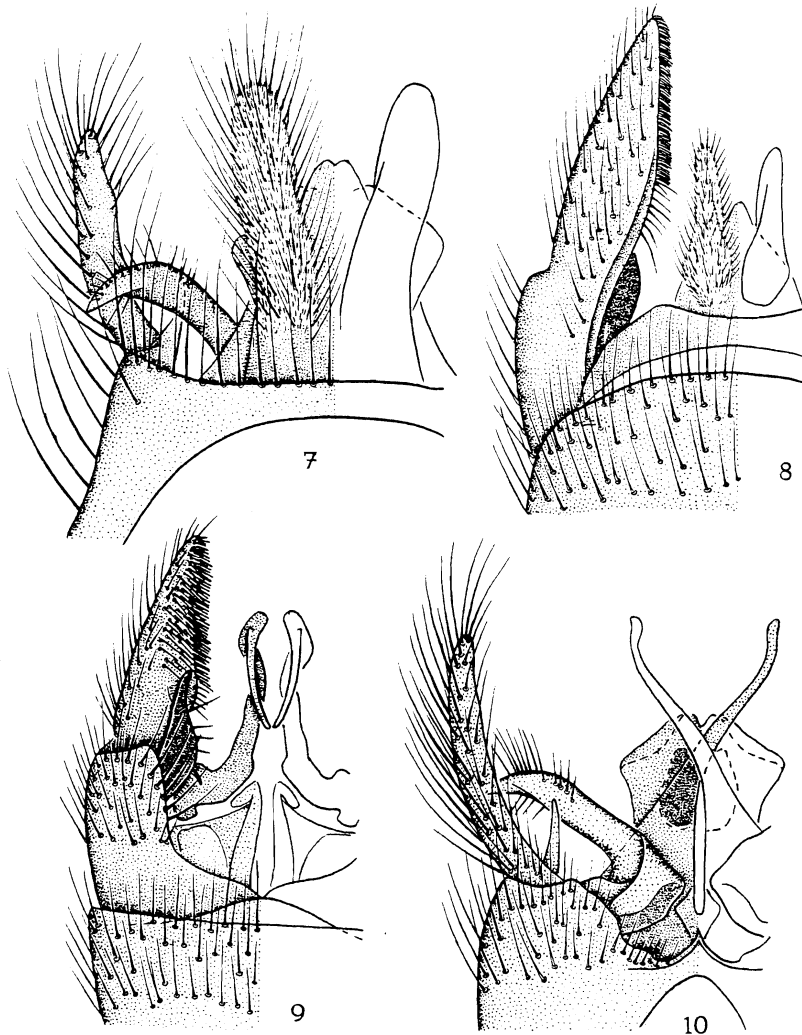
Material examined: Holotype - ♂, Russia: Primorskiy kray, Anisimovka, Sukhodol river, 50 km SE Artyom, 43.1° N 132.5° E, 200 m, 6.-10.VIII.1993, leg. C. KUTZSCHER (collection A.N. SEVERTZOV Institute, Moscow).

Male. Head brown, vertex dark brown. Clypeus and mouthparts yellow. Palpal segments elongate. Antennae brown with pedicel and basal part of first flagellar segment yellow. Median

flagellar segments 2 times as long as broad. Last flagellar segment small, spherical. Thorax yellowish brown. Mesonotum yellow with a dark median stripe. Scutellum brown. Mediotergite and lateral sclerites of thorax yellow with brownish spots. Wing length - 4.6 mm. Membrane transparent. Costa extends one third of the distance from R_5 to M_1 . The length of R_4 and the distance from R_1 to R_4 are subequal. Legs yellow with dark bristles. Fore tibia about 1.3 times the length of fore basitarsus. Tibia II with 11a, 1ad, 6d, 7pd, 7v. Abdomen light brown. Tergites I and II with yellow lateral parts. Genitalia light brown. Cerci elongate, narrow (fig. 8). Medial part of gonostyle pointed (fig. 9).

Female unknown.

Remarks. *U. attenuata* sp. n. is close to *U. articeps* (EDWARDS), from which it is distinguished by the structure of the genitalia.



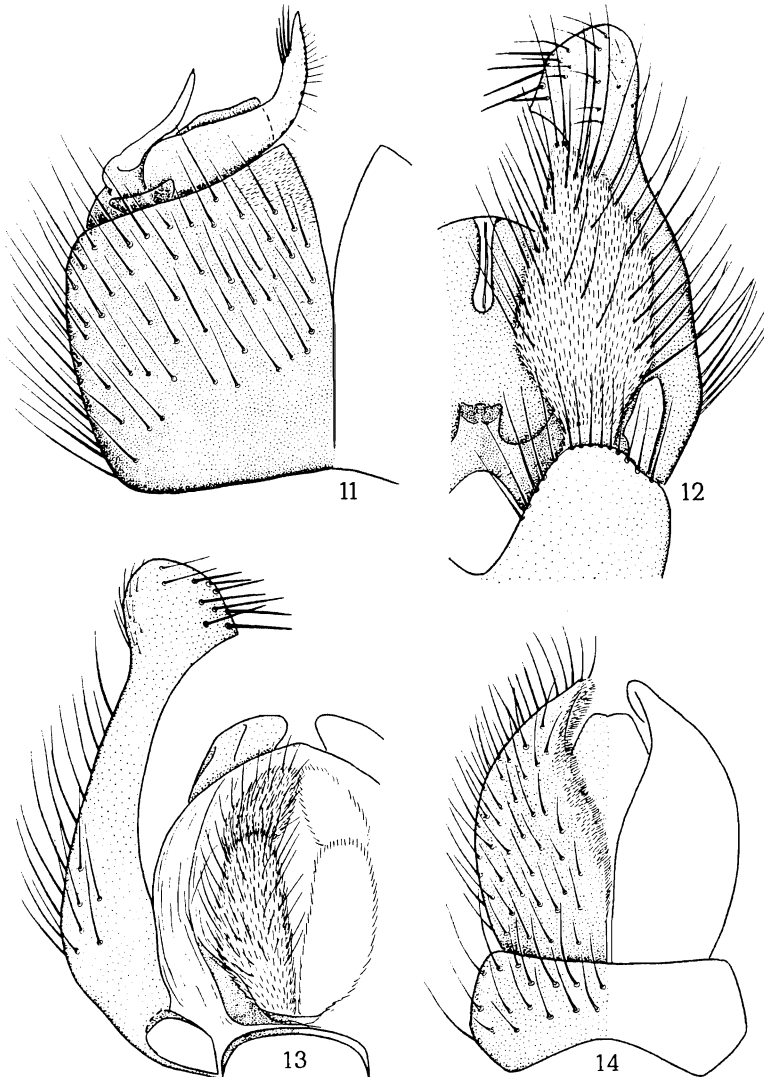
Figs 7-10 Male genitalia: *Urytalpa attenuata* sp. n. (8 dorsal, 9 ventral); *Neoplatoryra cornuta* sp. n. (7 dorsal, 10 ventral).

Family Mycetophilidae

7. *Neoempheria aperta* sp. n.

Material examined: Holotype - ♂, Russia: Primorskiy kray, Krounovka, Medveditsa river, 40 km SW Ussuriysk, 43.3° N 131.15° E, 250 m, 2.-6.VIII.1993, leg. C. KUTZSCHER (collection A.N. SEVERTZOV Institute, Moscow).

Male. Head brown. Clypeus light brown. Palpi dark brown. Antennae bicolourous. Five basal segments yellow, apical segments light brown. Median flagellar segments 2 times as long as broad. Thorax bicolourous. Mesonotum, scutellum, mediotergite and pleurotergites dark brown.



Figs 11-14 Male genitalia: *Trichonta subterminalis* sp. n. (11 ventral, 14 tergite IX); *Neoempheria aperta* sp. n. (12 ventral, 13 dorsal).

Lateral sclerites of thorax yellow. Scutellum with two long medial bristles. Wing length - 2.8 mm. Membrane with two dark bands. Costa extends one third of distance from R_5 to M_1 . Sc_2 above Rs . Small cell of wing 1.8 times as long as broad. Base of posterior fork before base of stem of median fork. Halteres yellow. Legs yellow. Fore tibia equal in length to fore basitarsus. Tibia II with 5a, 3d, 5p, tibia III with 8a, 5d, 2p. Abdomen dark brown. Tergites I and IV yellow, the latter with triangular dark spot. Genitalia (figs 12-13).

Female unknown.

Remarks. *N. aperta* sp. n. is close to *N. pictipennis* HALIDAY, from which it is distinguished by the structure of the genitalia.

8. *Monoclona rufilatera* (WALKER, 1837)

[Ent. Mag., 4: 115 (Sciophila)]

[= halterata STAEGER, 1840 - Naturh. Tidsskr., 3: 275 (Sciophila)]

[= unicornuta DZIEDZICKI, 1884 - Pam. fizyogr., 4: 318 (Staegeria)]

[= atrata STROBL, 1898 - Glasn. zemalj. Mus. Bosni Herceg., 10: 597]

[= elegantula JOHANNSEN, 1910 - Bull. Maine Agr. Exp. Station, 180: 128]

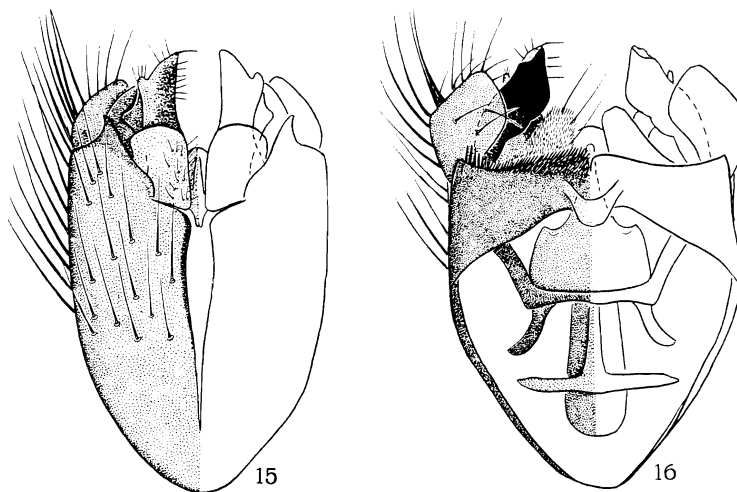
[= aristata OSTROVERCHOVA, 1979 - Fungus Gnats of Siberia: 91]

Material examined: 1 ♂, Russia: Promorskiy kray, Anisimovka, Sukhodol river, 50 km SE Artyom, 43.1° N 132.5° E, 6.-10.VIII.1993, leg. C. KUTZSCHER (collection DEI Eberswalde).
Distribution: Holarctic.

9. *Megophthalmidia takagii* SASAKAWA, 1964

[Akitu, 12 (1): 1]

Material examined: ♂, Russia: Primorskiy kray, Krounovka, Medveditsa river, 40 km SW Ussuriysk, 43.3° N 131.15° E, 250 m, 2.-6.VIII.1993, leg. C. KUTZSCHER (collection DEI Eberswalde).



Figs 15-16 Male genitalia of *Megophthalmidia takagii* SASAKAWA (15 ventral, 16 dorsal).

SASAKAWA (1964) described this species from a single specimen, which had been collected in Hokkaido (Japan). *M. takagii* SASAKAWA is distinguished from other palaeartic species of the genus *Megophthalmidia* DZIEDZICKI by the coloration, by the position of the basis of the Cu-fork and by the structure of the genitalia (figs 15-16).

10. *Trichonta subterminalis* sp. n.

Material examined: Holotype - ♂, Russia: Primorskiy kray, Anisimovka, Sukhodol river, 50 km SE Artyom, 43.1° N 132.5° E, 200 m, 6.-10.VIII.1993, leg. C. KUTZSCHER (collection A.N. SEVERTZOV Institute, Moscow).

Male. Head dark brown. Clypeus and mouthparts yellow. Antennae brown. Median flagellar segments 2 times as long as broad. Thorax dark brown. Scutellum with 4 long medial bristles. Pleurotergite with bristles. Propleura with 3 bristles. Wing length - 2.9 mm. Membrane transparent. rm as long as stem of M-fork. Legs yellow. Tibia II with 5a, 4d, 10pd, 8p. Abdomen dark brown. Genitalia (fig. 11, 14) light brown.

Female unknown.

Remarks. *T. subterminalis* sp. n. is close to *T. terminalis* (WALKER) and *T. facilis* GAGNÉ, from which it is distinguished by the structure of the gonostyle and the cerci.

11. *Cordyla sixi* (BARENDRECHT, 1938)

[Tijdschr. Ent., 81: 49 (Polyxena)]

Material examined: 2 ♂♂, Russia: Primorskiy kray, Krounovka, Medveditsa river, 40 km SW Ussuriysk, 43.3° N 131.15° E, 250 m, 2.-6.VIII.1993, leg. C. KUTZSCHER (collection DEI Eberswalde).

Distribution: Europe, Mongolia, Russian Far East.

References

SASAKAWA, M. 1964: Japanese Mycetophilidae V. Descriptions of three new species. - Akitu: Transactions of the Kyoto Entomological Society, 12(1): 1-4.

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