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NEW SPECIES OF GALL MIDGES (DIPTERA, CECIDOMYIIDAE) FROM THE RUSSIAN FAR EAST

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Fifteen new species of gall midges are described from Primorskii krai: *Dasineura tavalga* sp. n., *Asteralobia (Euasteralobia) clematidis* sp. n., *A. (E.) spiraeae* sp. n., *A. (E.) veronicastrum* sp. n., *Gynandrobremia populicola* sp. n., *G. maackiaefloris* sp. n., *Trotteria humulopsidis* sp. n., *T. veronicastricola* sp. n., *T. clematicola* sp. n., *T. asteralobiphila* sp. n., *Lestodiplosis rabdosiae* sp. n., *L. maackiae* sp. n., *Mycodiplosis filipendulae* sp. n., *M. fraxinicola* sp. n., and *Ametrodiplosis maackiae* sp. n. The data on their biology, gallforming and distribution are given. All species are monophagous, forming galls, or their inquilines. Almost all species reared from the galls on trees and shrubs. *Spiraea salicifolia*, *Clematis brevicaudata*, *Veronicastrum sibiricum*, *Populus koreana*, and *Maackia amurensis* firstly recorded as the host-plants for the gall midges.

KEY WORDS: Diptera, Cecidomyiidae, Gall Midges, galls, new species.

З. А. Федотова. Новые виды галлиц (Diptera, Cecidomyiidae) с Дальнего Востока России // Дальневосточный энтомолог. 2002. N 118. С. 1- 35.

Описано 15 новых видов галлиц из Приморского края: *Dasineura tavalga* sp. n., *Asteralobia (Euasteralobia) clematidis* sp. n., *A. (E.) spiraeae* sp. n., *A. (E.) veronicastrum* sp. n., *Gynandrobremia populicola* sp. n., *G. maackiaefloris* sp. n., *Trotteria humulopsidis* sp. n., *T. veronicastricola* sp. n., *T. clematicola* sp. n., *T. asteralobiphila* sp. n., *Lestodiplosis rabdosiae* sp. n., *L. maackiae* sp. n., *Mycodiplosis filipendulae* sp. n., *M. fraxinicola* sp. n. и *Ametrodiplosis maackiae* sp. n.

Приведены сведения по их биологии, галлообразованию и распространению. Все виды являются фитофагами, образующими галлы, или их инквилинами. Почти все виды выведены из галлов на деревьях и кустарниках. *Spiraea salicifolia*, *Clematis brevicaudata*, *Veronicastrum sibiricum*, *Populus koreana* и *Maackia amurensis* впервые отмечены как кормовые растения для галлиц.

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INTRODUCTION

The Gall Midges (Diptera, Cecidomyiidae) was collected by me during 2001 in the vicinity of Kamenushka village near Ussuriyskii Reserve (Primorskii krai, Russia). There are a lot of new species besides collected material. The descriptions of the fifteen new species from the genera *Asteralobia* Kovalev, 1964 (all new species belongs to subgenus *Euasteralobia* Kovalev, 1964), *Trotteria* Kieffer, 1901, *Gynandrobremia* Mamaev, 1965, *Dasineura* Rondani, 1840, *Ametrodiplosis* Rübsaamen, 1910, *Mycodiplosis* Rübsaamen, 1895 and *Lestodiplosis* Kieffer, 1894 are given below. Holotypes and part of paratypes of new species are deposited in the Zoological Institute of Russian Academy of Sciences (St.Petersburg); the other part of paratypes – in the collection of Samara Academy of Agriculture (Ust-Kinelskii, Samarskaya oblast). The next plant-hosts are new for the gall midges food-specialization: *Spiraea salicifolia* (complex from 3 species of gall midges), *Clematis brevicaudata* (2 species), *Veronicastrum sibiricum* (2 species), *Populus koreana* (2 species), and *Maackia amurensis* (3 species).

My field research was supported by administration of Samara Academy of Agriculture and in part by the Russian Fund of Fundamental Investigations, Grant No 01-04-96915, S.Yu. Storozhenko, principal investigator.

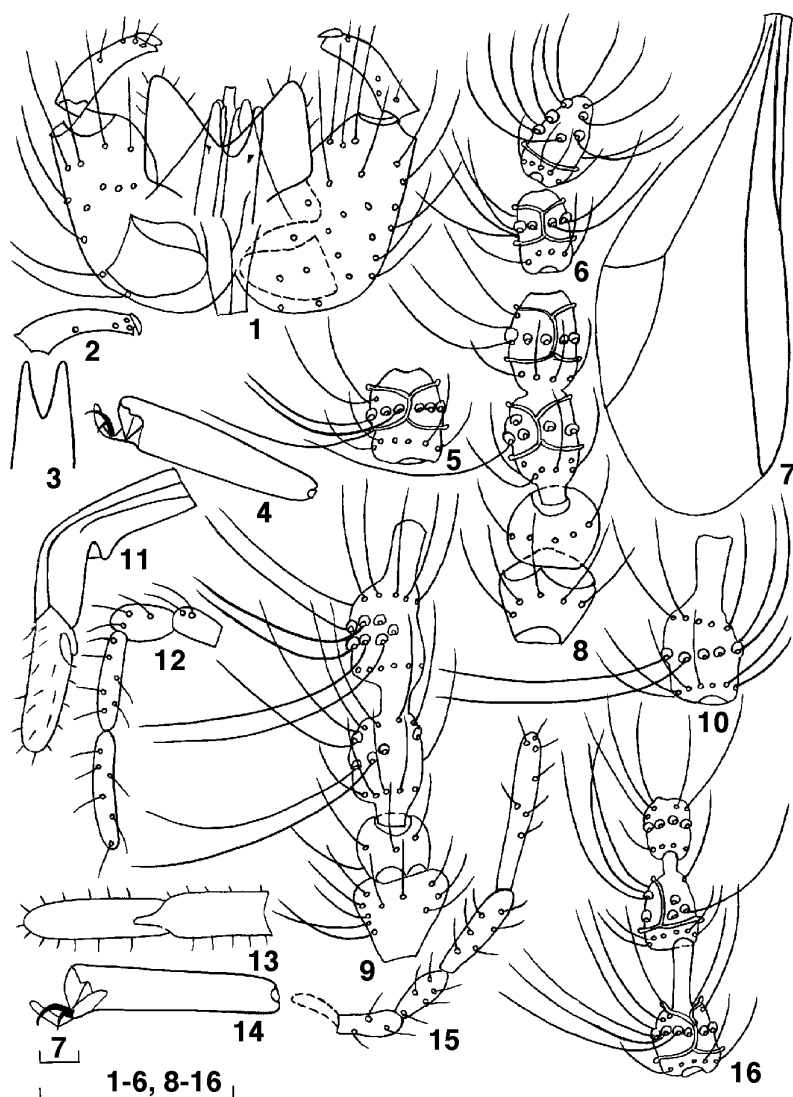
DESCRIPTIONS OF NEW SPECIES

***Dasineura tavolga* Fedotova, sp. n.**

Figs 1-16

MATERIAL. Holotype – ♂ (slide N 7034/1): Russia, Primorskii krai, 30 km SE Ussuriysk, Kamenushka, 15.VII 2001, larvae in flower galls on *Spiraea salicifolia* (Z. Fedotova). Paratypes – 11 ♂, 8 ♀ (slides N 7034/1-11), from the same locality, emergence after overwinter in laboratory ice-box.

DESCRIPTION. MALE. Body length 1.2-1.6 mm. Medial width of eye bridge 5 to 7 facetes. Antennae 2+14-segmented. 1st flagellomere 1.3 times as long as 2nd. 5th flagellomere 2.0 times as long as wide, basal node 1.5 times as long as neck. Flagellomere 14 almost round, 1.6 times as long as flagellomere 13. Palpi 4-segmented, its proportion 3:3:4:7, 4th segment wading toward apex. Tarsal claw with fine bent tooth at base, empodium longer than claw. Wings 2.7 times as long as wide. Vein R_{1+2} running into anterior wing margin far before its middle, R_{4+5} far before its wing apex.



Figs 1-16. *Dasineura tavolga* sp. n., 1-4, 7, 9, 10, 15, 16 – male; 5, 6, 8, 11-14 – female. 1) genitalia; 2) gonostylus (variability of shape); 3) hypoproct (variability of shape); 4, 14) tarsal claw; 5, 10) 5th flagellomere; 6) flagellomeres 13-14; 7) wing; 8, 9) scape, pedicel, flagellomeres 1-2; 11) ovipositor laterally; 12, 15) palpus; 13) ovipositor ventrally; 16) flagellomeres 13-15. Scale line – 0.1 mm.

Gonocoxite not strongly dilated basally, 2.3 times as long as wide. Gonostylus 0.6 times as long as gonocoxite, not swollen, slightly bent in proximal half, 3.7-3.9 times as long as wide. Cerci cordiform, with deep, nearly triangular emargination,

non-sclerotized, gradually broadened basally, 2.8 times as wide as hypoproct. Hypoproct sclerotized, strongly emarginate at apex, almost parallel-side. Basal outgrowths of gonocoxites not sclerotized, nearly triangular, somewhat beveled apically toward aedeagus and slightly undulate.

FEMALE. Body length 1.4-1.8 mm with retracted ovipositor. Antennae 2+14-segmented, 1st flagellomere 1.1 times as long as flagellomere 2. 5th flagellomere 1.3 times as long as wide; flagellomere 14 consists of two fused segments, 1.2 times as long as flagellomere 13, with rounded apex. Palpi 4-segmented, with rounded apex, its proportion 2:3:4:5. Tarsal claw larger than in male, with larger tooth at base. Apical plate of ovipositor nearly rounded, covered with setae slightly longer than those on ventral side of abdominal segment IX, 3.0-3.5 times as long as wide.

BIOLOGY. Gregarious yellow larvae in small flower gall. One generation per year. Pupation in soil. Prepupa overwinters. Adults were reared in laboratory.

RELATIONSHIPS. New species closely related to *D. incola* Fedotova, 1990 (Kazakhstan) from leaf galls on *Spiraea hypericifolia* (Fedotova, 1990) but differs from it by shape of gonostylus (that more bent in proximal half) and not equal length of the neck and node of male flagellomere 5.

***Asteralobia (Euasteralobia) clematidis* Fedotova sp. n.**

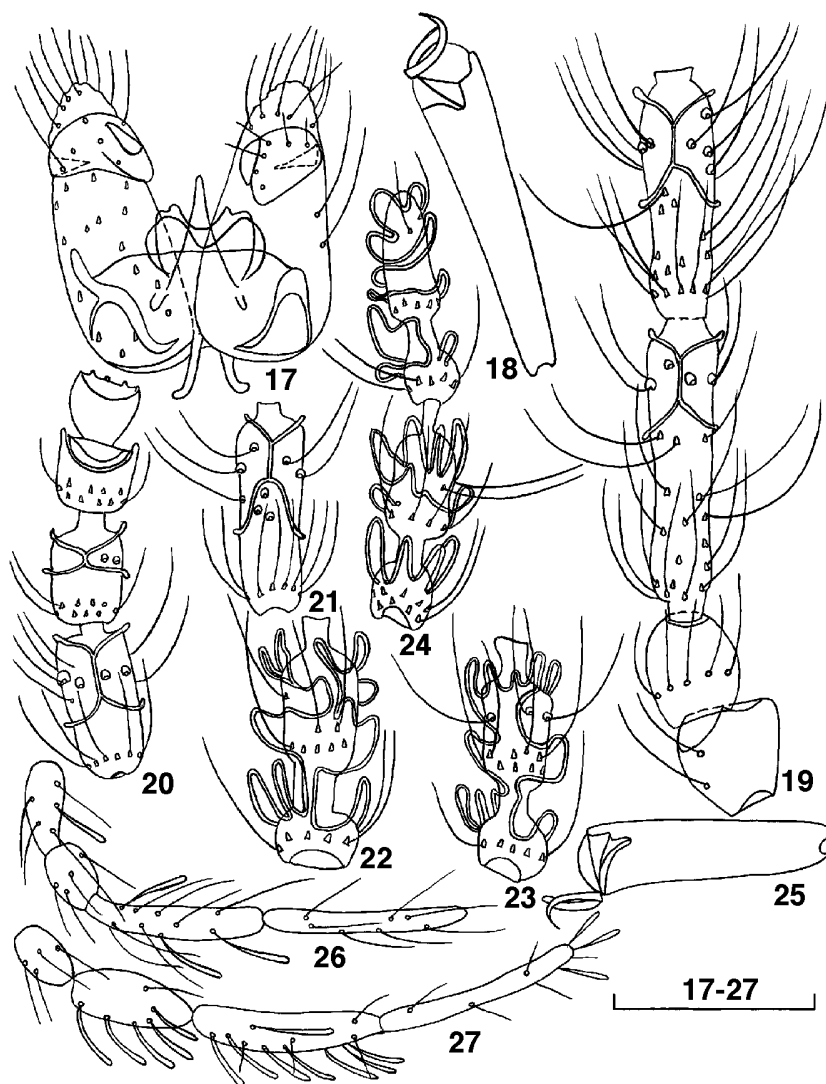
Figs. 17-27, 185

MATERIAL. Holotype – ♂ (slide N 7016 /1): Russia, Primorskii krai, 30 km SE Ussuriysk, Kamenushka, 12.VII 2001, larvae in leaf and flower galls on *Clematis brevicaudata* (Z. Fedotova). Paratypes – 5♂, 39♀ (slides N 7016/1-6) from the same locality, emergence after winter in laboratory.

DESCRIPTION. MALE. Body length 1.4-1.9 mm. Medial width of eye bridge 7 to 8 facets. Antennae 2+12-segmented. 1st flagellomere 1.1 times as long as flagellomere 2. 5th flagellomere 3.1 times as long as wide, distal node 4 times as long as distal neck; distal node 2 times as long as proximal one and 5.4 times as long as proximal neck. Flagellomere 12 rounded apically, with more distinct proximal neck, equal length to flagellomere 11. Palpi 4-segmented, its proportion as 3:2:6:7. 4th segment parallel-side, narrowing toward apex. Tarsal claw simple, empodium longer claw. Wings 2.3 times as long as wide. Vein R_{1+2} running into anterior wing margin far before its middle, R_{4+5} into wing apex.

Gonocoxite weakly dilated basally, 2.6 times as long as wide. Gonostylus 0.3 times as long as gonocoxite, not swollen, slightly bent in proximal half, 1.7 times as long as wide. Cerci cordiform; with deep, nearly triangular emargination, non-sclerotized. Hypoproct 1.1 times slender as cerci, strongly emarginate at apex, forming a pair of subtriangular, gradually widening medially. Genital base slender, weakly sclerotized.

FEMALE. Body length 1.3-2.2 mm with retracted ovipositor. Antennae 2+12-segmented, 1st flagellomere 1.2 times as long as flagellomere 2. 5th flagellomere 3.1 times as long as wide; with little neck. 10th flagellomere 1.6 times as long as



Figs 17-27. *Asterolobia (Euasteralobia) clematidis* sp. n., 17, 22-26 – male; 18-21, 27 – female. 17) genitalia; 18, 25) tarsal claw; 19) scape, pedicel, flagellomeres 1-2; 20) flagellomeres 9-12; 21, 22) 5th flagellomere; 23) 9th flagellomere; 24) flagellomeres 11-12; 26, 27) palpus. Scale line – 0.1 mm.

flagellomere 11; flagellomere 12 with dentated apex. Palpi 4-segmented, its proportion as 3:5:8:9, last segment with rounded apex. Tarsal claw simple, larger than in male, empodium longer than claw.

BIOLOGY. Gregarious white larvae in a gall on leave at 1st generation and in flower galls at 2nd one. The leaves are weakly thickened, weakly covered with white hair and pressed together. Sometimes leaf fold, upper leaf surface at top, lower at bottom. Leave galls of irregular shape. Larvae developing in groups of 4-6 without separate chambers at gall base. The flower galls are wait and strongly swelled. Pupation in soil.

RELATIONSHIPS. New species closely related to Russian Far Eastern one, *A. (E.) calathidiphaga* Kovalev, 1964, reared from *Cacalia hastata* flowers (Kovalev, 1964), but differs from it by the presence of necks on 1st female flagellomere and almost equal wide of cerci and hypoproct.

***Asteralobia (Euasteralobia) spiraeae* Fedotova sp. n.**

Figs 28-39, 193-195

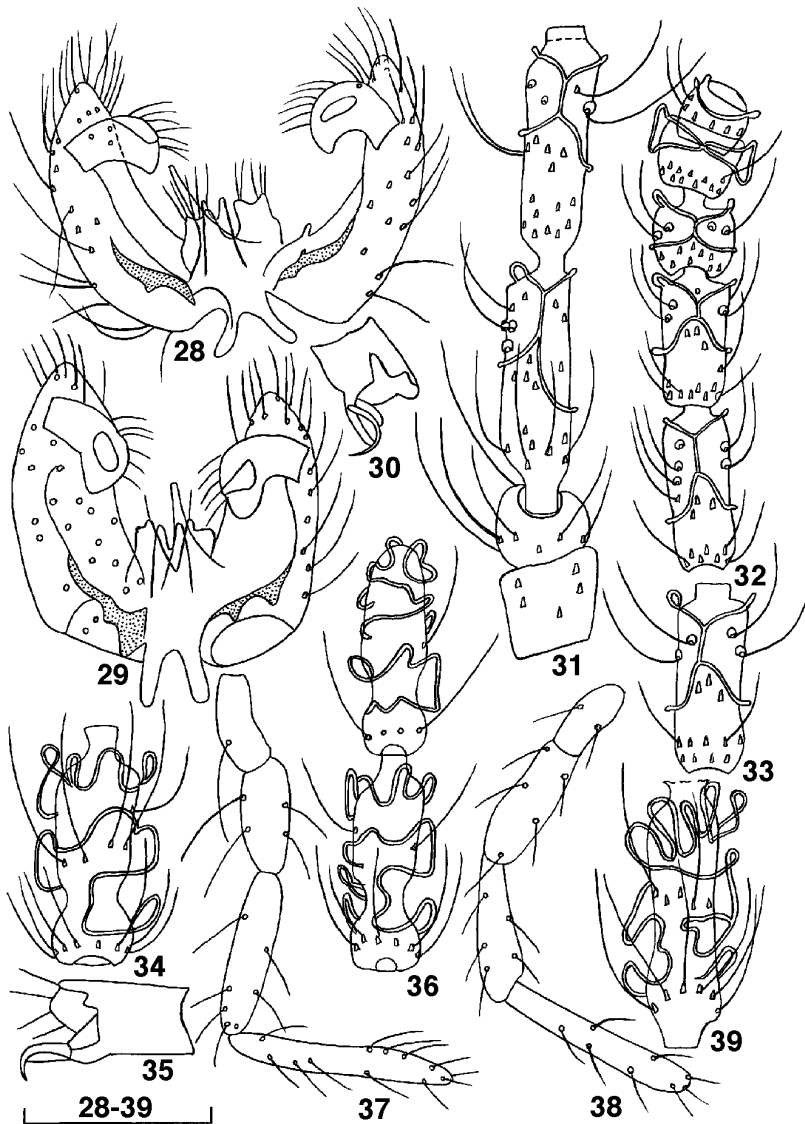
MATERIAL. Holotype – ♂ (slide N 7036 a/1): Russia, Primorskii krai, 30 km SE Ussuriysk, Kamenushka, 15.VII 2001, larvae in leave and bud galls on *Spiraea salicifolia* (Z. Fedotova). Paratypes – 8♂, 2♀ (slides N 7036 a/1-8) from the same locality, emergence after overwinter in laboratory.

DESCRIPTION. MALE. Body length 1.2-1.9 mm. Medial width of eye bridge 8 to 10 facets. Antennae 2+12-segmented. 1st flagellomere 1.1 times as long as flagellomere 2. 5th flagellomere 3.4 times as long as wide, distal node 5 times as long as distal neck; also distal node 2.3 times as long as proximal one and equal length proximal neck. Flagellomere 12 rounded apically, with more distinct proximal neck, almost equal length to flagellomere 11. Palpi 4-segmented, its proportion as 2:3:3:5. 4th segment parallel-side, rounding toward apex. Tarsal claw simple, empodium longer claw. Wings 2.3 times as long as wide. Vein R_{1+2} running into anterior wing margin far before its middle, R_{4+5} into wing apex.

Gonocoxite weakly dilated basally, 2.6 times as long as wide. Gonostylus 0.4 times as long as gonocoxite, not swollen, slightly bent in proximal half, 2.2 times as long as wide. Cerci cordiform; with deep, nearly triangular emargination, non-sclerotized Hypoproct 2.0 times slender as cerci, strongly emarginate at apex, forming a pair of subtriangular, gradually broadened medially. Genital base slender, weakly sclerotized.

FEMALE. Body length 1.3-1.9 mm with retracted ovipositor. Antennae 2+12-segmented, 1st flagellomere 1.2 times as long as flagellomere 2. 5th flagellomere 2.7 times as long as wide; with little neck. 10th flagellomere 1.2 times as long as 11th ones, flagellomere 12 with rounded apex. Palpi 4-segmented, its proportion as 2:3:4:5, last segment with rounded apex. Tarsal claw simple, larger than in male, empodium equal with claw length.

BIOLOGY. Gregarious pink larvae in a gall on rolled leaves and conical bud galls. The leaves are weakly thickened, densely covered with white hair and pressed together. Pupation in soil. Development of only one generation was observed in July. Adults were reared from galls after winter in laboratory conditions.



Figs 28-39. *Asterolobia (Euasteralobia) spiraeae* sp. n., 28-30, 34, 36, 38, 39 – male; 31-33, 35, 37 – female. 28, 29) genitalia (variability of shape); 30, 35) tarsal claw; 31) scape, pedicel, flagellomeres 1-2; 32) flagellomeres 9-12; 33, 34) 5th flagellomere; 36) flagellomeres 11-12; 37, 38) palpus; 39) 1st flagellomere. Scale line – 0.1 mm.

RELATIONSHIPS. New species closely related to *A. (E.) clematidis* sp. n. but differs from it by the presence of many sensorial file on male flagellum, strongly curved gonostylus and slender hypoproct.

***Asteralobia (Euasteralobia) veronicastrum* Fedotova sp. n.**

Figs 40-50, 192

MATERIAL. Holotype – ♂ (slide N 7050/1): Russia, Primorskii krai, 30 km SE Ussuriysk, Kamenushka, 15.VII 2001, larvae in flower galls on *Veronicastrum sibiricum* (Z. Fedotova). Paratypes – 7♂, 1♀ (slides N 7050/2-6) from the same locality, emergence after winter in laboratory.

DESCRIPTION. MALE. Body length 1.8-2.1 mm. Medial width of eye bridge 8 to 10 facets. Antennae 2+12-segmented. 1st flagellomere 1.1 times as long as flagellomere 2. 5th flagellomere 2.9 times as long as wide, distal node 4.3 times as long as distal neck; distal node 1.8 times as long as proximal one and 4.2 times as long as proximal neck. 12th flagellomere rounded apically, with weakly distinct proximal neck, almost equal length with flagellomere 11. Palpi 4-segmented, its proportion as 4:3:5:8. 4th segment parallel-side, rounding toward apex. Tarsal claw simple, empodium not longer than claw. Wings 2.3 times as long as wide. Vein R_{1+2} running into anterior wing margin far before its middle, R_{4+5} into wing apex.

Gonocoxite strongly dilated basally, 2.6 times as long as wide. Gonostylus 0.3 times as long as gonocoxite, not swollen, slightly bent in proximal half, 1.8 times as long as wide. Cerci cordiform; with deep, nearly triangular emargination, non-sclerotized. Hypoproct 2.2-3.9 times slender as cerci, strongly emarginate at apex, forming a pair of subtriangular, almost parallel-side. Genital base slender, weakly sclerotized.

FEMALE. Body length 1.8 mm with retracted ovipositor. Antennae 2+12-segmented, 1st flagellomere 1.1 times as long as 2nd ones. 5th flagellomere 3.1 times as long as wide; with little neck. 10th flagellomere equal to 11th ones, flagellomere 12 with dentated apex. Palpi 4-segmented, its proportion as 3:3:5:5, with rounded apex. Tarsal claw simple, larger than in male, empodium not longer than claw.

BIOLOGY. Solitary orange larvae in flower galls. The flower galls are weakly swelled. Pupation in soil. Gall of irregular shape, almost around, looking weakly pubescent, 0.5 cm in diameter.

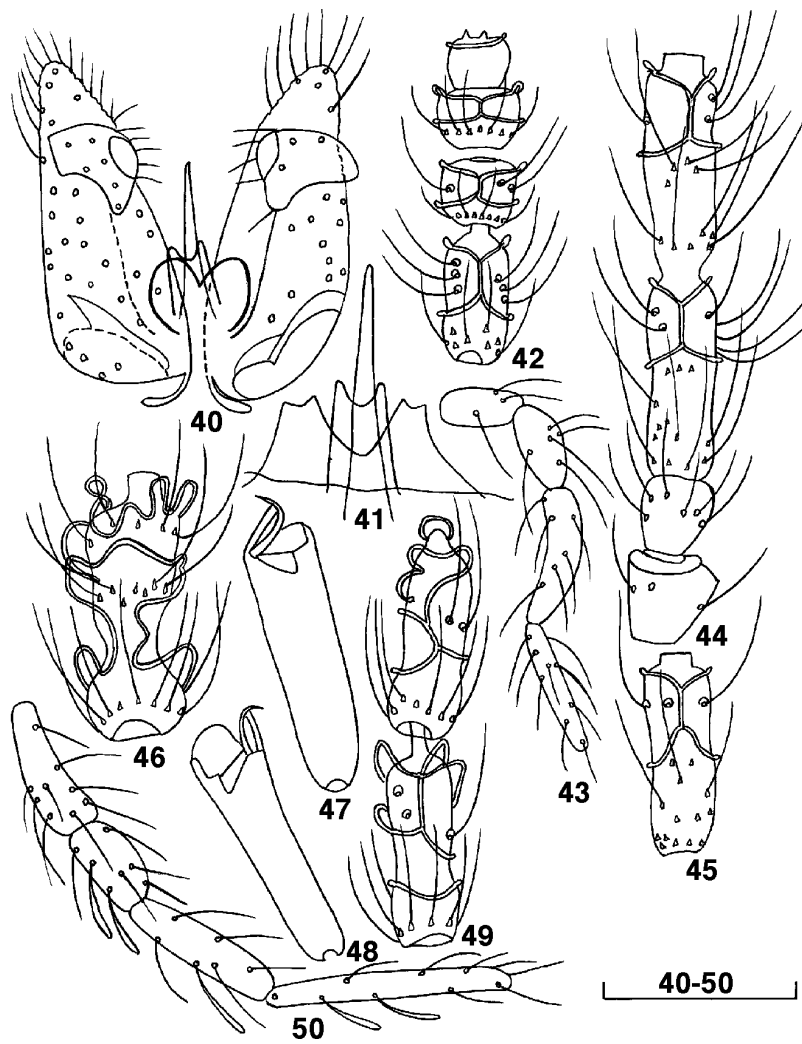
RELATIONSHIPS. New species closely related to *A. (E.) spiraeae* sp. n., but differs from it by strongly curved gonostylus, weakly distinct necks at last male flagellomere and very long palpus.

***Gynandrobremia populicola* Fedotova sp. n.**

Figs 51-63, 187, 188

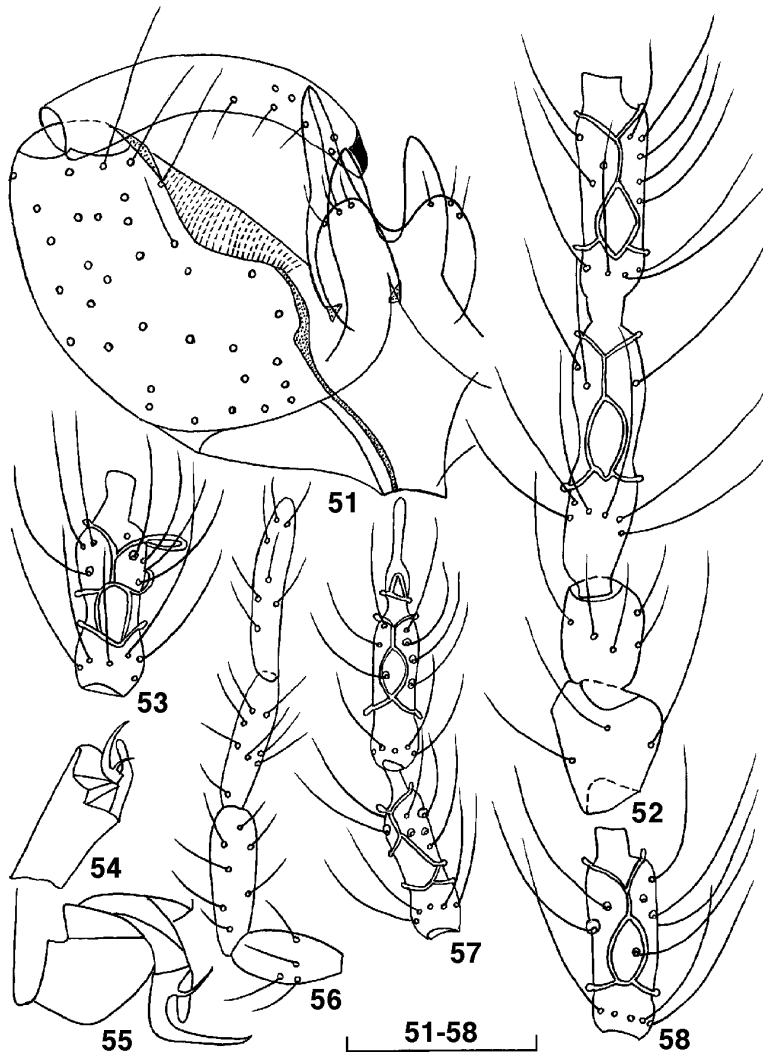
MATERIAL. Holotype – ♂ (slide N 7015/1): Russia, Primorskii krai, 30 km SE Ussuriysk, Kamenushka, 12.VII 2001, larvae in leaf galls on *Populus koreana* (Z. Fedotova). Paratypes – 9♂, 19♀ (slides N 7015/2-14) from the same locality, emergence after winter in laboratory.

DESCRIPTION. MALE. Body length 1.8-2.5 mm. Medial width of eye bridge 10 to 12 facets. Antennae 2+12-segmented. 1st flagellomere 1.2 times as long as 2nd flagellomere. 5th flagellomere 3.3 times as long as wide, node 3.9 times as long



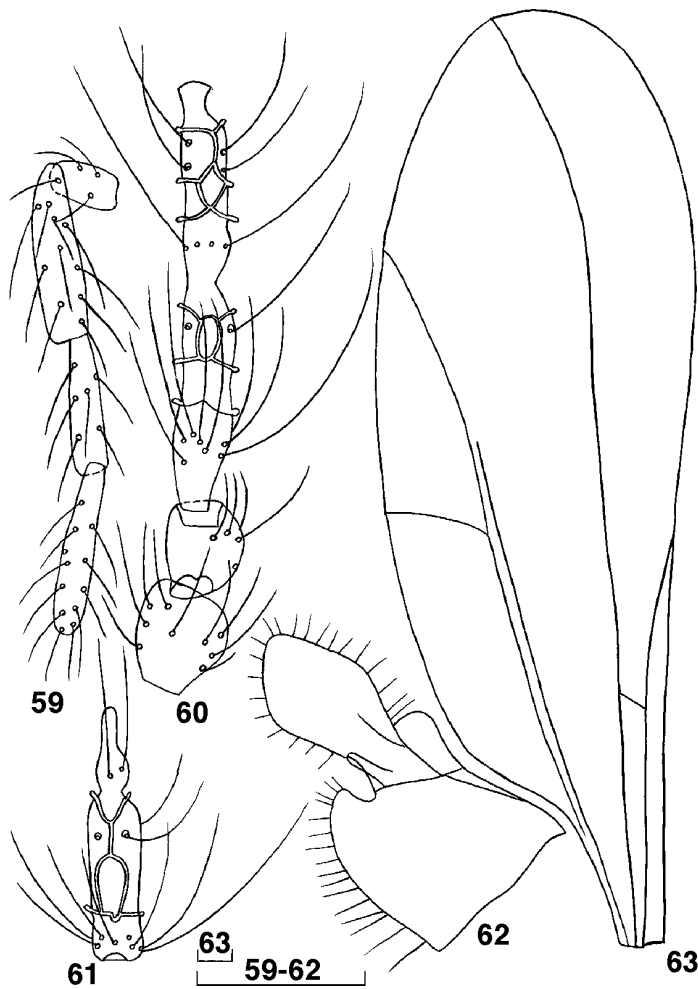
Figs 40-50. *Asterolobia (Euasteralobia) veronicastrum* sp. n., 40, 41, 46, 48, 50 – male; 42-45, 47, 49 – female. 40) genitalia; 41) cerci, hypoproct and aedeagus (variability of shape); 42) flagellomeres 9-12; 43, 50) palpus; 44) scape, pedicel, flagellomere 1-2; 45, 46) 5th flagellomere; 47, 48) tarsal claw; 49) flagellomeres 11-12. Scale line – 0.1 mm.

as neck. 12th flagellomere with long, setose protrusion, 1.6 times as long as flagellomere 11. Palpi 4-segmented, its proportion as 3:7:6:7, 4th segment almost parallel-side, broadened toward apex. Tarsal claw with fine bent tooth at base, empodium not longer claw. Wings 3.1 times as long as wide. Vein R_{1+2} running into anterior wing margin far before its middle, R_{4+5} into wing behind apex.



Figs 51-58. *Gynandrobremia populicola* sp. n., 51-54, 56, 77 – male; 55, 58 – female. 51) genitalia; 52) scape, pedicel, flagellomeres 1-2; 53, 58) 5th flagellomere; 54, 55) tarsal claw; 56) palpus; 57) flagellomeres 11-12. Scale line – 0.1 mm.

Gonocoxite strongly dilated basally, 1.7 times as long as wide. Gonostylus 0.9 times as long as gonocoxite, not swollen, slightly bent in proximal half, 4.6 times as long as wide. Cerci cordiform; with deep, nearly triangular emargination, non-sclerotized, 1.3 times as wide as hypoproct. Hypoproct sclerotized, shallowly emarginate at apex, gradually broadened medially. Genital base wide, weakly sclerotized. Aedeagus slender, weakly larger medially and narrowing apically.



Figs 59-63. *Gynandrobremia populicola* sp. n., 59-62 – female; 63 – male. 59) palpus; 60) scape, pedicel, flagellomeres 1-2; 61) 12th flagellomere; 62) apex of ovipositor laterally; 63) wing. Scale line – 0.1 mm.

FEMALE. Body length 1.9-3.2 mm with retracted ovipositor. Antennae 2+12-segmented, 1st flagellomere 1.3 times as long as 2nd. 5th flagellomere 3.1 times as long as wide; node 6.7 times as long as neck. Flagellomere 12 with long, setose protrusion, 1.3 times as long as flagellomere 11. Palpi 4-segmented, its proportion as 3:6:5:6, with pointed apex. Tarsal claw larger than in male, with larger tooth at base. Ovipositor 1.9 times as long as wide, covered with setae slightly longer than those on ventral side of abdominal segment IX. Apical plate with rounded apex, length 2.3-3.3 times more than its wide.

BIOLOGY. Gregarious rouse (host) and white larvae (inquiline *Ametrodiplosis populicola* Kovalev, 1972) in a rolled galls on leave. The leaves are strongly thickened, densely covered with white and rose spots and often pressed together at apex stem. Part full-grown larvae drop to the ground to pupate, the other part are pupating in the galls. Up to two generations occur per year. Part of the larvae of first generation were pupated only spring next year.

RELATIONSHIPS. New species closely related to *G. viciae* Mamaev, 1965, reared from leave galls on *Vicia cracca*, describing from Russia: Vologda region (Mamaev, 1965) but differs from it by cordiform cerci and deep emarginated hypoproct (not V-shaped) and more created gonostylus.

***Gynandrobremia maackiaefloris* Fedotova sp. n.**

Figs 64-79

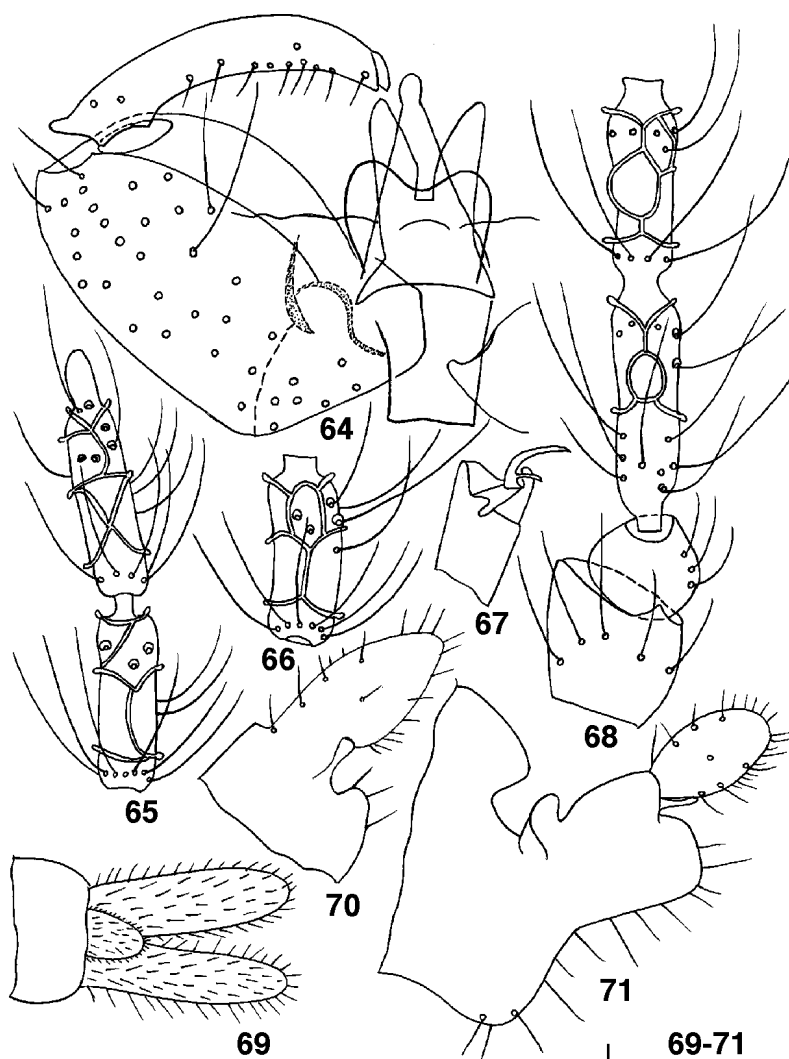
MATERIAL. Holotype – ♂ (slide N 7041/1): Russia, Primorskii krai, 30 km SE Ussuriysk, Kamenushka, 15.VII 2001, larvae in flower galls on *Maackia amurensis* (Z. Fedotova). Paratypes – 7♂, 12♀ (slides N 7041/1-8) from the same locality, emergence after overwinter in laboratory.

DESCRIPTION. MALE. Body length 1.7-2.6 mm. Medial width of eye bridge 10 to 11 facets. Antennae 2+12-segmented. 1st flagellomere 1.1 times as long as 2nd. 5th flagellomere 2.8-3.0 times as long as wide, node 6.8-7.1 times as long as neck. 12th flagellomere with long, setose protrusion, 1.3 times as long as flagellomere 11. Palpi 4-segmented, its proportion as 2:6:4:4, 4th segment almost parallel-side, narrowing toward apex. Tarsal claw with fine bent tooth at base, empodium very short. Wings 2.7 times as long as wide. Vein R_{1+2} running into anterior wing margin far before its middle, R_{4+5} into wing behind apex.

Gonocoxite not strongly dilated basally, 1.3 times as long as wide. Gonostylus equal length as gonocoxite, not swollen, slightly bent in proximal half, 4.9 times as long as wide. Cerci cordiform; with not deep, nearly rounded emargination, non-sclerotized, 1.3 times as wide as hypoproct. Hypoproct sclerotized, deeply emarginate at apex, almost parallel-side. Genital base wide, weakly sclerotized. Aedeagus conical, strongly larger basally and rounded apically.

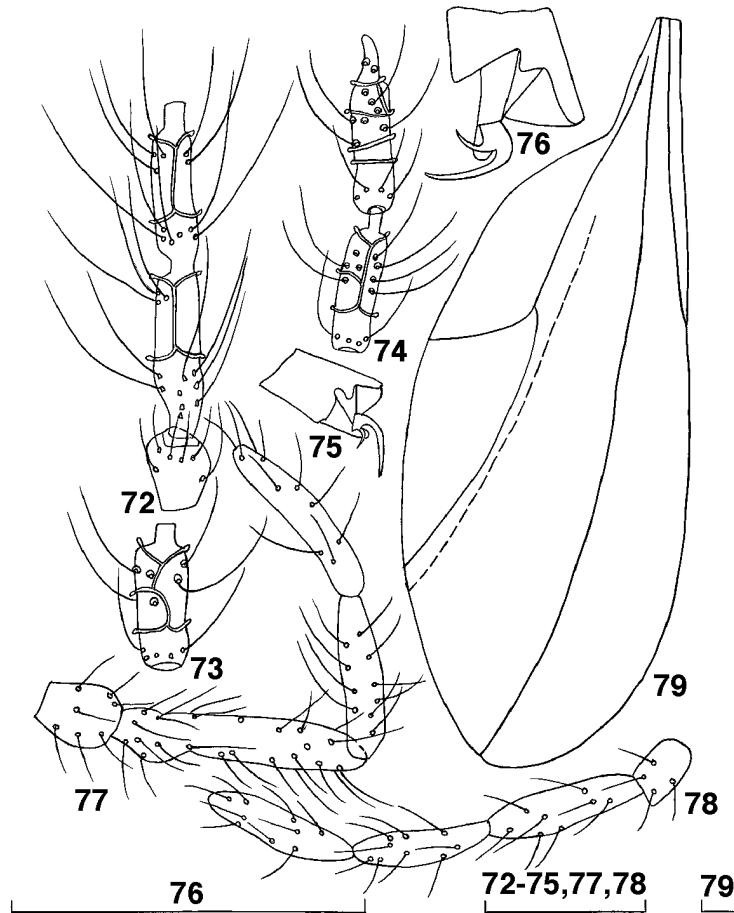
FEMALE. Body length 1.8-3.2 mm with retracted ovipositor. Antennae 2+12-segmented, 1st flagellomere 1.3 times as long as 2nd. 5th flagellomere 2.5 times as long as wide; node 10.2 times as long as neck. Flagellomere 12 with long, setose protrusion, 1.3 times as long as flagellomere 11. Palpi 4-segmented, its proportion as 3:7:6:7 with rounded apex. Tarsal claw larger than in male, with larger tooth at base. Ovipositor 1.5 times as long as wide, covered with setae slightly smaller than those on ventral side of abdominal segment IX. Apical plate with conical or rounded apex, length 1.5-2.1 times more than its wide.

BIOLOGY. Gregarious yellow (host) and white larvae (inquiline *Ametrodiplosis maackiae* sp. n., *Lestodiplosis maackiae* sp. n., *Contarinia* sp. and *Clinodiplosis* sp.) in not swelled flower galls. The flower are weakly thickened. Pupation in soil. There is one generation per year.



Figs 64-71. *Gynandrobremia maackiaefloris* sp. n., 64 – male; 65-71 – female. 64) genitalia; 65) flagellomeres 11-12; 66) 5th flagellomere; 67) tarsal claw; 68) scape, pedicel, flagellomeres 1-2; 69) apex of ovipositor ventrally; 70, 71) apex of ovipositor laterally (variability of shape). Scale line – 0.1 mm.

RELATIONSHIPS. New species closely related to *G. populicola* sp. n., but differs from it by the presence of less longed necks on male and female flagellomeres, larger wing and rounded apical part of aedeagus.



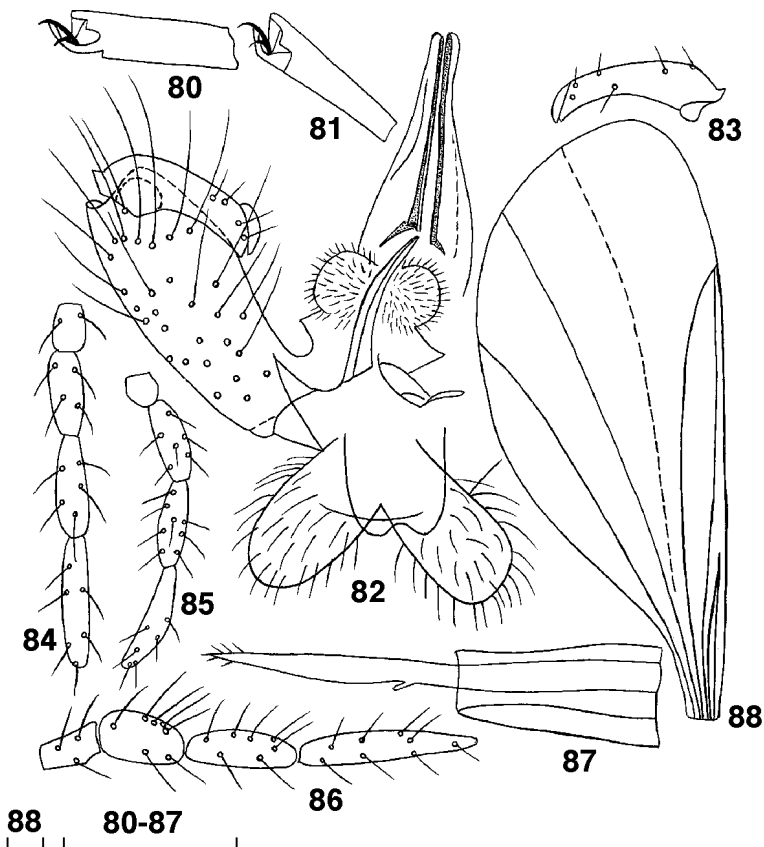
Figs 72-79. *Gynandrobremia maackiaefloris* sp. n., 72-76, 78, 79 – male; 77 – female. 72) scape, pedicel, flagellomeres 1-2; 73) 5th flagellomere; 74) flagellomeres 11-12; 75, 76) tarsal claw (variability of shape); 77, 78) palpus; 79) wing. Scale line – 0.1 mm.

***Trotteria humulopsidis* Fedotova sp. n.**

Figs 80-90, 186

MATERIAL. Holotype – ♂ (slide N 7025 b/1): Russia, Primorskii krai, 30 km SE Ussuriysk, Kamenushka, 14.VII 2001, larvae in flower galls on *Humulopsis scandens* (Z. Fedotova). Paratypes – 1 ♂, 2 ♀ (slides N 7025 b/2-3) from the same locality, emergence after winter in laboratory.

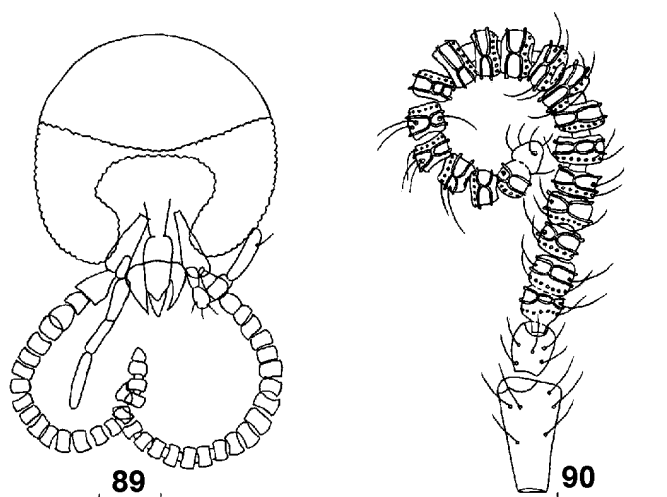
DESCRIPTION. MALE. Body length 2.1-2.8 mm. Eye bridge without of facets wide medially. Antennae 2+19-segmented. Scape of antenna 2.3 times as long as pedicel. Flagellomere 1 almost equal length of 2nd flagellomere. 5th flagellomere 2.7 times as long as wide, neck is absent. 18th flagellomere ovoid-form, 1.1 times as



Figs 80-88. *Trotteria humulopsidis* sp. n., 80, 82, 83, 85, 88 - male; 81, 84, 86, 87 - female. 80, 81) tarsal claw; 82) genitalia; 83) gonostylus; 84-86) palpus (variability of shape); 87) ovipositor laterally; 88) wing. Scale line - 0.1 mm.

long as flagellomere 19. Palpi 4-segmented, its proportion as 2:5:6:7, last narrowing toward apex. Tarsal claw with fine bent tooth at base, empodium not longer than claw. Wings 2.5 times as long as wide. Vein R_{1+2} running into anterior wing margin far before its middle, R_{4+5} far before its apex.

Gonocoxite strongly dilated apically, 2.4 times as long as wide. Gonostylus 0.5 times as long as gonocoxite, swollen proximally, slightly bent in medial part, 1.7 times as long as wide. Cerci cordiform, with deep, strongly triangular emargination, non-sclerotized. Cerci 2.6 times as wide as hypoproct, sclerotized, shallowly emarginate at apex, not gradually broadened basally. Basal outgrowths of gonocoxites uniformly strongly rounded, somewhat beveled apically toward aedeagus and slightly undulate. Genital base wide, weakly sclerotized.

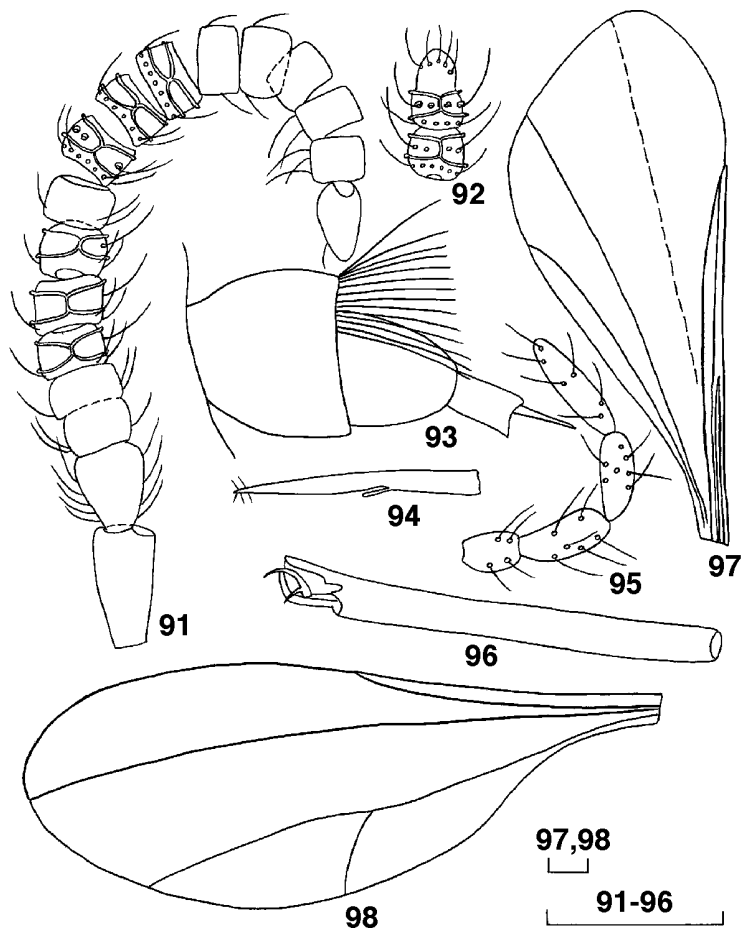


Figs 89-90. *Trotteria humulopsidis* sp. n. 89) female head; 90) male antenna. Scale line – 0.1 mm.

FEMALE. Body length 2.0-2.8 mm with retracted ovipositor. Antennae 2+19-2+20 segmented. Scape of antenna 2.3 times as long as pedicel. 1st flagellomere almost equal to length of flagellomere 2. 5th flagellomere 2.7 times as long as wide, neck is absent. Flagellomere 18 ovoid-form, 1.1 times as long as 19th flagellomere. Palpi 4-segmented, its proportion as 3:4:6:9 or 3:4:5:6, last segment with pointed apex. Tarsal claw larger than in male, with larger tooth at base. Apical plate of ovipositor covered with setae slightly longer than those on ventral side of abdominal segment IX, 6.7 times as long as wide and strongly pointed.

BIOLOGY. Solitary white larvae in a gall of *Asteralobia humuli* (Shinji) on leaf. Subglobular or ellipsoidal swelling normally on the hypophyllous portion of leaf veins, sometimes on the flower bud, peduncule or on the epiphyllous portion of leaf veins; surface white or pale yellow, with white hairs, sometimes with a reddish tinge; major axis 1.7-5.0 mm, minor axis 1.2-3.0 mm, height 1.0-2.2 mm; monothalanus; each gall containing normally 1, rarely 2 midge larvae. Number of galls per leaf normally ranging from 1 to 12; sometimes 2 or 3 galls, produced continuously (Yukawa, 1983). Pupation in soil. Two generations in Primorye. Prepupa overwinters. Adults were reared from galls of new vegetation period and after winter in laboratory.

RELATIONSHIPS. New species closely related to *T. ussuriana* Kovalev, 1965, reared from the galls *Asteralobia calathidiphaga* Kovalev, 1964 on *Cacalia hastata* (Kovalev, 1967), but differs from it by the presence of 19 (not 15) male flagellomeres, very long hypoproct, cordiform cerci and strongly pointed apical plate ovipositor. *A. calathidiphaga* is a new species for Russian fauna. Until now it was known from Japan.



Figs 91-98. *Trotteria veronicastricola* sp. n., female (91-97) and *Mycodiplosis fraxinicola* sp. n., male (98). 91) antenna; 92) flagellomeres 14-15; 93) apex of abdomen; 94) apex of ovipositor; 95) palpus; 96) tarsal claw; 97, 98) wing. Scale line – 0.1 mm.

***Trotteria veronicastricola* Fedotova sp. n.**

Figs 91-97, 192

MATERIAL. Holotype – ♀ (slide N 7050 a/1): Russia, Primorskii krai, 30 km SE Ussuriysk, Kamenushka, 15.VII 2001, larvae in flower galls on *Veronicastrum sibiricum* (Z. Fedotova). Paratype – 1 ♀ (slide N 7050 a/2) from the same locality, emergence after overwinter in laboratory.

DESCRIPTION. FEMALE. Body length 1.8-2.2 mm with retracted ovipositor. Antennae 2+15-segmented. Scape of antenna 2.3 times as long as pedicel. 1st flage-

llomere 1.2 times as long as flagellomere 2. 5th flagellomere 1.6 times as long as wide. 15th flagellomere ovoid-form, 1.7 times as long as flagellomere 14. 14th flagellomere not consists of two fused segments, with conical apex. Palpi 4-segmented, its proportion as 2:3:3:4, last segment with pointed apex. Tarsal claw large, with larger tooth at base, empodium equal length as tarsal claw. Apex of ovipositor covered with setae slightly longer then those on ventral side of abdominal segment IX.

MALE. Unknown.

BIOLOGY. Solitary white larvae in flower galls of *Asteralobia veronicastrum* sp. n. described above. The flowers petalus are weakly thickened, irregular shape, densely covered with white hair and pressed together. Prepupa overwinters. One generation, according of material from Primorye.

RELATIONSHIPS. New species closely related to *T. humulopsidis* sp. n., but differs from it by the presence of 2+15 (not 2+19-20) flagellomeres of female; wing broadened far from middle (not medially) and short apical plate of ovipositor.

***Trotteria clematicola* Fedotova sp. n.**

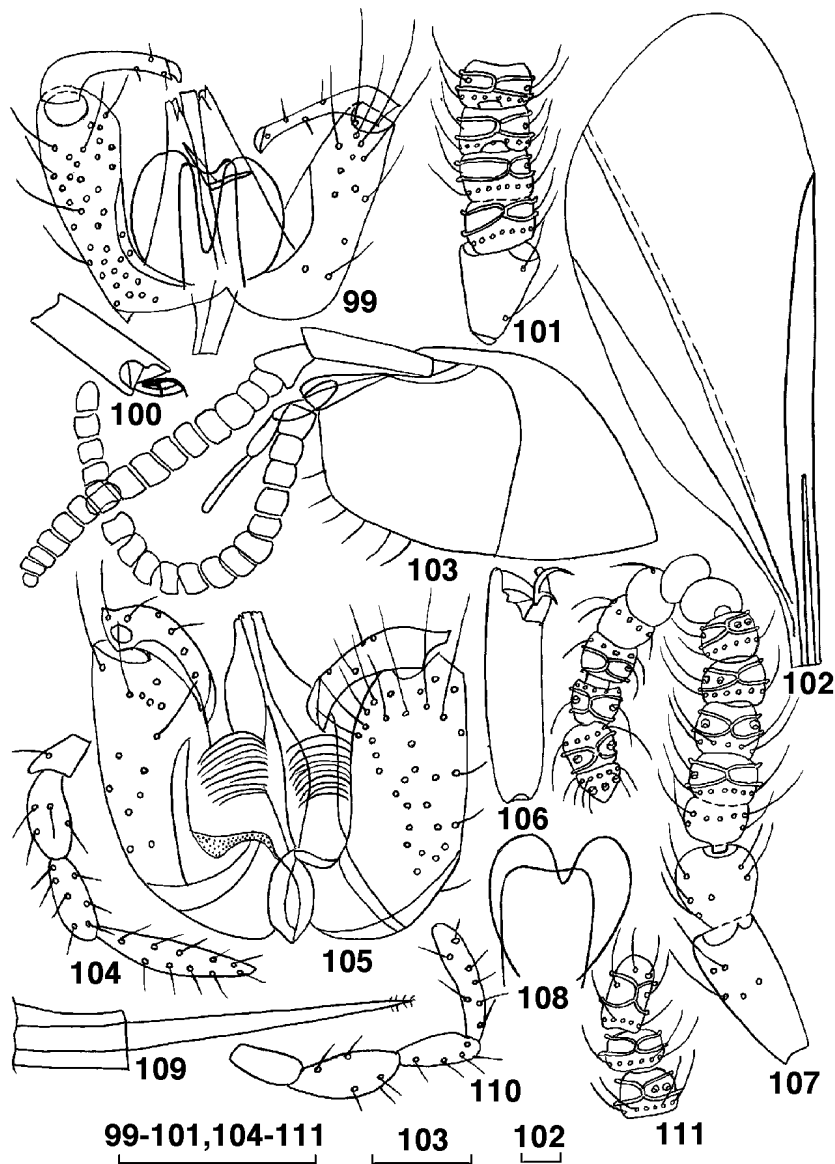
Figs 99-111, 185

MATERIAL. Holotype – ♂ (slide N 7016 a/1): Russia, Primorskii krai, 30 km SE Ussuriysk, Kamenushka, 12.VII 2001, larvae in leave and flower galls on *Clematis brevicaudata* (Z. Fedotova). Paratypes – 3 ♂, 12 ♀ (slides N 7016 a/2-7) from the same locality, emergence after overwinter in laboratory.

DESCRIPTION. MALE. Body length 1.2 mm. Scape of antenna 1.8 times as long as pedicel. 1st flagellomere as long as 2nd. 5th flagellomere 1.3 times as long as wide. Flagellomere 12 conical, fused from two segments. Palpi 4-segmented, its proportion as 2:4:3:4 or 1:2:2:4. Last segment 2.2 times as long as 1st, larger medially, narrowing toward apex. Tarsal claw with fine bent tooth at base, empodium longer than half claw length. Wings 2.6 times as long as wide. Vein R_{1+2} running into anterior wing margin far before its middle, R_{4+5} far before wing apex.

Gonocoxite almost parallel-side or oval-form, 2.6 times as long as wide. Gonostylus 0.5 times as long as gonocoxite, swollen, slightly bent medially, 1.8-3.4 times as long as wide. Cerci cordiform, with deep, nearly triangular emargination, non-sclerotized. Hypoproct 0.4-0.7 times as wide as cerci, sclerotized, shallowly emarginate at apex, parallel-side. Basal outgrowths of gonocoxites uniformly strongly sclerotized, slightly broadened basally, somewhat beveled apically toward aedeagus and slightly undulate. Genital base wide, weakly sclerotized.

FEMALE. Body length 1.8-2.2 mm with retracted ovipositor. Antennae 2+15-18 segmented. Scape of antenna 3.0 times as long as pedicel. 1st flagellomere 1.1 times as long as 2nd. 5th flagellomere 1.8 times as long as wide. Last flagellomere not formed by two fused segments, 1.7 times as long as flagellomere 17, with rounded apex. Palpi 4-segmented, its proportions as 2:3:4:4, last segment with pointed apex. Tarsal claw larger than in male, with larger tooth at base, empodium longer than tarsal claws. Apex of ovipositor covered with setae slightly longer then those on ventral side of abdominal segment IX.



Figs 99-111. *Trotteria clematicola* sp. n., 99, 102, 105-108, 110 - male; 100, 101, 103, 104, 109, 111 - female. 99, 105) genitalia (variability of shape); 100, 106) tarsal claw; 101) pedicel, flagellomeres 1-4; 102) wing; 103) head; 104, 110) palpus; 107) antenna; 108) cerci and hypoproct (variability of shape); 109) apex of ovipositor; 111) flagellomeres 15-17. Scale line - 0.1 mm.

BIOLOGY. Gregarious white larvae in a gall on leave at 1st generation and in flower galls at 2nd one. The leaves are weakly thickened, densely covered with white hair and pressed together. Leaves are tightly rolled into a tube. The flower white galls are strongly swelled. Pupation in soil. Two generation in Primorye. Adults were reared from galls of a new vegetation period and wham prepupa overwintered in laboratory conditions.

RELATIONSHIPS. New species closely related to *T. veronicastricola* sp. n., but differs from it by the presence of more longer scape of female antenna, not distinctly developed apical plate of ovipositor and more long wing.

***Trotteria asteralobiphila* Fedotova sp. n.**

Figs 112-121, 193-195

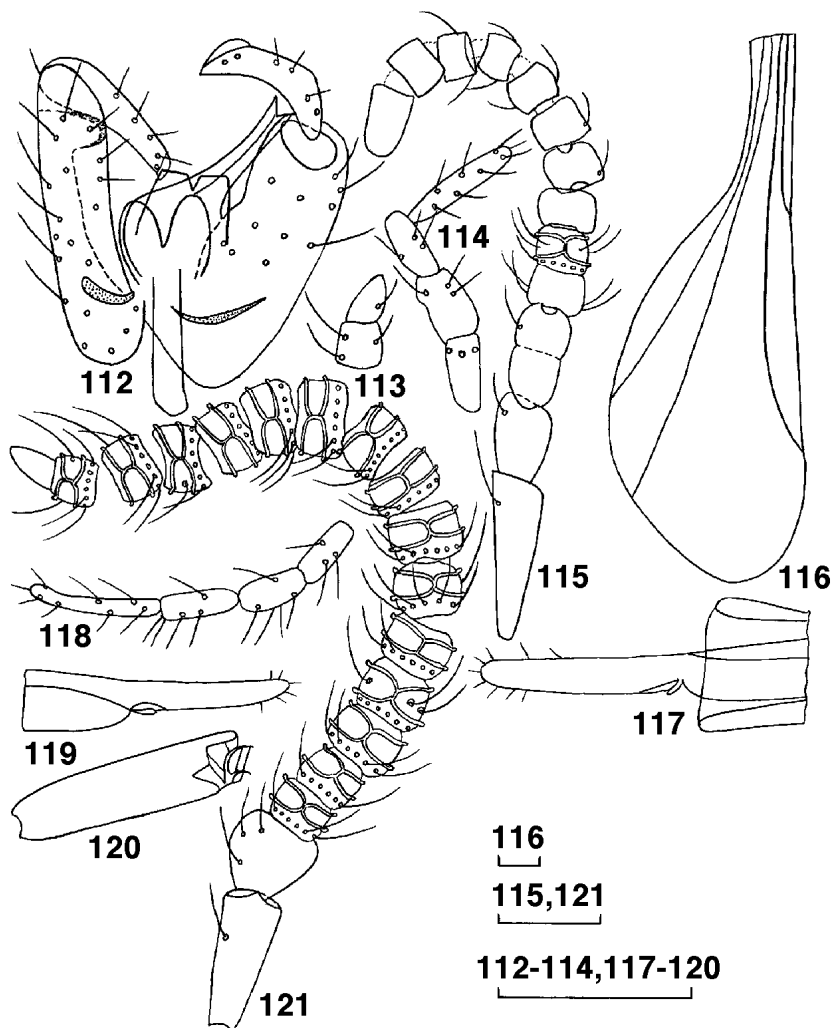
MATERIAL. Holotype – ♂ (slide N 7036 b/1): Russia, Primorskii krai, 30 km SE Ussuriysk, Kamenushka, 15.VII 2001, larvae in leave and bud galls on *Spiraea salicifolia* (Z. Fedotova). Paratypes – 3 ♀ (slides N 7036 b/2-4) from the same locality, emergence after winter in laboratory.

DESCRIPTION. MALE. Body length 1.4 mm. Scape of antenna 2.0 times as long as pedicel. 1st flagellomere 1.3 times as long as 2nd. 5th flagellomere 1.5 times as long as wide, neck is absent. 14th flagellomere ovoid-form, 1.9 times as long as flagellomere 13. Palpi 4-segmented, its proportion as 2:2:2:4, last segment narrowing toward apex. Tarsal claw with fine bent tooth at base, empodium not longer than claw. Wings 2.8 times as long as wide. Vein R_{1+2} running into anterior wing margin, far before its middle, R_{4+5} far before its apex.

Gonocoxite strongly dilated apically, 2.5 times as long as wide. Gonostylus 0.5 times as long as gonocoxite, swollen proximally, slightly bent in medial part, 3.4 times as long as wide. Cerci cordiform, with deep, strongly triangular emargination, non-sclerotized. Hypoproct as wide as cerci, sclerotized, shallowly emarginate at apex, not gradually broadened basally. Basal outgrowths of gonocoxites uniformly strongly rounded, somewhat beveled apically toward aedeagus and slightly undulate. Genital base wide, weakly sclerotized.

FEMALE. Body length 1.2-1.5 mm with retracted ovipositor. Antennae 2+14-2+16 segmented. Scape of antenna 2.0 times as long as pedicel. 1st flagellomere almost equal to length of flagellomere 2. 5th flagellomere 1.4 times as long as wide, neck is absent. Flagellomere 16 conical, 1.1 times as long as flagellomere 15. Palpi 4-segmented, its proportion as 2:2:3:4, with thin apex. Tarsal claw larger than in male, with large tooth at base. Apical plate of ovipositor almost parallel-side, covered with setae slightly more longer than those on ventral side of abdominal segment IX, 5.3-5.7 times as long as wide, with rounded apex. Little ventral plate presents.

BIOLOGY. Solitary white larvae in a galls of *Asteralobia* (*Euasteralobia*) *spiraeae* sp. n. Pupation on the plants galls and in the soil. Two generation in Primorye. Prepupa overwinters. Adults were reared from galls of new vegetation period and after winter in laboratory.



Figs 112-121. *Trotteria asteralobiphila* sp. n., 112, 114-116 – male; 113, 117-121 – female. 112) genitalia; 113) flagellomeres 15-16; 114, 118) palpus; 115, 121) antenna; 116) wing; 117, 119) apex of ovipositor (variability of shape); 120) tarsal claw. Scale line – 0.1 mm.

RELATIONSHIPS. New species closely related to *T. ussuriana* Kovalev, 1965, reared from the galls *Asteralobia calathidiphaga* Kovalev, 1964 on *Cacalia hastata* (Kovalev, 1967), but differs from it by the presence of the parallel-side apical plate of ovipositor with rounded apex and shape of hypoproct with obrupted apex.

***Lestodiplosis radosiae* Fedotova sp. n.**

Figs 122-133, 189-191

MATERIAL. Holotype – ♂ (slide N 8014 /1): Russia, Primorskii krai, 30 km SE Ussuriysk, Kamenushka, 27.VII 2001, larvae in leave, bud and flower galls on *Rabdosia excisa* (Z. Fedotova). Paratypes – 1 ♂, 2 ♀ (slides N 8014/1-2) from the same locality, emergence after winter in laboratory.

DESCRIPTION. MALE. Body length 1.2-1.3 mm. Medial width of eye bridge 10 to 12 facets. Antennae 2+12-segmented. 1st flagellomere 1.1 times as long as 2nd. 5th flagellomere 3.7 times as long as wide, distal node as long as distal neck, 1.3 times as long as proximal node, and equal length to proximal neck. 12th flagellomere rounded apically, almost 1.4 times longer than length of flagellomere 11. Palpi 4-segmented, its proportion 2:4:5:6, last segment almost oval form. Tarsal claw with fine bent tooth at base, empodium no longer than half claw length. Wings 2.3 times as long as wide. Vein R_{1+2} running into anterior wing margin before its middle, R_{4+5} into wing apex.

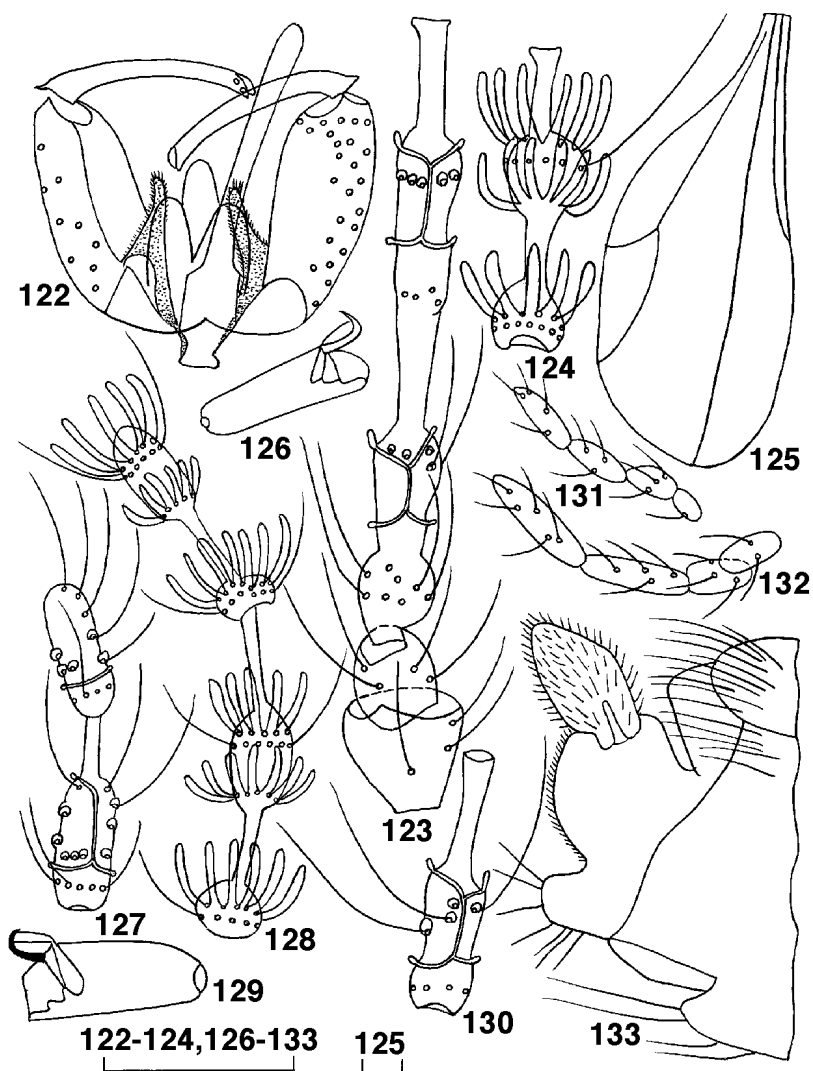
Gonocoxite weakly dilated apically, 2.8 times as long as wide. Gonostylus 0.7 times as long as gonocoxite, not swollen, slightly bent in proximal half, 6.3 times as long as wide. Cerci cordiform, with deep, nearly triangular emargination, non-sclerotized. Hypoproct 0.4 times as wide as cerci, sclerotized, shallowly emarginate at apex, gradually widening basally. Basal outgrowths of gonocoxites uniformly strongly sclerotized, nearly large-sided, with dense, dark hairs apically. Aedeagus more longer than gonocoxites, almost parallel-side. Genital base wide, weakly sclerotized.

FEMALE. Body length 1.5-1.7 mm with retracted ovipositor. Antennae 2+12-segmented, 1st flagellomere 1.1 times as long as 2nd. 5th flagellomere 4.1 times as long as wide; node 1.1 times as long as neck. Flagellomere 12 not consists of two fused segments, 1.9 times as long as flagellomere 11, with rounded apex. Palpi 4-segmented, its proportion as 2:4:5:6, last segment with rounded apex. Tarsal claw simple, larger than in male. Ovipositor 1.1 times as long as wide. Apical plate 2 times as long as wide, covered with setae slightly longer than those on ventral side of abdominal segment IX.

BIOLOGY. Gregarious white larvae in a gall on leave and in flower galls. The leaves are weakly thickened and capsulated, densely covered with white hair and pressed together. The flower galls are weakly swelled. Pupation in soil. Prepupa overwinters. Adults were reared from galls of a new vegetation period and after overwinter in laboratory condition.

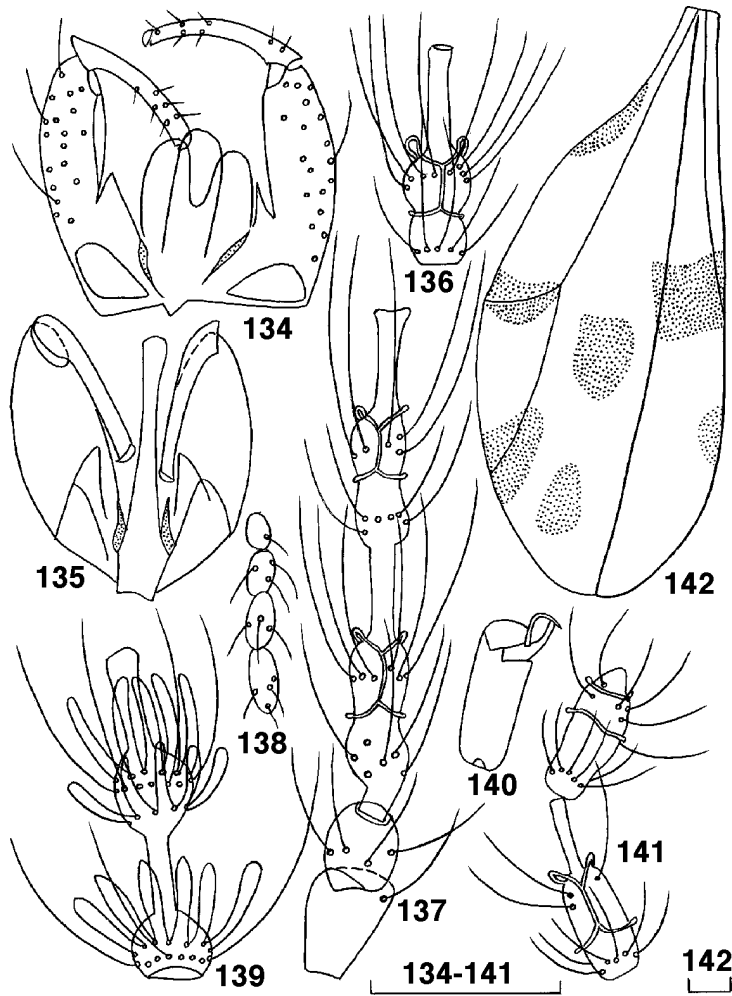
NOTES. Until now only one species, *Lasioptera ussurica* Mamaeva et Kritskaja, 1980, from stem galls of *Rabdosia excisa* was known from Primorye: Kedrovaya Pad Reserve (Mamaeva & Kritskaja, 1980).

RELATIONSHIPS. New species closely related to *Lestodiplosis flomicoliphaga* Kovalev, 1972, described from galls *Dasineura phlomicola* (Kovalev, 1972). This species was reared from flower galls on *Phlomoidea maximowiczii*. New species differs from it by the presence of sensorial loops in basal and apical node of female



Figs 122-133. *Lestodiplosis rabdosiae* sp. n., 122, 124-126, 128, 131 – male; 123, 127, 129, 130, 132, 133 – female. 122) genitalia; 123) scape, pedicel, flagellomeres 1-2; 124, 130) 5th flagellomere; 125) wing; 126, 129) tarsal claw; 127, 128) flagellomeres 11-12; 131, 132) palpus; 133) ovipositor. Scale line – 0.1 mm.

flagellomeres; more distinct basal outgrowths of gonocoxites triangular form; oval form of hypoproct (not parallel-side); not long necks of male flagellomeres, and not equal wide of cerci and hypoproct.

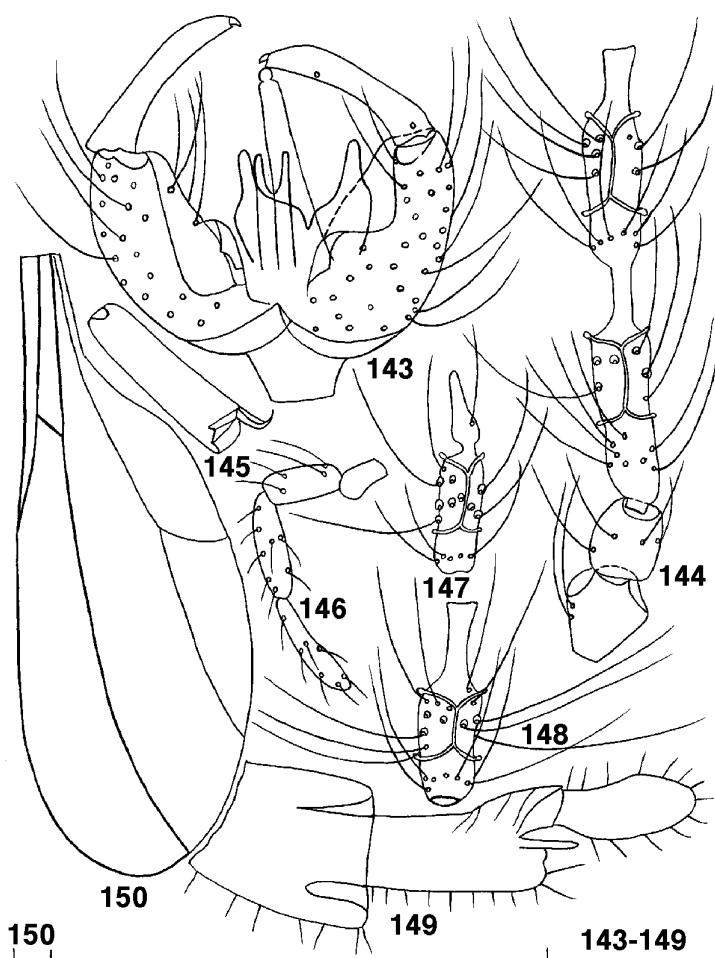


Figs 134-142. *Lestodiplosis maackiae* sp. n., 134, 135, 139, 142 – male; 136-138, 140, 141 – female. 134, 135) genitalia (variability of shape); 136, 139) 5th flagellomere; 137) scape, pedicel, flagellomeres 1-2; 138) palpus; 140) tarsal claw; 141) flagellomeres 11-12; 142) wing. Scale line – 0.1 mm.

***Lestodiplosis maackiae* Fedotova sp. n.**

Figs 134-142, 155-159

MATERIAL. Holotype – ♂ (slide N 7041 c/1): Russia, Primorskii krai, 30 km SE Ussuriysk, Kamenushka, 15.VII 2001, larvae in flower galls on *Maackia amurensis* (Z. Fedotova). Paratypes – 4♂, 8♀ (slides N 7041/1-10) from the same locality, emergence 23.VII 2001 and after diapause in laboratory.



Figs 143-150. *Mycodiplosis filipendulae* sp. n., 143, 150 – male; 144-149 – female. 143) genitalia; 144) scape, pedicel, flagellomeres 1-2; 145) tarsal claw; 146) palpus; 147) 12th flagellomere; 148) 5th flagellomere; 149) ovipositor; 150) wing. Scale line – 0.1 mm.

DESCRIPTION. MALE. Body length 1.0-1.2 mm. Medial width of eye bridge 10 to 12 facets. Antennae 2+12-segmented. 1st flagellomere 1.1 times as long as 2nd. 5th flagellomere 4.1 times as long as wide, distal node 1.1 times as long as distal neck; distal node 1.6 times as long as proximal one and 1.3 times as long as proximal neck. 12th flagellomere ovoid apically, almost 1.2 times more than length of flagellomere 11. Palpi 4-segmented, its proportion as 2:3:4:5, last segment almost oval form. Tarsal claw simple, empodium as long as tarsal claw. Wings 2.8 times as long as wide, with dark spots from scales. Vein R_{1+2} running into anterior wing margin before its middle, R_{4+5} into wing apex.

Gonocoxite weakly dilated apically, 3.5 times as long as wide. Gonostylus 0.6 times as long as gonocoxite, not swollen, slightly bent in proximal half, 5.5 times as long as wide. Cerci cordiform, with deep, nearly oval emargination, non-sclerotized. Hypoproct 0.5 times as wide as cerci, sclerotized, strongly emarginate at apex, gradually broadened basally. Basal outgrowths of gonocoxites uniformly strongly sclerotized, nearly larged, with dense, dark hairs apical. Aedeagus not longer than gonocoxites, almost paralleled side. Genital base wide, weakly sclerotized.

FEMALE. Body length 1.3-1.4 mm with retracted ovipositor. Antennae 2+12-segmented, 1st flagellomere 1.2 times as long as 2nd. 5th flagellomere 3.6 times as long as wide; node 1.1 times as long as neck. Flagellomere 11 with rounded apex, 1.3 times as long as flagellomere 12. Palpi 4-segmented, its proportion as 4:6:5:5, last segment with rounded apex and larged medially. Tarsal claw simple, larger than in male. Ovipositor 1.9 times as long as wide. Apical plate 1.9-2.6 times as long as wide, covered with setae slightly more long than those on ventral side of abdominal segment IX.

BIOLOGY. Gregarious white larvae in flower galls, together with the larvae of *Gynandrobremia maackiaefloris* sp. n. and *Ametrodiplosis maackiae* sp. n. The flower is weakly thickened. Pupation in soil. Prepupa overwinters. Adults were reared from galls of a new vegetation period and after overwinter in laboratory.

RELATIONSHIPS. New species closely related to *L. radosiae* sp. n., but differs from it by the presence of wing spots, more long aedeagus, not larged gonocoxites, conical apex of 12th flagellomere, and oval apical plates of ovipositor.

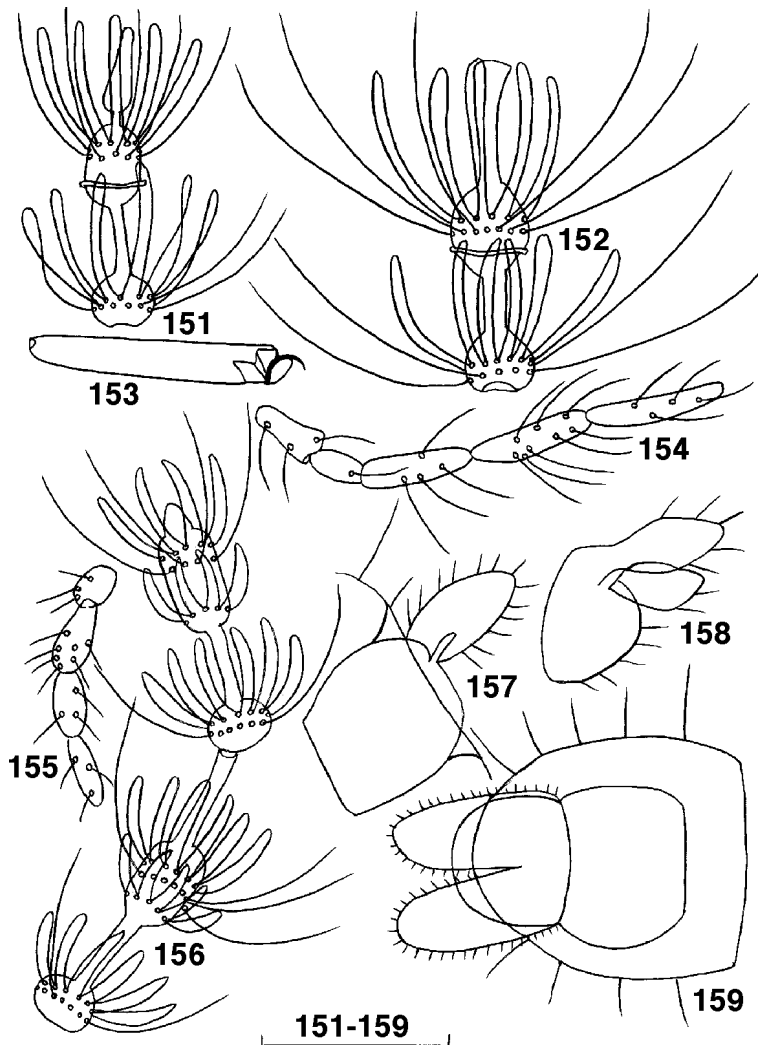
***Mycodiplosis filipendulae* Fedotova sp. n.**

Figs 143-154, 196, 197

MATERIAL. Holotype – ♂ (slide N 8021/1): Russia, Primorskii krai, 30 km SE Ussuriysk, Kamenushka, 28.VII 2001, larvae in leave galls on *Filipendula palmata* (Z. Fedotova). Paratypes – 27 ♀ (slides N 8021/2-4) from the same locality, emergence after overwinter in laboratory.

DESCRIPTION. MALE. Body length 2.4-1.6 mm. Medial width of eye bridge 8 to 10 facets, with small protrusion behind eyes. Antennae 2+12-segmented. 1st flagellomere 1.1 times as long as 2nd. 5th flagellomere 4.4 times as long as wide, distal neck 1,4 times as long as distal node; distal node 1.4 times as long as proximal one and equal to length of proximal neck. 12th flagellomere apically with conical protrusion almost equal length to the distal node of its segment. 11th flagellomere 1.1 times as long as 12th. Palpi 4-segmented, its proportion as 3:8:7:8, last segment with rounded apex. Tarsal claw simple, empodium shorter than claw. Wings 2.7 times as long as wide. Vein R_{1+2} running into anterior wing margin far before its middle, R_{4+5} far behind wing apex.

Gonocoxite strongly dilated basally, 2.0 times as long as wide. Gonostylus 0.8 times as long as gonocoxite, not swollen, slightly bent in proximal half, 4.4 times as long as wide. Cerci with long apical protrusion, with deep, nearly triangular emargi-



Figs 151-159. *Mycodiplosis filipendulae* sp. n. (151-154) and *Lestodiplosis maackiae* (155-159), 151-156 - male; 157-159 – female. 151) 12th flagellomere; 152) 5th flagellomere; 153) tarsal claw; 154, 155) palpus; 156) flagellomeres 11-12; 157, 158) apex of ovipositor laterally; 159) apex of abdomen dorsally. Scale line – 0.1 mm.

nation, non-sclerotized. Hypoproct parallel-side, 0.2 times as wide as cerci, sclerotized, strongly emarginate between long lobes. Basal outgrowths of gonocoxites triangular form, with strongly sclerotized spot. Aedeagus more longer than gonocoxites, enlarged basally and rounded apically. Genital base wide, weakly sclerotized.

FEMALE. Body length 1.4-1.9 mm with retracted ovipositor. Antennae 2+12-segmented, 1st flagellomere 1.1 times as long as 2nd. 5th flagellomere 3.1 times as long as wide; node 1.5 times as long as neck. 12th flagellomere with same protrusion as male. 11th flagellomere equal to length of 12th. Palpi 4-segmented, its proportion as 3:5:7:7, with pointed apex. Tarsal claw smaller than in male, empodium as long as claw. Ovipositor 3.0-4.0 times as long as wide. Apical plate 3.0 times as long as wide, covered with setae slightly longer than those on ventral side of abdominal segment IX. Ventral plate is very long, 0.3 times as long as apical plate.

BIOLOGY. Gregarious white larvae in a gall on leaves. The leaves are not discovered, rosettes firm and weakly thickened, pressed together. Pupation in soil. Prepupa overwinters. One generations per year.

RELATIONSHIPS. New species closely related to *M. plasmoparae* Rübsaamen, 1906 (= *M. deuthera* Milne, 1960), redescribed by W. Nijweldt (1963). Latter species was reared from samples of red clover. New species differs from it by the absence of sensorial loops in basal part of male distal node of flagellum; more distinct basal outgrowths triangular form of gonocoxites; parallel-side form of hypoproct (not cordiform) and more long necks of female flagellomeres.

***Mycodiplosis fraxinicola* Fedotova sp. n.**

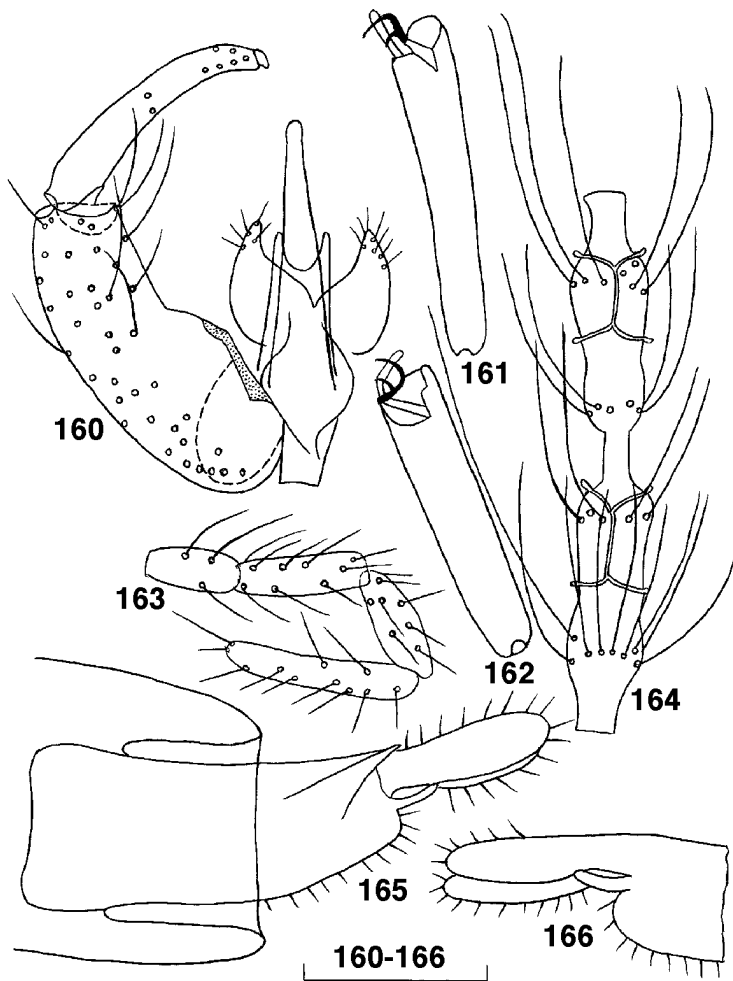
Figs 98, 160-171

MATERIAL. Holotype – ♂ (slide N 8020/1): Russia, Primorskii krai, 30 km SE Ussuriysk, Kamenushka, 28.VII 2001, larvae in leave galls on *Fraxinus mandshurica* (Z. Fedotova). Paratypes – 27 ♀ (slides N 8020/2-4) from the same locality, emergence after overwinter in laboratory.

DESCRIPTION. MALE. Body length 1.4-1.6 mm. flagellomere of flagellum 1.1 times as long as 2nd. 5th flagellomere 4.6 times as long as wide, distal neck 1.1 times as long as distal node; distal node 1.4 times as long as proximal one and 1.6 times as long as proximal neck. 12th flagellomere apically with conical protrusion almost equal to length of the distal node of this segment. 11th flagellomere 1.1 times as long as 12th. Palpi 4-segmented, its proportion 2:3:3:5, last segment with rounded apex. Tarsal claw with small tooth, empodium longer than claw. Wings 2.7 times as long as wide. Vein R_{1+2} running into anterior wing margin far before its middle, R_{4+5} far behind wing apex.

Gonocoxite strongly dilated basally, 2.0 times as long as wide. Gonostylus 0.7 times as long as gonocoxite, not swollen, slightly bent in proximal half, 4.5 times as long as wide. Cerci with long apical protrusion, with deep, nearly triangular emargination, non-sclerotized. Hypoproct parallel-side, 2.2 times as wide as cerci, sclerotized, strongly emarginate between long lobes. Basal outgrowths of gonocoxites triangular form, with strongly sclerotized spot. Aedeagus longer than gonocoxites, enlarged basally and rounded apically. Genital base not wide, weakly sclerotized.

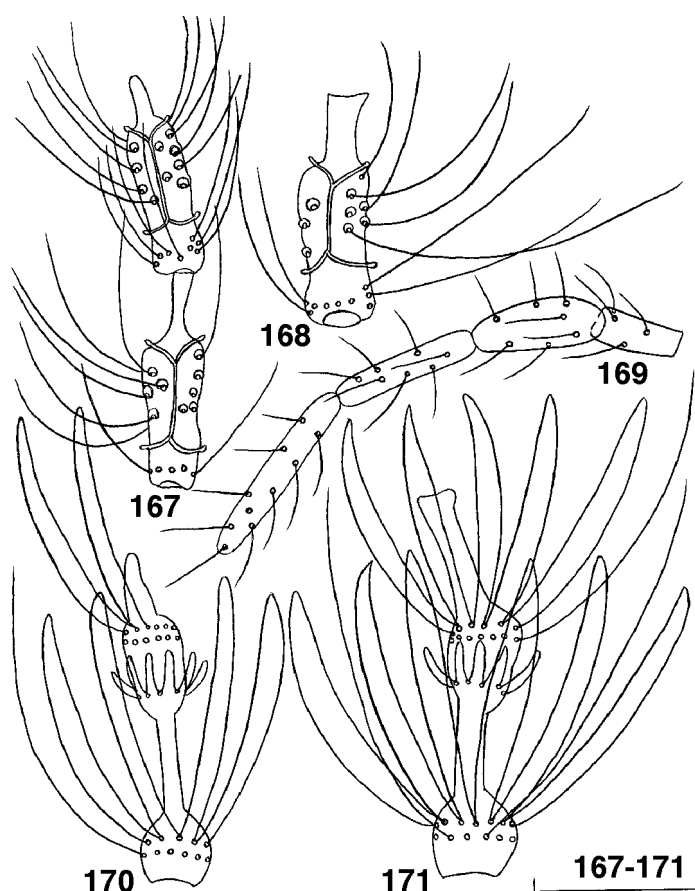
FEMALE. Body length 1.4-1.9 mm with retracted ovipositor. Antennae 2+12-segmented, 1st flagellomere 1.2 times as long as 2nd. 5th flagellomere 3.2 times as long as wide; node 2.6 times as long as neck. 12th flagellomere with parallel-side protrusion. 11th flagellomere 1.1 times as long as 12th. Palpi 4-segmented, its proportion



Figs 160-166. *Mycodiplosis fraxinicola*, sp. n., 160, 161, 163 – male; 162, 164-166 – female. 160) genitalia; 161, 162) tarsal claw; 163) palpus; 164) flagellomeres 1-2; 165) ovipositor; 166) apex of ovipositor laterally. Scale line – 0.1 mm.

as 3:4:5:7, last segment with rounded apex. Tarsal claw smaller than in male, empodium longer than claw. Ovipositor 4.1 times as long as wide. Apical plate 3.0-4.3 times as long as wide, covered with setae slightly longer than those on ventral side of the abdominal segment IX. Ventral plate is very long.

BIOLOGY. Gregarious yellow-gray larvae in a gall on leaf. The leaves are not discovered, rolled form and weakly thickened, its lobes pressed together. Pupation in soil. Prepupa overwinters. One generations per year.

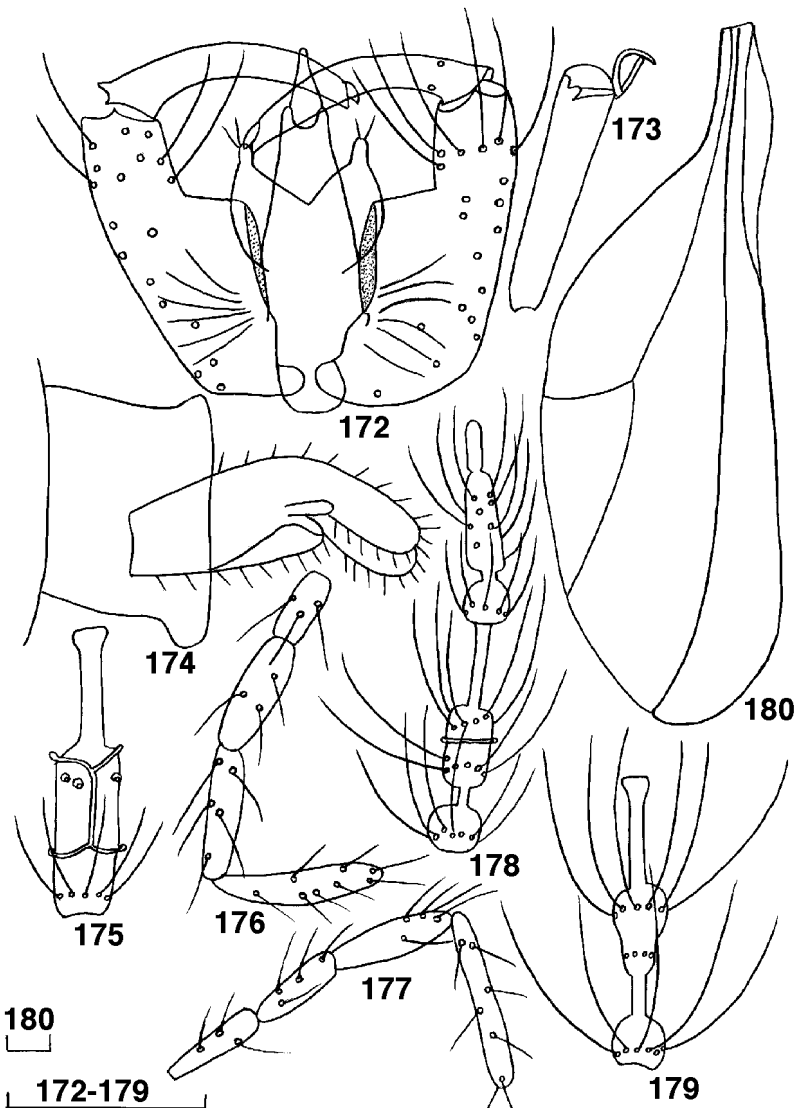


Figs 167-171. *Mycodiplosis fraxinicola* sp. n., 167-169, – female; 170, 171 – male. 167) flagellomeres 11-12; 168, 171) 5th flagellomere; 169) palpus; 170) 12th flagellomere. Scale line – 0.1 mm.

RELATIONSHIPS. New species closely related to previous species, but differs from it by the absence of sensorial loops of male flagellum; less distinct basal outgrowths of gonocoxites triangular form; not parallel-side of hypoproct, and more short necks of female flagellomeres.

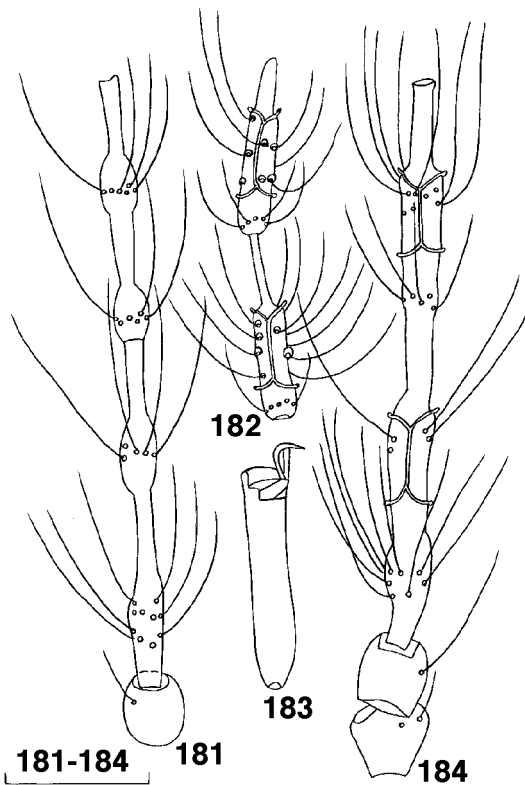
***Ametrodiplosis maackiae* Fedotova sp. n.**
Figs 172-184

MATERIAL. Holotype – ♂ (slide N 7041 b/1): Russia, Primorskii krai, 30 km SE Ussuriysk, Kamenushka, 15.VII 2001, larvae in flower galls on *Maackia amurensis* (Z. Fedotova). Paratypes – 4 ♂ and 2 ♀ (slides N 7041 b\2-4) from the same locality, emergence after winter in laboratory.



Figs 172-180. *Ametrodiplosis maackiae* sp. n., 172, 173, 177-180 – male; 174-176 – female. 172) genitalia; 173) tarsal claw; 174) ovipositor; 175, 179) 5th flagellomere; 176, 177) palpus; 178) flagellomeres 11-12; 180) wing. Scale line – 0.1 mm.

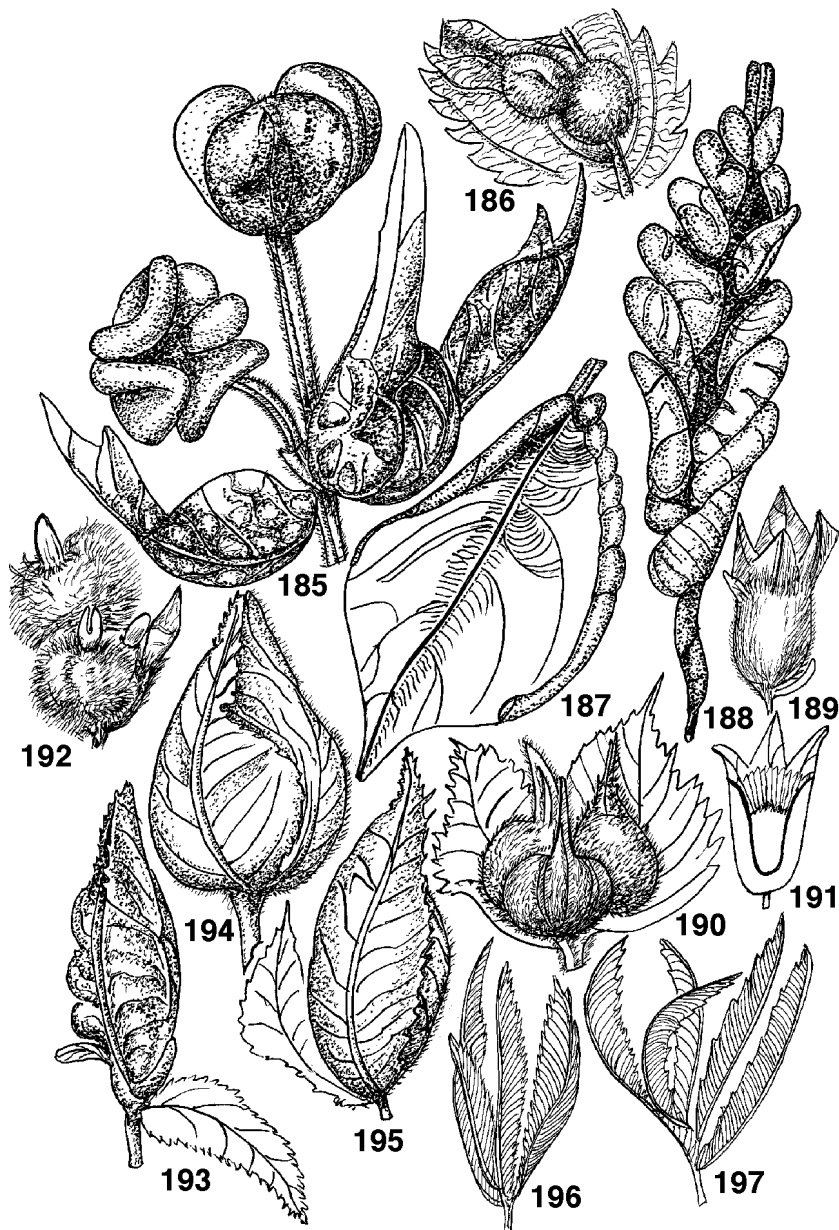
DESCRIPTION. MALE. Body length 1.2-1.7 mm. Medial width of eye bridge 14 to 15 facets wide medially. Antennae 2+12-segmented. 1st flagellomere 1.1 times as long as 2nd 5th flagellomere 5.6 times as long as wide, distal neck 2.0 times as long



Figs 181-184. *Ametrodiplosis maackiae* sp. n., 181 – male; 182-184) female; 181) pedicel, flagellomeres 1-2; 182) flagellomeres 11-12; 183) tarsal claw; 184) scape, pedicel, flagellomeres 1-2. Scale line – 0.1 mm.

as distal node; distal node 1.8 times as long as proximal one and 1.1 times as long as proximal neck. 12th flagellomere apically with conical protrusion almost equal length to the distal node of this segment. 11th flagellomere with long protection, 1.1 times as long as 12th. Palpi 4-segmented, its proportion as 3:3:4:5, last segment with rounded apex. Tarsal claw simple, empodium shorter than claw. Wings 2.9 times as long as wide. Vein R_{1+2} running into anterior wing margin far before its middle, R_{4+5} far behind wing apex.

Gonocoxite strongly dilated basally, 2.2 times as long as wide. Gonostylus 0.8 times as long as gonocoxite, not swollen, slightly bent in proximal half, 4.4 times as long as wide. Cerci with long apical protrusion, with deep, nearly triangular emargination, non-sclerotized. Hypoproct parallel-side, 1.7 times as wide as cerci, sclerotized, strongly emarginate between long lobes. Basal outgrowths of gonocoxites triangular form, with strongly sclerotized spot. Aedeagus more longer than gonocoxites, enlarged basally and rounded apically. Genital base wide, weakly sclerotized.



Figs 185-197. Galls of the Gall Midges. 185) *Asteralobia* (*Euasteralobia*) *clematidis* sp. n. (flower and leaves galls); 186) *Trotteria* *humulopsidis* sp. n.; 187, 188) *Gynandrobremia* *populicola* sp. n.; 189-191) *Lestodiplosis* *rabdosiae* sp. n.; 192) *A. (E.) veronicastrum* sp. n. and *T. veronicastricola* sp. n.; 193-195) *A. (E.) spiraeae* sp. n. and *T. asteralobiphila* sp. n.; 196, 197) *Mycodiplosis* *filipendulae* sp. n.

FEMALE. Body length 2.2-2.4 mm with retracted ovipositor. Antennae 2+12-segmented, 1st flagellomere 1.4 times as long as 2nd. 5th flagellomere 5.5 times as long as wide; node 1.5 times as long as neck. 12th flagellomere with same protrusion as male. Flagellomere 11 equal to length of flagellomere 12. Palpi 4-segmented, its proportion as 3:3:4:5, with pointed apex. Tarsal claw smaller than in male, empodium as long as claw. Ovipositor 3.0 times as long as wide. Apical plate 2.8 times as long as wide, covered with setae slightly longer than those on ventral side of abdominal segment IX.

BIOLOGY. Gregarious white larvae in a flower gall. The flowers are not discovered and weakly thickened, its lobes pressed together. Pupation in soil. Prepupa overwinters. One generation per year.

RELATIONSHIPS. New species closely related to *A. mamajevi* Kovalev, 1972, reared from leaves galls of *Abies holophylla* (Kovalev, 1972). New species differs from latter by the absence of sensorial loops in basal part of male; shape of distal node of flagellum; more distinct basal outgrowths of gonocoxites triangular form; parallel-side form of hypoproct (not cordiform) and more long necks of female flagellomeres.

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