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NEW TAXA OF GALL MIDGES FROM THE TRIBES QUADRIDIPOSINI AND HETEROSTYLIDIPOSINI (DIPTERA, CECIDOMYIIDAE) FROM THE RUSSIAN FAR EAST

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Three new subtribes of the tribe Quadridiplosini (Marikovskidiplosina Fedotova, **subtr. n.**, Mamaeviina Fedotova, **subtr. n.**, and Undadiplosina Fedotova, **subtr. n.**) and two new subtribes of the tribe Heterostylidiplosini (Magadiplosina Fedotova, **subtr. n.**, Ruidadiplosina Fedotova, **subtr. n.**) are described. Five new genera and five new species: *Quadridiplosis astrica* Fedotova et Sidorenko, **sp. n.**, *Marikovskidiplosis bullata* Fedotova et Sidorenko, **gen. et sp. n.**, *Laxadiplosis latebra* Fedotova et Sidorenko, **gen. et sp. n.**, *Sharmadiplosis* Fedotova et Sidorenko, **gen. n.** (type species *Odontodiplosis orientalis* Sharma et Rao), *Magadiplosis mera* Fedotova et Sidorenko, **gen. et sp. n.**, and *Ruidadiplosis fluida* Fedotova et Sidorenko, **gen. et sp. n.** are described. New combination - *Sharmadiplosis orientalis* (Sharma et Rao), **comb. n.** is proposed. Keys to the subtribes, genera and species of Quadridiplosini and Heterostylidiplosini from Russian Far East are given.

KEY WORDS: Diptera, Cecidomyiidae, new taxa, Russian Far East.

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Описаны три новых подтрибы трибы Quadridiplosini (*Marikovskidiplosina* Fedotova, **subtr. n.**, *Mamaeviina* Fedotova, **subtr. n.**, и *Undadiplosina* Fedotova, **subtr. n.**) и две новых подтрибы трибы Heterostylidiplosini (*Magadiplosina* Fedotova, **subtr. n.** и *Ruidadiplosina* Fedotova, **subtr. n.**). Описываются как новые для науки 5 родов и 5 видов: *Quadridiplosis astrica* Fedotova et Sidorenko, **sp. n.**, *Marikovskidiplosis bullata* Fedotova et Sidorenko, **gen. et sp. n.**, *Laxadiplosis latebra* Fedotova et Sidorenko, **gen. et sp. n.**, *Sharmadiplosis* Fedotova et Sidorenko, **gen. n.** (типовой вид *Odontodiplosis orientalis* Sharma et Rao), *Magadiplosis mera* Fedotova et Sidorenko, **gen. et sp. n.** и *Ruidadiplosis fluida* Fedotova et Sidorenko, **gen. et sp. n.** Предложена новая комбинация для *Sharmadiplosis orientalis* (Sharma et Rao), **comb. n.** Приводятся определительные таблицы подтриб, родов и видов Quadridiplosini и Heterostylidiplosini Дальнего Востока России.

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INTRODUCTION

Up to now the widely distributed tribe Coquillettomyiini Mamaev, 1968 included 7 genera (Skuhravá, 1997). Recently some new genera related to the genera *Karshomyia* Felt, 1908 and *Coquillettomyia* Felt, 1908 from Russian Far East were described (Fedotova, 2003a; Fedotova, Sidorenko, 2004a, 2005). Later two tribes Quadridiplosini Fedotova, and Heterostylidiplosini Fedotova, were described based on some known species of *Karshomyia* and new species (Fedotova, 2003a, 2004, Fedotova, Sidorenko, 2004b). Seven tribes – Coquillettomyiini, Quadridiplosini, Heterostylidiplosini and recently described Karshomyiini (incorrect spelling Karshomyini - Fedotova & Sidorenko, 2009), Tollereadastrini, Filidiplosini and Gigantodiplosini have been included in Coquillettomyiidi and its status was elevated to supertribe rank (Fedotova, Sidorenko, 2009).

In this paper three new subtribes, three new genera, and four new species of tribe Quadridiplosini and two new subtribes, two new genera and two new species of tribe Heterostylidiplosini are described.

Tribe Quadridiplosini includes four subtribes: *Quagridiplosina* (genera *Quadridiplosis* Fedotova, 2003, and *Sharmadiplosis* gen. n.), *Undadiplosina* subtr. n. (*Opinatodiplosis* Fedotova, 2004, *Undadiplosis* Fedotova, 2004, *Laxadiplosis* gen. n.), *Marikovskidiplosina* subtr. n. (*Marikovskidiplosis* gen. n., *Ogdodiplosis* Fedotova, 2004), and *Mamaeviina* subtr. n. (*Mamaevia* Skuhravá, 1967).

Tribe Heterostylidiplosini includes three subtribes: *Heterostylidiplosina*, *Magadiplosina* subtr. n., and *Ruidadiplosina* subtr. n.

Tribes Quadridiplosini and Heterostylidiplosini differ from other tribes of supertribe Coquillettomyiidi by presence of sclerotized free parameres, sometimes functional (Heterostylidiplosini) or parameres paired and shorter, by transversal genitalia, by long, almost straight gonostylus, and by excavated cerci and hypoproct (Quadridiplosii). Both tribes characterized by presence of elongated free aedeagus, by absence of unpaired sclerotized plate with fused parameres and aedeagus (Coquillettomyiini).

The gall midges were collected in 2005-2007 in Lazovskii Reserve (Primorskii krai, Russia). Holotypes and some paratypes of the new species are deposited in the Zoological Institute of Russian Academy of Sciences, St.-Petersburg, Russia, other paratypes – in the collection of Samara Academy of Agriculture, Ust-Kinelskii, Samarskaya oblast, Russia and Institute of Biology and Soil Science, Far Eastern Branch of the Russian Academy of Sciences, Vladivostok, Russia. The abbreviations used in the descriptions and figure legends are as follows: F1, F2, ...F12 – length of flagellomeres 1, 2, ...12; MT – Malaise trap.

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Tribe Quadridiplosini Fedotova, 2003

Quadridiplosini Fedotova, 2003a: 65; 2004: 612.

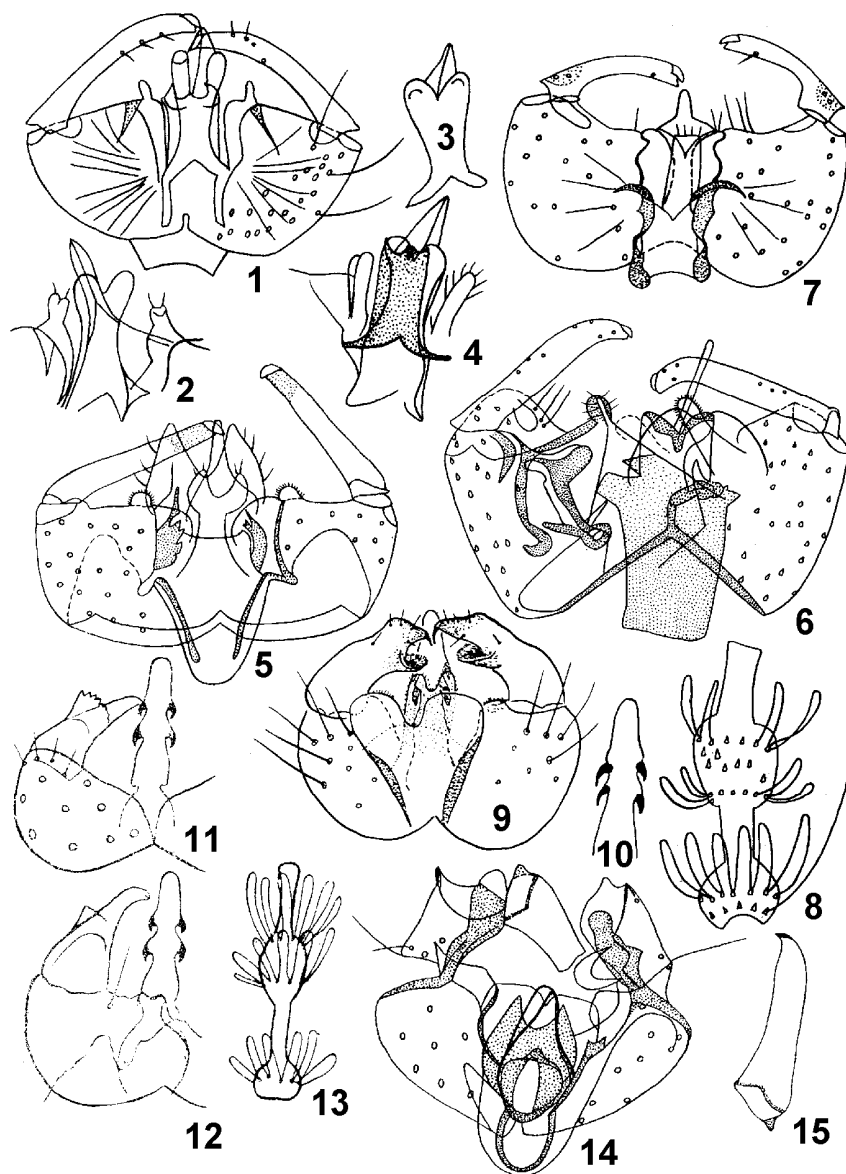
DIAGNOSIS. Male flagellomeres with two nodes, distal node of middle flagellomere elongated with narrowing (*Quadridiplosis*, *Undadiplosis*, *Laxadiplosis*) (Figs 19, 20, 51, 58) or almost rounded, without narrowing (*Opinatodiplosis*, *Mamaevia*, *Marikovskidiplosis*) (Figs 8, 13, 24, 25). Flagellomeres with three whorls of the loops sensorial filae and two whorls of setae. Basal whorl of sensorial filae with more long loops than mid and apical ones or all whorls with short loops (*Marikovskidiplosis*). Female flagellomeres with basal outgrowth and long neck (Figs 24, 26). Male and female F12 with swollen apical projection (Figs 21, 25, 27). Palpi 4-segmented. Tarsal claw simple or dentated (Figs 17, 18, 36, 60). Abdominal tergites and sternites whole, tergites with wide or small lacunes. Gonocoxites transverse, almost square-formed quadrate, apical margin straight (Figs 1, 5-7, 16). Gonostylus different forms, often thin and long (*Quadridiplosis*), short (*Opinatodiplosis*) or swollen with specific additional structure in view of swollen (*Marikovskidiplosis*, Fig. 33) or membraneous appendage (*Mamaevia*, Figs 11, 12). Female flagellomeres long, especially 1st, with long neck. Aedeagal complex longer than gonocoxites. Cerci and hypoproct excavated or hypoproct concaved. Aedeagus swollen basally or medially, attenuated apically. Base of genitalia strongly sclerotized in view of quadrate, often with more sclerotized roots of genitalia (*Opinatodiplosis*) of stripes (*Quadridiplosis*). Ovipositor short, but telescopic, with pair of large apical lobes and pair of ventral plates (Figs 29, 30).

GENERA INCLUDED. Tribe includes 8 genera: *Quadridiplosis* Fedotova, 2003 (4 species); *Opinatodiplosis* Fedotova, 2004 (1 species), *Undadiplosis* Fedotova, 2004 (1 species), *Laxadiplosis* Fedotova et Sidorenko, gen. n. (1 species),

Sharmadiplosis Fedotova et Sidorenko, gen. n. (1 species), *Marikovskidiplosis* Fedotova et Sidorenko, gen. n. (1 species), *Ogdodiplosis* Fedotova, 2004 (1 species), *Mamaevia* Skuhrová, 1967 (2 species).

Key to the subtribes, genera and species of tribe Quadridiplosini (males)

1. Gonocoxites with large apical triangular lobe (Fig. 33) and completely covered by membranous structures or gonocoxites consist of two parts (Fig. 14). Aedeagus much shorter than gonocoxites. Genitalia without parameres (**Marikovskidiplosina** subtr. n.) 2
 - Gonocoxites almost straightly truncated apically (Figs 1, 5, 7, 16) or slightly narrowed near apex (Figs 6, 11, 52, 54, 55). Aedeagus much longer than gonocoxites 3
2. Gonocoxites with large apical triangular lobe (Fig. 33) and completely covered by membranous structures. Gonostylus very wide. F1 and F2 without proximal neck, with constriction between neck (Fig. 34). Distal node F5 strongly swollen, without constriction (Fig. 35) *Marikovskidiplosis* gen. n. (*M. bullata* Fedotova et Sidorenko sp. n.)
 - Gonocoxites consist of two parts (Fig. 14): basal part triangular, apical one quadrate. Both parts of gonocoxites connected by strongly sclerotized stripe. Gonostylus almost straight, slightly swollen basally. F1 and F2 with long proximal neck. Distal node F5 strongly constricted medially *Ogdodiplosis* Fedotova (*O. utkini* Fedotova, 2004)
3. Aedeagus with pair of lateral denticles on both side (Figs 9-12). Gonostylus strongly swollen basally (Figs 9, 11, 12), with membranous collaret near mid (Figs 11, 12) or with lobe (Fig. 9). Gonocoxites transverse (Figs 11, 12) or almost rounded (Fig. 9), without apically-medial projection. Parameres absent. (**Mamaeviina** subtr. n., *Mamaevia* Skuhrová) 4
 - Aedeagus without lateral denticles. Gonostylus thin, long and straight, not swollen basally (Figs 1, 5, 6, 12, 16, 55) or short and thin (Figs 7, 52). Gonocoxites whole, quadrate or swollen (Figs 1, 7, 11), with apico-medial projections. Parameres developed 5
4. Gonostylus with ventral lobe, hypoproct emarginated, wider than aedeagus (Fig. 9) *M. vysineki* Skuhrová, 1967
 - Gonostylus with membranouse ring near middle, slightly excavated, narrower than aedeagus (Fig. 12). Body length 1.8 mm *M. hamifera* (Marikovskij, 1960)
5. Gonostylus thin, long and straight, not swollen basally (Figs 1, 5, 6, 16). Aedeagus strongly swollen before apex or triangular (Figs 3, 5, 16). Hypoproct wide and strongly excavated. Gonocoxites straightly truncated apically (Figs 1, 5, 16) or gonocoxites narrowed near apex (Figs 6, 54), with sclerotized parameres. (**Quadridiplosina**) 8
 - Gonostylus short (Figs 7, 52), long (Fig. 55), thin or swollen (Fig. 54) and curved ventrally. Aedeagus thin and straight (Fig. 7) or slightly swollen on apex (Figs 52, 55). Hypoproct narrow, rounded apically (Fig. 52), truncated (Fig. 7) or bilobed (Fig. 55). (**Undadiplosina** subtr. n.) 6

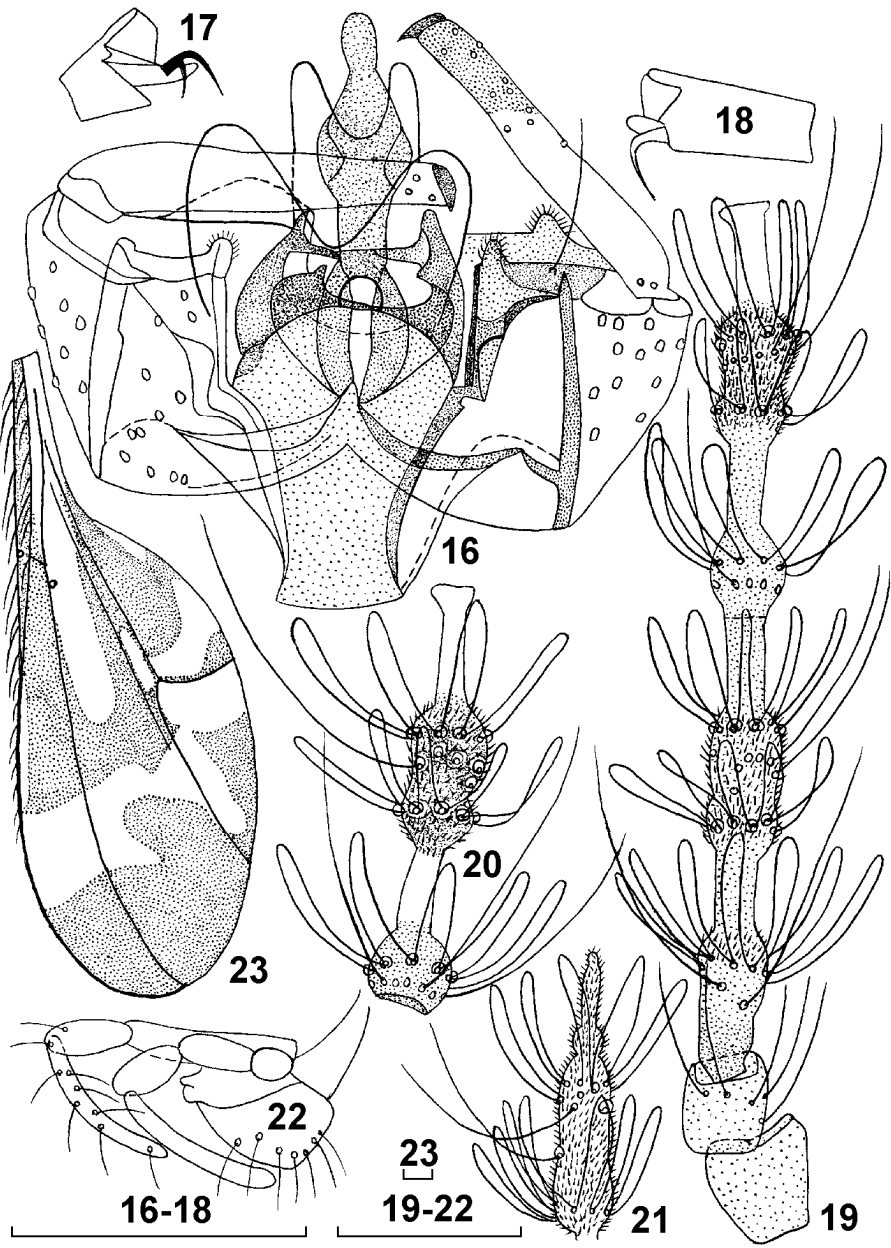


Figs 1-15. *Quadridiplosis sidorenkoi* Fedotova (1-4); *Q. lucis* Fedotova (5); *Q. flexus* Fedotova (6); *Opinatodiplosis turriiformis* Fedotova (7, 8); *Mamaevia vysineki* Skuhrová (9, 10); *M. hamifera* Marikovskij (11-13); *Ogdodiplosis utkini* Fedotova (14, 15): 1, 5-7, 9, 11-12, 14 – genitalia (1, 5-7, 9, 12, – dorsally; 11 – ventrally); 2-4 – cerci, hypoproct, aedeagus, apico-medial projections of gonocoxites; 8 – F5; 10 – aedeagus; 13 – F6; 15 – gonostylus (after Marikovskij, 1960; Skuhrová, 1967; Fedotova, 2003a,b; Fedotova, Sidorenko, 2004a).

6. Aedeagus slightly swollen before apex (Fig. 7). Gonostylus short, without ventral setae. Gonocoxites without apico-medial projections and medial swelling. F5 with spherical distal node. Genital rod undeveloped. Body length 1.95 mm, wing length 1.42 mm (Fig. 8) *Opinatodiplosis* Fedotova (*O. turriiformis* Fedotova, 2004)
- Aedeagus thin, transparent, swollen apically (Figs 52, 55). Gonostylus very long (Fig. 55) or short with ventral setose thin plate (Fig. 52). Gonocoxites with apico-medial projections fused basally (Fig. 52) or completely (Fig. 55) in triangular sclerotized plate. F5 with elongated distal node, narrowed medially (Figs 51, 56-58). Genital rod developed 7
7. Aedeagus straight and swollen apically (Fig. 52). Gonostylus short, ventrally with thin stripe, covered by setae. Gonocoxites with apico-medial projections and medial sclerotized swellings, fused only basally in triangular sclerotized plate. Genital rod very short. Body length 1.68 mm, wing length 2.45 mm *Undadiplosis* Fedotova (*U. tomentosa* Fedotova, 2004)
- Aedeagus curved, apically with paddle-shaped structures (Figs 55). Gonostylus very long, without ventral thin stripe. Gonocoxites with apico-medial projections and medial sclerotized swellings, that fused completely in triangular sclerotized plate. Genital rod very long, spiniform. Body length 2.44 mm, wing length 3.15 mm *Laxadiplosis* gen. n. (*L. latebra* sp. n.)
8. Gonostylus thin, long and straight (Figs 1, 5, 6, 16). Aedeagus strongly swollen before apex or triangular (Figs 3, 5, 7, 16). Hypoproct wide and strongly excavated. Gonocoxites straightly truncated apically (Figs 1, 5, 16) or narrowed near apex (Figs 6, 7, 54), with sclerotized parameres *Quadridiplosis* Fedotova (4 species)
- Gonostylus swollen basally and narrowed apically. Aedeagus triangular, sclerotized apically. Hypoproct short and excavated. Gonocoxites narrowed subapically (Fig. 54). Body length 0.95 mm, wing length 1.1 mm *Sharmadiplosis* gen. n. (*Sh. orientalis* (Sharma et Rao, 1979), comb. n.)

Subtribe Quadridiplosina Fedotova, 2003

DIAGNOSIS. Gonocoxites almost straightly truncated apically (Figs 1, 7, 5, 16, 55) or slightly narrowed near apex (Figs 6, 11, 52, 54). Gonocoxites whole, quadrate (Figs 1, 7, 11, 16) or swollen (Figs 11, 12, 52, 54, 55), with apico-medial projections, basal lobes (Figs 52, 54, 55) and sclerotized (Figs 5, 16, 54) or non sclerotized parameres (Figs 2, 4, 6, 52). Sometimes parameres undeveloped (Figs 7, 11, 12, 14, 33). Gonostylus thin, long and straight (Figs 1, 5, 6, 15, 16, 55), swollen basally (Figs 9, 12, 54) or short and thin, curved ventrally (Figs 7, 52). Aedeagus much longer than gonocoxites (Figs 1, 4-7, 16, 52, 55), or shorter (Figs 14, 33), with lateral denticles (Figs 9, 10, 11, 12) or without ones, strongly swollen before apex (Fig. 16) or triangular (Figs 3, 5, 7 and *Sharmadiplosis*), rarely thin (Fig. 6) or swollen (Fig. 52) and angularly-lobed (Fig. 55) apically. Hypoproct wide and strongly excavated (Figs 5, 9, 14, 16, 33, 55), narrow, with groove apically (Figs 12, 54), rounded (Fig. 52) or truncated (Fig. 7).



Figs 16-23. *Quadridiplosis astrica* sp. n., male: 16 – genitalia; 17 – hind tarsal claw; 18 – fore tarsal claw; 19 – scape, pedicel, F1 and F2; 20 – F5; 21 – F12; 22 – mouth parts; 23 – wing. Scale line – 0.1 mm.

RELATIONSHIPS. Tribe Quadridiplosini differs from the Coquillettomyiini s. str. by developed aedeagus (not fused with aedeagal sclerotized plate), by separated parameres, by strongly swollen or quadrate gonocoxites, by presence of basal, medial and apico-medial projections of gonocoxites.

Genus *Quadridiplosis* Fedotova, 2003

Quadridiplosis Fedotova, 2003b: 65. Type species: *Karschomyia sidorenkoi* Fedotova, 2003, by original designation.

DIAGNOSIS. Gonostylus much longer than length and width of gonocoxites (Figs 1, 5, 6, 16); straight or slightly recurved before apex, not enlarged basally. Cerci with rounded or pointed lobes and deep triangular excision. Hypoproct sclerotized, excavated, parallel-sided or wide rounded laterally. Aedeagus swollen and narrowed before apex, enlarged basally and (or) medially, rarely thin and parallel-sided (Fig. 6). Medio-apical projections of gonocoxites clearly longer than apical margin. Inner side of gonocoxites with sclerotized parameres and sclerotized stripes reached to genital roots of gonocoxites. Plate with genital roots sclerotized.

SPECIES INCLUDED. *Q. sidorenkoi* (Fedotova, 2003), *Q. flexus* Fedotova, 2003, *Q. lucis* Fedotova, 2003 and *Q. astrica* sp. n.

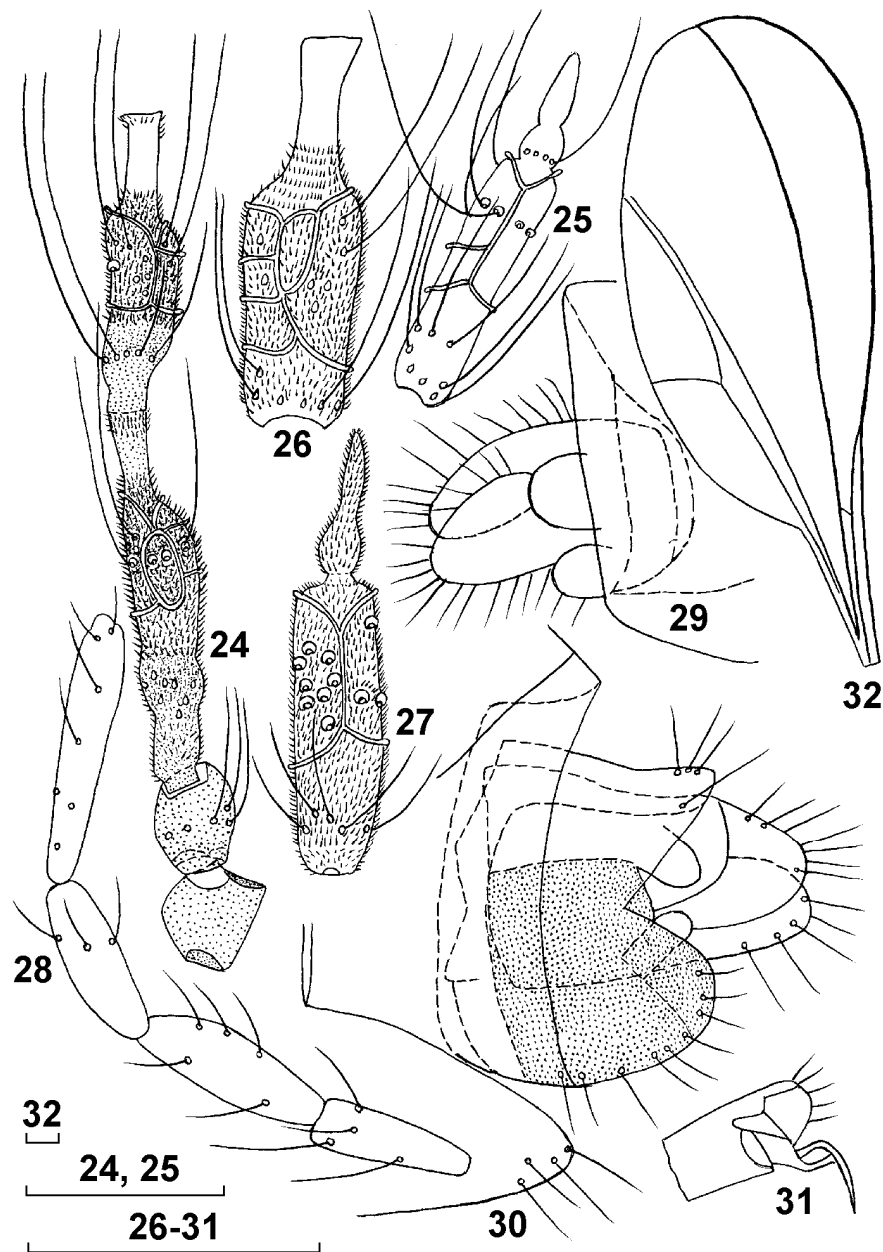
BIOLOGY. *Q. sidorenkoi* was reared from flower galls on *Cirsium schantarense* (Fedotova, 2003a).

Quadridiplosis astrica Fedotova et Sidorenko, sp. n.

Figs 16-32

MATERIAL. Holotype – ♂ (slide 419/8123/1): Russia, Primorskii krai, Lazovskii Reserve, Koreiskaya pad', MT, river shore, 8-9.VII 2007 (V. Sidorenko). Paratype – 1 ♀ (slide 419/8115/2): Lazovskii Reserve, Proselochnaya Bay, sea' shore, MT, 15-16. VII. 2006 (V. Sidorenko); 1 ♀ (slide 419/8125/3): Proselochnaya Bay, MT, swamp, 5-6.VII 2007 (V. Sidorenko).

DESCRIPTION. MALE. Body dark, thin, length 1.85-2.18 mm, wing length 2.33-2.7 mm, wing width 0.98-1.13 mm. Eyes very large, occupy nearly whole head capsula. Neck very long, with sclerotized stripes along sclerotized bars. Notum pale-brown. Sternopleura and mesopleura strongly sclerotized. Scape and pedicel lighter than F1 and F2, distal node of all flagellomeres darker than other part of flagellomere, scape and pedicel. Nodes of flagellomeres dark, necks almost white, basal node not covered by microtrichiae, distal nodes covered by black microtrichia. Setae of flagellomeres black. Wing with pattern; tarsi with black bands. Scape elongated, pedicel almost parallel-sided, 1.1 times shorter than scape. F1 6.3 times as long as wide, distal neck 1.9 times shorter than distal node. Distal node of F1 as long as elongated proximal one and 1.1 times longer than proximal neck. F2 with white distal stem, rest part of flagellomeres dark, 1.1 times shorter than F1, distal nodes both flagellomeres with narrowings. Mid flagellomeres with strongly



Figs 24-32. *Quadridiplosis astrica* sp. n., female: 24 – scape, pedicel, F1 and F2; 25 – F5; 26 – F5; 27 – F12; 28 – palpi; 29 – ovipositor laterally; 30 – the same ventrally; 31 – tarsal claw; 32 – wing. Scale line – 0.1 mm.

narrowed distal node, proximal and distal necks white and nodes – dark. F5 3.3 times as long as wide, distal neck 1.2 times shorter than distal node; distal node 1.7 times as long as proximal node and proximal neck. F12 with elongated apical projection. Loops of sensorial filae in middle whorl shorter than basal and distal ones. Palpi shorter than diameter of head, very dark, 4-segmented, its ratio 1:1.9:2.2:4.4, last segment

thin, almost parallel-sided, with rounded apex. Tarsal claw dark. Fore and mid tarsal claw simple, strongly curved basally and near end, empodium as long as claw. Hind tarsal claw dentated. Wing with dark pattern and white spots and stripes, 2.8 times as long as wide, slightly enlarged medially, R_{1+2} 2.0 times shorter than wing. Fork of vein *Cu* situated on equal distance from the base of wing as point of joining R_{1+2} to *C*. Abdominal tergites and sternites whole, undissected. Apical part of gonocoxites almost straight, with very small apico-medial rounded projections on dorsal and ventral sides. Gonocoxites with large cavity along all medial side, 1.1 times as long as wide. Gonocoxites 0.8 as long as gonostylus. Medial margin of gonocoxite with sclerotized stripes, elongated in view of roots of genitalia. Other sclerotized stripes situated on dorsal side of gonocoxite. Transversal sclerotized parameres in distal part of genitalia connected with medial sclerotized stripes of gonocoxites. Gonostylus 1.3 times longer than gonocoxites, about 5.8 times as long as wide. Gonostylus dark near apex, straight, almost parallel-sided, much longer than width of gonocoxite. Cerci much wider than width of gonocoxite, rounded apically and deeply excavated. Hypoproct almost parallel-sided, bilobed with oval excision between apexes. 2.2 times narrower than cerci; unsclerotized. Aedeagus sclerotized, strongly swollen far before apex, basally with thick sclerotized projections.

FEMALE. Body length 2.18 mm, wing length 2.7 mm, wing width 1.13 mm. Scape and pedicel lighter than flagellum, slightly elongated. Flagellomeres with long neck, covered by microtrichiae near apex, basal outgrowth more darker than neck. F1 6.3 times as long as wide, neck 3.3 times shorter than basal outgrowth, covered by reticulate sensorial filae. Last flagellomeres with ring of sensorial filae connected by commissures and separate cells. F5 3.7 times as long as wide, neck 1.6 times shorter than basal outgrowth, stem basally covered by microtrichiae. F12 with elongated apical projection. Palpi 4-segmented, its ratio 1:1.2:1.1:1.7, last segment slightly dilated apically. All tarsal claw light basally and dark near apex. Fore tarsal claw with denticle, mid and hind tarsal claw simple. Wing with dark drawing as in male but pale, unclear, 2.6 times as long as wide, slightly enlarged medially, R_{1+2} 2.9 times shorter than wing. Fork of *Cu* situated on more farther distance from the base of wing as point of joining R_{1+2} to *C*. Ovipositor short, telescopic, 1.4 times as long as wide, consists of pair of dorsal and pair of ventral plates. VIII abdominal segment ventrally dark, IX and X segments light. Dorsal plates 2.1 times as long as wide. Ventral plates paired, very large.

RELATIONSHIPS. New species is similar to *Q. lucis* Fedotova, 2003 but differs from it by having wider cerci and hypoproct; by not conical aedeagus; by more large

sclerotized parameres of aedeagal complex; by sclerotized aedeagus swollen medially; by spotted wings; by less swollen and elongated gonocoxites; by short flagellomeres with long sensorial filae, especially in mid whorls; by dentated hind tarsal claw.

ETYMOLOGY. The specific name originates from a Latin *astrica* – star-shaped, pertaining to special projections on genitalia.

***Sharmadiplosis* Fedotova et Sidorenko, gen. n.**

Type species: *Odontodiplosis orientalis* Sharma et Rao, 1979, designated here.

DIAGNOSIS. Male. Body small (0.95 mm). Eyes confluent above. Palpi 4-segmented, 4th segment cylindrical, longest. Antennae longer than body, 2+12-segmented, flagellomeres binodose with long stems; enlargements with two whorls of long setae on each node, three whorls of regular circumfila, middle whorl shortest. F1 with a small basal lengthening, basal node as long as proximal neck, distal neck 0.73 as long as distal node. F5 with basal enlargement slightly less than half of the length of the segment and wider than long, basal stem as long as basal node, distal node longer than basal one, distal neck 0.85 as long as distal node; penultimate segment as long as 12th one, proximal neck slightly longer than basal node, distal node longer than basal one, distal stem longer than distal node. F12 shortest, basal node 0.22 as long as segment and wider than long, proximal neck longer than basal node, distal node as long as basal node and proximal neck combined together, with a very short and blunt apical knob. Wing hyaline, 2.54 as long as broad, vein *Rs* present, R_{1+2} united costa at the basal 0.25 of the wing, R_{4+5} curved, meeting costa well beyond the apex of wing, *Cu* forked. Legs fairly hairy, tarsal claw evenly curved, simple on all legs, empodium well developed, 0.7 the length of the claw. Genitalia dark-brown, sparsely setose. Gonocoxites cylindrical with a large obtuse basal lobe, 1.6 times as long as wide. Gonostylus slender, 2.3 times as long as wide, gradually tapering towards the tip and ending in a pointed tooth, slightly shorter than gonocoxites. Cerci bilobed, lobes triangular with a strong curved spine apically. Hypoproct (aedeagus in original description) cylindrical, broadest apically, shallowly truncate, 2.0 times as long as wide. Aedeagus (hypoproct in original description) shorter than cerci, triangular, sclerotized apically. Parameres cocks comb-like branched projections present between hypoproct (subdorsal plate) and aedeagus.

Female unknown.

SPECIES INCLUDED. Only type species, *Sharmadiplosis orientalis* comb. n. described from Maharashtra, India, (Sharma, Rao, 1979).

RELATIONSHIPS. New genus resembles *Quadridiplosis* Fedotova by pair of sclerotized parameres at the base of hypoproct, by presence of basal lobes of gonocoxites, by pointed apex of cerci, broadest apically, by excavated hypoproct and by triangular aedeagus, but differs by cylindrical (not quadrate) gonocoxites, by gonostylus gradually tapering towards the tip (not narrow parallel-sided), by absence of elongated projection on F12, by constrictions on distal nodes of middle flagellomeres and by very short vein R_{1+2} .

NOTES. Now *Odontodiplosis orientalis* replaced by Gagné, (2004) to the genus *Coquilletomyia* Felt, 1908. Anyway *O. orientalis* differs from other species of the genus by presence of paired parameres in the form of cocks comb-like branches projections, by narrow gonostylus and by not swollen gonocoxites without basal lobes, by presence of not separated dorso-laterally eyes. In our opinion it's main better to consider this species in separate genus.

ETYMOLOGY. This genus is dedicated to Indian cecidologist R.M. Sharma (University of Rajasthan, India).

Subtribe Marikovskidiplosina Fedotova, subtr. n.

DIAGNOSIS. Gonocoxites with large apical triangular lobe (Fig. 33) and completely covered by membranous structures or gonocoxites consist of two parts (Fig. 14). Aedeagus much shorter than gonocoxites, unsclerotized, almost parallel-sided, narrowed near apex. Genitalia without parameres. Middle flagellomeres with very short neck, distal node without constriction (*Marikovskidiplosis* gen. n.), loops of sensorial filae very short, not reached to next node. Loops of sensorial filae as long as in basal, medial and distal whorls. If middle flagellomeres strongly narrowed (*Ogdodiplosis*), loops of sensorial filae reached to next node. Vein R_{4+5} straight, joining with *C* not far from the wing apex. Vein *Cup* situated far from vein *Cu*.

GENERA INCLUDED. *Marikovskidiplosis* gen. n. and *Ogdodiplosis* Fedotova 2004.

***Marikovskidiplosis* Fedotova et Sidorenko, gen. n.**

Type species: *Marikovskidiplosis bullata* Fedotova et Sidorenko, sp. n., designated here.

DIAGNOSIS. Body very dark, thorax completely dark, without stripes on the notum. Face dark. Eyes very large, occupied nearly entire head capsule. Head with occipital process. Male flagellomeres with two nodes: strongly swollen distal node with narrowing on 1st and 2nd segments, enlarged distally on middle segments and with rounded proximal ones. Male flagellomeres with three whorls of sensorial filae and two whorls of setae. Sensorial filae of flagellomeres with equal loops far not reached to next node. Palpi 4-segmented. Tarsi densely covered by scales, especially on 3-5 segments. Tarsal claw dark, dentated at all tarsi, strongly curved behind middle, empodium shorter than claw. Wing margin not interrupted in point of joining veins *C* and R_{4+5} . Wing enlarged near middle. Vein R_{1+2} joining *C* before wing middle, R_{4+5} almost straight and joining *C* distinctly behind wing apex, formed large cell. M_{3+4} , *pCu* and forked *Cu* present. Abdominal tergites and sternites whole, not dissected transverse, distal margin with row of setae. Tergites with lateral lacunae near distal margin. Male genitalia with unusual gonocoxites, swollen gonostylus and very wide membranous tegmen, completely covered genitalia. Gonocoxites broad, strongly enlarged distally on inner margin, with acutangular medial projection.

Gonostylus swollen dorsally near middle, apically with narrow claw. Cerci wide, emarginated, with wide rounded lobes. Hypoproct shorter and narrower than cerci with pointed lobes and concaved apically. Aedeagus slightly visible, parallel-sided, unsclerotized. Dorsal and ventral parts of tegmen connected to each other on gonostylus by two white pores

SPECIES INCLUDED. Only type species.

RELATIONSHIPS. New genus differs from the other known genera of the Coquillettomyiidi by presence of wide tegmen on gonocoxites, by very narrow aedeagus, by absence of narrowing on distal nodes of male flagellomeres, by straight vein R_{4+5} joining C not far from the wing apex, by vein M_{3+4} situated far from Cu . New genus resembles *Quadridiplosis* by form of gonocoxites.

ETYMOLOGY. This genus is dedicated to the memory of famous entomologist P.I. Marikovskij (1912-2008).

***Marikovskidiplosis bullata* Fedotova et Sidorenko, sp. n.**

Figs. 33-38

MATERIAL. Holotype – ♂ (slide 421/8134): Russia, Primorskii krai, Lazovskii Reserve, cordon America, MT, 19-20.VII 2006 (V. Sidorenko).

DESCRIPTION. MALE. Body length 1.5 mm, wing length 1.6 mm, wing width 0.6 mm. Pedicel rounded. F1 3 times as long as wide, distal neck 1.4 times shorter than distal node; distal node 5 times as long as proximal neck and as long as proximal node together with basal stem. F5 3.3 times as long as wide, distal neck 2 times shorter than distal node; distal node 1.3 times as long as proximal node and 2.5 times as long as proximal neck. Palpi 4-segmented, its ratio 1:1.5:1.9:2.2, last segment thin, almost parallel-sided, with narrowed apex. Wing 2.1 times as long as wide, costal cell strongly enlarged, R_{1+2} 2.1 times shorter than R_{4+5} with one pore near Rs . Fork Cu situated at more long distance from the base of wing than point of joining R_{1+2} to C . Gonocoxites 2.2 times as long as wide, strongly dilated medially, widely rounded laterally, covered by large pores. Gonostylus large, slightly dilated proximally, straight, 2.0 times as long as wide, 2.0 times smaller than gonocoxites. Aedeagal complex very wide, longer than gonocoxites. Cerci large, with rounded apical lobes and small triangular excision. Hypoproct 1.7 times narrower than cerci slightly sclerotized, almost parallel-sided, with rounded lobes. Aedeagus thin, unsclerotized, shorter than cerci. Tegmen formed wide swollen bubbles above gonostylus, covered by short setae.

FEMALE unknown.

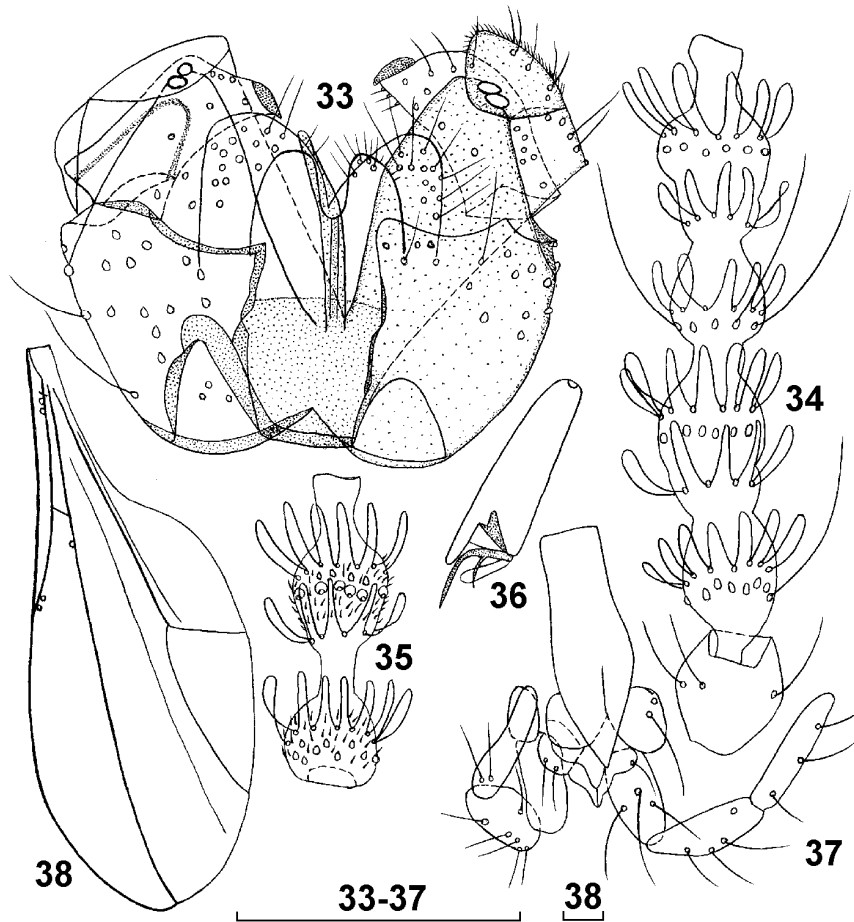
ETIMOLOGY. New species named is formed from the Latin *bullata* – vesicular.

Subtribe Mamaeviina Fedotova, subtr. n.

DIAGNOSIS. Aedeagus with pair of lateral denticles on each side (Figs 9-11). Gonostylus strongly swollen basally, with membranous collaret near mid (Figs 11,

12) or with lobe (Fig. 9). Gonocoxites transverse (Figs 11, 12) or almost rounded (Fig. 9), without apico-medial projection. Parameres absent. Middle flagellomeres with swollen distal node without constriction.

GENERA INCLUDED. Genus *Mamaevia* Skuhrová, 1967 with 2 species: *M. vysineki* Skuhrová, 1967 (Czech Republic; Russia: Samara Province) and *M. hamifera* Marikovskij, 1960 (Kazakhstan) (Gagné, 2004, Fedotova, 2006).



Figs 33-38. *Marikovskidiplosis bullata* sp. n., male: 33 – genitalia; 34 – pedicel, F1 and F2; 35 – F5; 36 – hind tarsal claw; 37 – mouth parts; 38 – wing. Scale line – 0.1 mm.

Subtribe Undadiplosina Fedotova, subtr. n.

DIAGNOSIS. Body brown, palpi, flagellomeres, tarsi, abdominal tergites and sternites and genitalia strongly sclerotized. Genitalia transverse. Gonocoxites strongly swollen, without apico-medial and apical lobes. Gonostylus short or long, thin, not swollen, slightly curved, slightly enlarged at the base. Basal lobe of gonocoxite developed. Parameres strongly curved, reached to apex of gonocoxites, fused with gonocoxites basally. Hypoproct sclerotized stronger than cerci, almost as long as gonocoxites. Aedeagus free, transparent, not fused with parameres, swollen apically, sometimes enlarged before apex (*Undadiplosis*). Genital rod strongly sclerotized, spiniform, completely or fragmentary developed.

GENERA INCLUDED. *Undadiplosis* Fedotova, 2004, *Opinatodiplosis* Fedotova, 2004, and *Laxadiplosis* Fedotova et Sidorenko, gen. n.

RELATIONSHIPS. New subtribe resembles the Quadridiplosina subtr. n., but differs by presence of short curved parameres, fused basally and formed basal sclerotized plate, by sclerotized genital rod, by swollen gonocoxites, by presence of basal lobes of gonocoxites, by gonostylus strongly excavated on ventral side.

***Laxadiplosis* Fedotova et Sidorenko, gen. n.**

Type species: *Laxadiplosis latebra* Fedotova et Sidorenko, sp. n., designated here

DIAGNOSIS. Male flagellomeres with two nodes: elongated distal ones with slight narrowing on all segments and rounded proximal ones. Apical whorl of sensorial loop with more shorter filae than distance before next node of flagellomere. Tarsal claw simple, strongly curved, situated on elongated setose base (Fig. 60), empodium undeveloped, pair of pulvilli dark and strong, as long as claw. Wing elongated and wide, veins R_{1+2} , R_s and fork Cu developed, R_{4+5} strongly curved and joining C distinctly behind wing apex, vein Cu_1 slightly visible (Fig. 61). Veins of wing without pores. Palpi 4-segmented. Abdominal tergites and sternites whole, sternites not dissected on two stripes. Genitalia transverse (Fig. 55). Gonostylus usual form, slightly curved and thin, with long ventral excision. Gonocoxites strongly swollen, almost quadrate. Apical and medial lobes absent, basal slightly sclerotized, rounded lobes developed. Cerci large, transverse, not reached to the apex of gonocoxites, with triangular lobes and wide triangular excision. Hypoproct more longer and narrowed than cerci, slightly sclerotized, pointed apically, with small excision on the end. Base of gonocoxites with additional sclerotized plate. Aedeagus longer than gonocoxites, transparent, with large angular swollen apical projection; aedeagus curved near apex (Fig. 55). Unpaired sclerotized plate, fused with medial margin of gonocoxites and basally in view of triangular plate with medial sclerotized rod. Parameres paired, pointed apically, sclerotized, symmetrical, strongly curved structures around genital rod, fused with sclerotized plate. Genital rod strongly sclerotized, spiniform, as long as hypoproct. Transparent aedeagus elongated toward apex of hypoproct.

RELATIONSHIPS. New genus differs from the genus *Undadiplosis* by presence of completely developed sclerotized genital rod, by curved elongated parameres, by very short and wide cerci, by presence of large transparent projection on the end of aedeagus, by more wide wing and by strongly curved vein R_{4+5} , by strongly curved gonostylus, by presence of basal lobes, by form and position of tarsal claw, by absence of empodium and well developed pulvilli. Shape of gonocoxites and gonostyli resembled that of the tribe C16oquilletomyiini but differ by presence of paired parameres (single in C16oquilletomyiini), by not fused aedeagus and sclerotized plate, by presence of free transparent aedeagus with additional apical projections, by presence of sclerotized rod, by very strongly curved vein R_{4+5} .

SPECIES INCLUDED. Only type species.

ETYMOLOGY. The name originates from a Latin *laxa* and traditional ending (*-diplosis*) for genera of the subfamily Cecidomyiinae.

***Laxadiplosis latebra* Fedotova et Sidorenko, sp. n.**

Figs 55-61

MATERIAL. Holotype – ♂ (slide 475/8079): Russia, Primorskii krai, Lazovskii Reserve, Koreiskaya pad', MT, 17.VII 2005 (V. Sidorenko).

DESCRIPTION. MALE. Body brown, length 2.44 mm, wing length 3.15 mm, wing width 1.13 mm. Eyes very large, occupied nearly entire head capsule. Head with postvertical peak. Notum with 3 dark-brown dorsal stripes. Flagellomeres very dark. Sensorial filae of middle flagellomeres with short loops of distal whorl, not reached to the next node (Fig. 58). F1 1.1 times as long as F2, 4.8 times as long as wide, without basal neck, proximal node slightly elongated, 2.5 times as long as proximal neck, 1.2 times longer than distal node; distal neck 1.9 times shorter than distal node; distal node 3.0 times as long as proximal neck. F5 4.2 times as long as wide, distal neck 1.5 times shorter than distal node; distal node 1.2 times as long as proximal node and 2.4 times as long as proximal neck. Tarsal claws strongly curved proximally. Palpi invisible. Wing very wide, gradually enlarged, 2.5 times as long as wide. Vein R_{1+2} joining with *C* in middle of wing. Fork of *Cu* situated on more short distance from the base of wing than point of joining R_{1+2} to *C*. Abdominal tergites and sternites whole, sternites with lateral round lacunes. Gonocoxite very wide, without apical lobe, truncated apically, with slightly rounded lateral sides, 1.3 times as long as wide. Gonostylus slightly curved near middle, almost parallel-sided, slightly enlarged proximally, 4.4 times as long as wide, as long as gonocoxites, covered by numerous setae. Cerci 1.6 times wider than hypoproct, densely covered by setae, triangular excision similar with lateral lobes. Hypoproct more strongly sclerotized than cerci, almost parallel-sided, narrowed from middle to apex, with strongly sclerotized basal stripe, longer than gonocoxites. Sclerotized plate with small apical triangular excision. Parameres adjoined genital rod apically, free from it basally. Aedeagus curved near apex, with wide apical rhomboid enlargement.

FEMALE unknown.

ETYMOLOGY. The specific name originates from Latin *latebra*.

Tribe Heterostylidiplosini Fedotova, 2004

DIAGNOSIS. Body brown, palpi, flagellomeres, tarsi, abdominal tergites and sternites and genitalia strongly sclerotized. Male flagellomeres with two nodes: elongated distal one with strong narrowing on all segments (except 12th) and rounded proximal one, rarely mid flagellomeres without narrowing (Fig. 63). The flagellomeres bear three whorls of sensorial loops and two whorls of setae. Mid whorl with more short sensorial loops than basal and medial ones. F12 with elongated projection (Fig. 45). Palpi 4-segmented. Tarsal claw simple, rectangularly curved, rarely dentated, empodium shorter than claw or equal length. Wing elongated. Veins R_{1+2} , M_{3+4} and fork Cu developed, R_{4+5} strongly curved and joining C distinctly behind wing apex, rarely in wing apex (Fig. 68). Abdominal tergites whole or emarginated, with lacunes, sternites dissected on two stripes. Genitalia almost rounded or transverse. Gonostylus unusual form, strongly swollen, sometimes with long basal projection, rarely straight and thin or without claw. Gonocoxites strongly swollen (Figs 39, 40, 41, 44, 47-49, 62, 69), apical lobe absent, sometimes medial sclerotized lobes developed. Cerci short and narrow with rounded pubescent lobes, dissected by triangular excision. Hypoproct whole, narrower than cerci, equal length with one, rounded or truncated apically. Base of gonocoxites with strongly developed sclerotized tubular parameres situated on strongly sclerotized plate with pair of small inner cavities (Figs 39, 40). Sometimes sclerotized plate unclear (Figs 39-41, 62) or in view of pair of triangular sclerotized structures (Fig. 69). Parameres curved caudally to apex of genitalia and ended by conical narrowing or apically very thin, without enlargements or narrowing. Aedeagus strongly sclerotized, curved or straight, thin or thick, triangular enlarged or narrowed apically. Rarely aedeagus very thin, unsclerotized (Fig. 62).

GENERA INCLUDED. Tribe includes 3 subtribes and 3 genera: *Heterostylidiplosis* Fedotova, 2004, *Ruidadiplosis fluida* gen. et sp. n., *Magadiplosis mera* gen. et sp. n.

Key to subtribes, genera and species of the tribe Heterostylidiplosini (males)

1. Genitalia almost rounded. Gonostylus short, swollen (Figs 41, 44, 45) or with projection (Figs 39, 40, 47-50). Medial or basal lobes of gonocoxites absent. Hypoproct not darker than cerci. (**Heterostylidiplosina**, ***Heterostylidiplosis*** Fedotova, 2004) 2
 - Genitalia transverse (Figs 62, 69). Gonostylus usual, thin and long. Medial lobes of gonocoxites developed. Medial or basal lobes of gonocoxites developed. Parameres from base directed to caudally. Hypoproct darker than cerci 6
2. Gonostylus short, cephalic-shaped (Figs 41-43), without claw and projection. Parameres directed caudally, than (потом) strongly curved basally. Body length 1.2 mm ***H. capituliformis*** Fedotova, 2004
 - Gonostylus long, with basal projection (Figs 47-50), asymmetrical (Figs 39, 40, 44) or swollen, with apical claw (Fig. 45) 3

3. Gonostylus asymmetrical, one of gonostylus with projection (Figs 39, 40), or both with projections (Figs 47-50). Aedeagus thin, straight (Fig. 39) or thin, spiniform (*H. hemisphaerica*) or curved (Fig. 44) 4
 - Gonostylus symmetrical, without projection, swollen medially (Fig. 45). Aedeagus thick, swollen and pointed apically (Fig. 44). Parameres directed caudally and then curved to base of genitalia. Wing length 1.9 mm
..... *H. fungicola* Mamaev et Krivosheina, 1997
4. Gonostylus asymmetrical. Parameres directed basally and then curved caudally (Figs 39, 40). Aedeagus thin, straight, triangularly dilated apically. Body length 1.2-1.3 mm, wing length 2.1 mm *H. serpentinus* Fedotova, 2004
 - Gonostylus with basal projection (Fig. 50). Parameres directed caudally 5
5. Aedeagus spiniform, curved. Hypoproct pubescent. Body length 1.5 mm
..... *H. hemisphaerica* (Kovalev et Mamaev, 1966)
 - Aedeagus slightly swollen near middle (Figs 47-49). Hypoproct with some setae. Wing length 2.0 mm *H. insolita* Gagné, 1973
6. Parameres thick, almost straight, directed caudally. Gonocoxites with basal sclerotized triangular lobes (Fig. 69). Distal node of mid flagellomeres elongated (Fig. 79), with constriction. Body length 1.0 mm, wing length 1.45 mm *Magadiplosina* subtr. n., *Magadiplosis* gen. n. (*M. mera* sp. n.)
 - Parameres thin, strongly curved, directed basally (Fig. 62). Gonocoxites with medial thick truncated sclerotized lobes. Distal node of mid flagellomere short, without constriction (Fig. 63). Body length 1.45, wing length 1.1 mm
.....//... *Ruidadiplosina* subtr. n., *Ruidadiplosis* gen. n. (*R. fluida* sp. n.)

Subtribe Heterostylidiplosina Fedotova, 2004

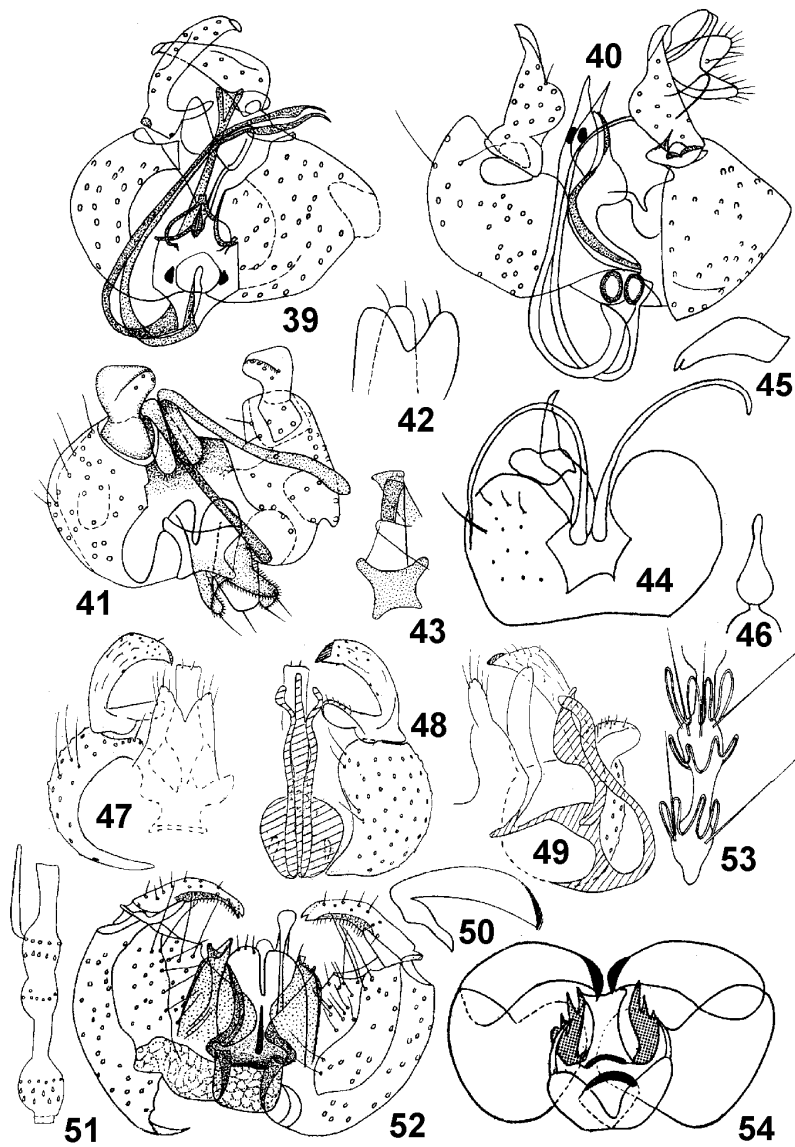
DIAGNOSIS. Genitalia almost rounded. Gonostylus swollen, sometimes with basal lobe. Gonocoxites without apico-medial projections, basal lobes absent. Apical sclerotized hexagonal plate at the base of genitalia developed. Parameres long, sclerotized, variable. Flagellomeres with strongly narrowed distal node.

GENERA INCLUDED. Genus *Heterostylidiplosis* Fedotova, 2004.

***Heterostylidiplosis* Fedotova, 2004**

Heterostylidiplosis Fedotova in Fedotova & Sidorenko, 2004b: 104. Type species: *Heterostylidiplosis serpentinus* Fedotova, 2004, by original designation.

DIAGNOSIS. Body brown, palpi, flagellomeres, tarsi, abdominal tergites and sternites and genitalia strongly sclerotized. Eyes very large, occupying nearly entire head capsule. Head without occipital process. Tarsal claw simple, rectangularly curved, empodium shorter than claw. Wing elongated, veins R_{1+2} , M_{3+4} and fork Cu developed, R_{4+5} strongly curved and joining C distinctly behind wing apex (Fig. 68). Abdominal tergites whole, sternites dissected on two stripes. Genitalia almost rounded with hexagonal capsule (Figs 39-41, 44, 47-50). Gonostylus straight and thin, with apical claw (Figs 39, 50) or without claw (Fig. 41). Gonocoxites strongly swollen, without medial lobes. Aedeagus strongly sclerotized, curved or straight, thin or thick, triangularly enlarged or narrowed apically.



Figs 39-54. *Heterostylidiplosis serpentinus* Fedotova (39, 40), *H. capituliformis* Fedotova (41-43), *H. fungicola* Mamaev et Krivosheina (44-46), *H. insolita* Gagné (47-49), *H. hemisphaerica* Mamaev et Kovalev (50), *Undadiplosis tomentosa* Fedotova (51, 52), *Odontodiplosis orientalis* Sharma et Rao (53, 54): 39-41, 44, 47-49, 52, 54 – genitalia (47 – dorsally, 48 – ventrally, 49 – laterally); 42 – cerci and hypoproct; 43 – aedeagus; 46 – F12; 45,50 – gonostylus; 51, 53 – F1 (after Kovalev & Mamaev, 1966; Gagné, 1973; Sharma & Rao, 1979; Mamaev & Krivosheina, 1997; Fedotova, 2004; Fedotova & Sidorenko, 2004a, b).

Diagnosis of genus made based on female of *H. fungicola* Mamaev et Krivosheina, 1997 (Fedotova, Sidorenko, 2006b) is probably wrong because of most characteristics are common for the subtribe Stomatosematidi (i. e. 2-segmented ovipositor; lamellae of ovipositor about 4 times as long as broad, with two terminal setae; base of necks of flagellomeres covered by microtrichiae; abdomen without brown stripes).

SPECIES INCLUDED. *Heterostylidiplosis insolita* (Gagné, 1973), *H. hemisphaerica* Kovalev et Mamaev, 1966, *H. fungicola* Mamaev et Krivosheina, 1997, *H. serpentinus* Fedotova, 2004, *H. capituliformis* Fedotova, 2004.

BIOLOGY. Larvae *H. fungicola* breed on polyporous fungi (Mamaev, Krivosheina, 1997).

Subtribe Ruidadiplosina Fedotova, subtr. n.

DIAGNOSIS. Body very light. Parameres thin, strongly curved, directed basally (Fig. 62), with triangular basal capsules. Gonocoxites with medial thick truncated sclerotized lobes. Gonostylus slightly curved, very thin, almost parallel-sided. Distal node of mid flagellomere short, without constriction. Abdominal tergites without lacunes.

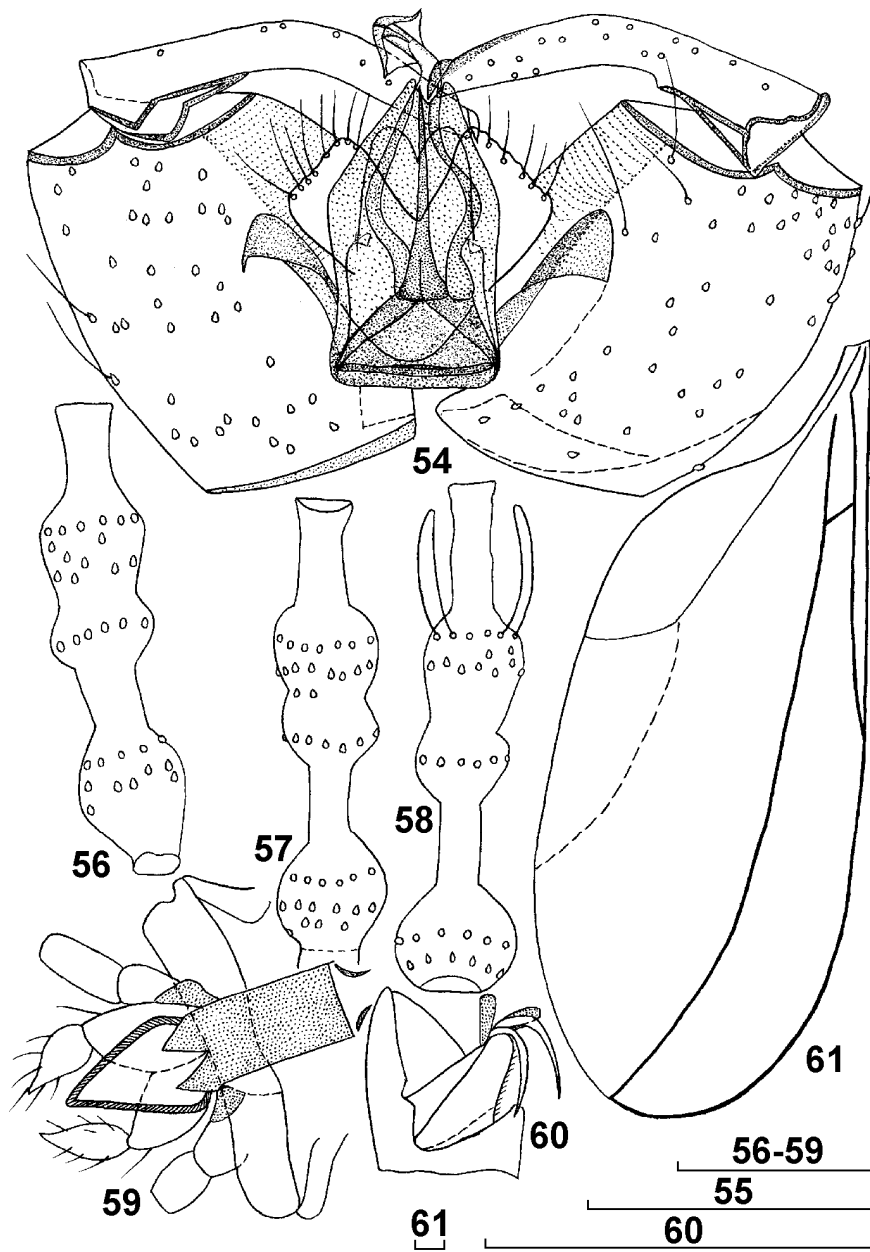
GENERA INCLUDES. *Ruidadiplosis* gen. n.

***Ruidadiplosis* Fedotova et Sidorenko, gen. n.**

Type species: *Ruidadiplosis fluida* Fedotova et Sidorenko, sp. n., designated here.

DIAGNOSIS. Body brown, palpi, flagellomeres, tarsi, abdominal tergites and sternites and genitalia strongly sclerotized. Male flagellomeres with two nodes: elongated distal one short, without narrowing on all segments and rounded proximal one. Apical whorl of sensorial loop longer than next node of flagellomere. Tarsal claw dentated, slightly curved, empodium as long as claw. Wing elongated, veins R_{1+2} , M_{3+4} presents, M_{3+4} and fork Cu invisible, R_{4+5} not curved and joining C distinctly in wing apex (Fig. 68). Abdominal tergites whole, sternites dissected on two stripes. Gonostylus usual form, straight and thin (Fig. 62). Gonocoxites strongly swollen, apical lobe absent, medial one thick, truncated apically. Cerci narrow, with wide triangular excision. Hypoproct whole, slightly sclerotized, narrower and longer than cerci. Base of gonocoxites with pair of clear sclerotized triangular plates. Sclerotized parameres short, strongly curved, without swelling, partly sclerotized, rounded apically. Aedeagus invisible.

RELATIONSHIPS. New genus differs from the genus *Heterostylidiplosis* by usual gonostylus, by elongated gonocoxites, by presence of projections on gonocoxites, by absence of constriction on distal node. New genus differs from the genus *Magadiplosis* gen. n. by more thin gonostylus, by strongly curved parameres, by truncated medial lobes of gonocoxites, by narrow and short cerci, by absence of constriction on distal flagellomeres.



Figs 55-61. *Laxadiplosis latebra* sp. n., male: 55 – genitalia; 56 – F1; 57 – F2; 58 – F5; 59 – mouth parts; 60 – tarsal claw; 61 – wing. Scale line – 0.1 mm.

SPECIES INCLUDED. Only type species.

ETYMOLOGY. The generic name originates from a Latin *ruidus* – roughness pertaining to shape of paramere and hypoproct and traditional ending (*-diplosis*) for genera of subfamily Cecidomyiinae.

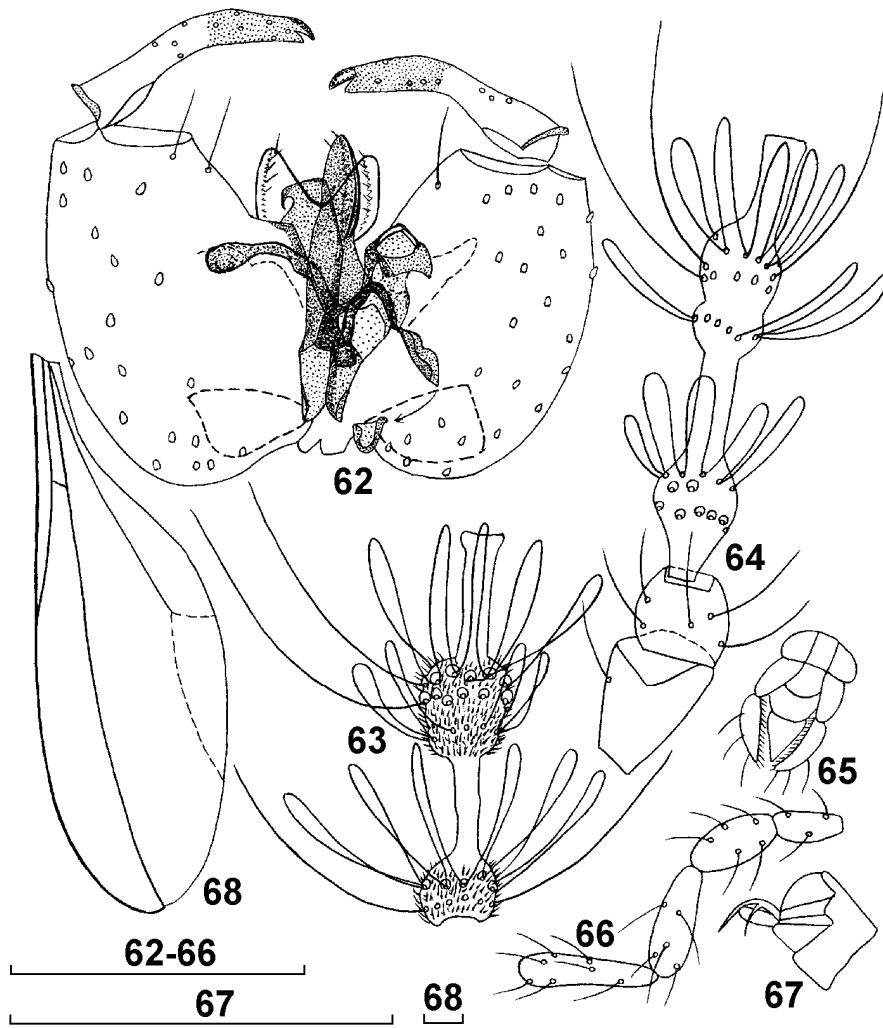
***Ruidadiplosis fluida* Fedotova et Sidorenko, sp. n.**

Figs 62-68

MATERIAL. Holotype – ♂ (slide 456/8149): Russia, Primorskii krai, Lazovskii Reserve, Koreiskaya pad', MT, forest, 9-10.VII 2007 (V. Sidorenko).

DESCRIPTION. MALE. Body very light, length 1.10 mm, wing length 1.45 mm, wing width 0.53 mm. Legs dark, densely covered by dark scales and setae. Notum unicolor, without stripes. Sternopleura sclerotized. Eyes very large, occupied nearly entire head capsule. Head with postvertical peak. Antennae dark brown, scape, pedicel and flagellomeres equally sclerotized. Distal node of middle flagellomeres without narrowing, proximal – semicircular, transverse. Sensorial filae of middle whorls shorter than that in basal and apical whorls. Apical sensorial filae of flagellomeres with long loops reached to the next node. Pedicel almost transverse, 1.6 times shorter than conical scape. F1 1.1 times longer than F2, 5.4 times as long as wide, basal neck unclear, distal neck 1.3 times shorter than distal node; distal node 1.3 times as long as proximal neck and 1.5 times longer than proximal node. F5 3.9 times as long as wide, distal neck as long as distal node; distal node 1.7 times as long as proximal node and 1.1 times as long as proximal neck. Tarsal claws with thin denticle, semicircularly curved at middle; empodium as long as claw. Palpi light, 4-segmented, its ratio 1:1.4:1.7:2.1, last segment enlarged distally, with rounded apex. Abdominal tergites whole, with distal row of setae on dark stripe, sternites dissected on 2 stripes. Wing narrow, maximally enlarged medially, 3.0 times as long as wide. Veins M_{3+4} , pCu absent, forked Cu slightly visible. Fork of Cu situated on more far distance from the base of wing with point of joining R_{1+2} to C . Gonocoxites without truncated apical lobe, 1.3 times as long as wide, slightly dilated laterally, with long unsclerotized thin medial projections, and medio-apical hook-formed sclerotized outgrowths. Gonocoxites sparsely covered by large pores. Gonostylus slightly dilated proximally or almost straight, darker distally, 4.8 times as long as wide, 1.6 times shorter than gonocoxites, slightly sclerotized distally. Aedeagal complex shorter than gonocoxites, with small cerci, strongly sclerotized hypoproct and short curved parameres of unusual and unclear form. Cerci very widely excavated; hypoproct asymmetrical, 2.9 times narrower than cerci, dilated basally and pointed apically. Aedeagus invisible. Pair of parameres strongly curved laterally, situated basally, directed apically, with pair of rhomboid cavities at the base.

FEMALE unknown.



Figs 62-68. *Ruidadiplosis fluida* sp. n., male: 62 – genitalia; 63 – F5; 64 – scape, pedicel and F1; 65 – mouth parts; 66 – palpus; 67 – tarsal claw; 68 – wing. Scale line – 0.1 mm.

RELATIONSHIPS. New species is similar to *H. serpentinus* Fedotova (Fedotova & Sidorenko, 2004b), but differs from it by thin gonostylus, by less swollen gonocoxites and by short parameres, directed basally (not apically), by asymmetrical hypoproct, by short flagellomeres with long sensorial filae, by dentated tarsal claw, by presence of unsclerotized thin medial projections and by hook-formed sclerotized outgrowths and by narrow wing.

ETYMOLOGY. The specific name originates from a Latin *fluida*.

Subtribe Magadiplosina Fedotova, subtr. n.

DIAGNOSIS. Body brown, palpi, flagellomeres, tarsi, abdominal tergites and sternites and genitalia strongly sclerotized. Genitalia transverse. Gonostylus not swollen, slightly curved. Medial triangular lobes of gonocoxites developed. Parameres slightly sclerotized, curved or straight. Hypoproct sclerotized stronger than cerci. Sclerotized plate at the base of parameres absent.

GENERA INCLUDES. One genus *Magadiplosis* gen. n.

***Magadiplosis* Fedotova et Sidorenko, gen. n.**

Type species: *Magadiplosis mera* Fedotova et Sidorenko, sp. n., designated here.

DIAGNOSIS. Male flagellomeres with two nodes: elongated distal ones with slight narrowing on all segments and rounded proximal ones (Figs 70, 71). Apical whorl of sensorial loop shorter than next node of flagellomere. Wing elongated, veins R_{1+2} M_{3+4} and fork of *Cu* developed, R_{4+5} strongly curved and joining *C* distinctly behind wing apex (Fig. 77). Abdominal tergites with wide lacunes, sternites dissected on two stripes. Gonostylus usual form, straight and thin (Fig. 69). Gonocoxites strongly swollen, apical lobe absent, basal sclerotized triangular lobes developed. Cerci short and wide, dissected by narrow excision. Hypoproct whole, slightly sclerotized, narrower than cerci, as long as cerci, rounded or truncated apically. Base of gonocoxites without clear sclerotized plate at the base of parameres. Sclerotized thick parameres without swelling, pointed apically. Aedeagus very thin, straight, unsclerotized.

RELATIONSHIPS. New genus differs from the genus *Heterostylidiplosis* by straight gonostylus, by presence of medial lobes, by wide cerci, by thick parameres and by male flagellomeres less narrowed on distal node.

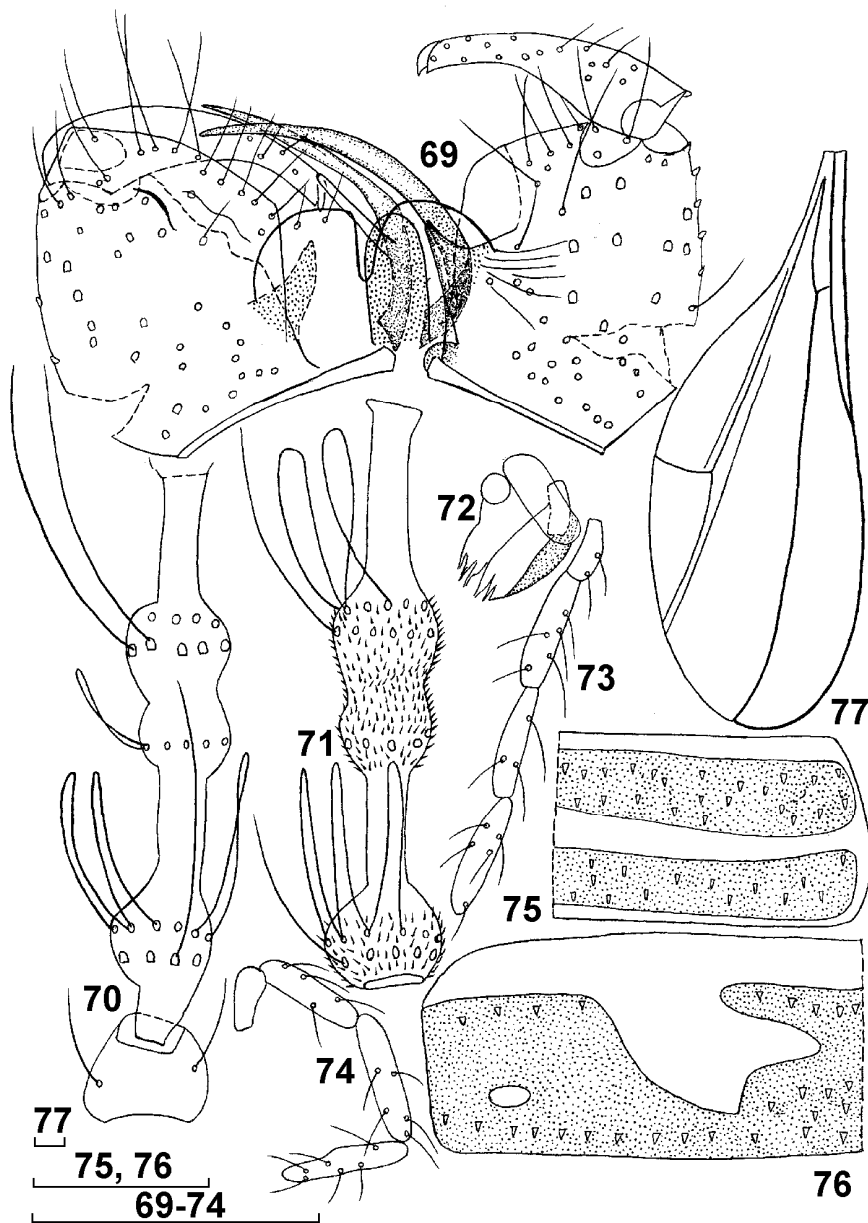
SPECIES INCLUDED. Only type species.

ETYMOLOGY. The generic name originates from a Latin *maga* – sorceress and traditional ending (*-diplosis*) for genera of subfamily Cecidomyiinae.

***Magadiplosis mera* Fedotova et Sidorenko, sp. n.**

Figs 69-77

MATERIAL. Holotype – ♂ (slide 454/8095): Russia, Primorskii krai, Lazovskii Reserve, cordon America, marge, MT, 18-19.VI 2005 (coll. V. Sidorenko).



Figs 69-77. *Magadiplosis mera* sp. n., male: 62 – genitalia; 63 – pedicel and F1; 64 – F5; 65 – mouth parts; 66, 67 – palpus (variation of shape); 68 – sternite 5; 69 – tergite 5; 70 – wing. Scale line – 0.1 mm.

DESCRIPTION. MALE. Body and wing dark, body length 1.0 mm, wing length 1.45 mm, wing width 0.53 mm. Legs densely covered by scales. Eyes very large, occupying nearly entire head capsule. Head with occipital process. Sensorial filae of middle flagellomeres with short loops of distal whorl not reached to the next node and long loops of proximal whorl reached to the next node. Middle whorl of sensorial loops consists of short filae. Flagellomeres dark, scape and pedicel light. Pedicel transverse, 1.2 times shorter than scape. F1 as long as F2, 5.5 times as long as wide, with basal long neck, proximal node almost rounded, distal neck 1.1 times shorter than distal node; distal node 1.6 times as long as proximal neck and 1.7 times as long as proximal node without basal stem. F5 5.0 times as long as wide, distal neck equal length with distal node; distal node 1.9 times as long as proximal node and 1.7 times as long as proximal neck. Palpi 4-segmented, its ratio 1:2.1:1.9:2.2 or 1:1.9:2.1:2.2, last segment rounded apically, slightly enlarged medially. Thorax dark-brown, without dorsal stripes, sternopleura and mesopleura strongly sclerotized. Wing without pores, very wide, maximal enlarged distally, 2.1 times as long as wide. Veins *Rs*, *M*₃₊₄, *pCu* and forked *Cu* present. Fork of *Cu* situated on more long distance from the base of wing than point of joining *R*₁₊₂ to *C*. Abdominal tergites strongly emarginated dorsally and bear lateral lacunes, sternites completely divided on two narrow transversal stripes.

Genitalia strongly transverse and strongly sclerotized. Gonocoxites swollen, without apical lobe, slightly rounded apically, with parallel lateral sides, 1.4 times as long as wide, without apical and medial projections. Gonocoxites densely covered by large pores. Gonostylus almost straight, slightly dilated proximally, 3.6 times as long as wide, 1.2 times shorter than gonocoxites, covered by numerous setae. Aedeagal complex with widely excised cerci, sclerotized oval hypoproct, very thin short aedeagus. Cerci with wide rounded lobes divided by narrow excision. Hypoproct more strongly sclerotized than cerci, wide rounded apically, 3.5 times narrower than cerci. Cerci and hypoproct almost equal in length. Parameres very stout, sclerotized, conical, slightly curved and strongly sclerotized basally.

FEMALE unknown.

RELATIONSHIPS. New species differs from *H. fluida* sp. n. by transverse genitalia, by long stout parameres, by absence of medial projections of genitalia, by shape of cerci and hypoproct, by long flagellomeres with elongated distal nodes.

ETYMOLOGY. The specific name originates from a Latin *mera* – pure.

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