

New gall midges related to the genus *Monepidosis* Mamaev, 1966 (Diptera: Cecidomyiidae) from the Russian Far East

Новые галлицы, близкие к роду *Monepidosis* Mamaev, 1966 (Diptera: Cecidomyiidae) с Дальнего Востока России

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КЛЮЧЕВЫЕ СЛОВА: Diptera, Cecidomyiidae, Дальний Восток России, новые роды, новые виды, новые комбинации.

ABSTRACT. Based on material from the Russian Far East, four new genera, *Glomepidosis* **gen.n.**, *Recessepidosis* **gen.n.**, *Ancorepidosis* **gen.n.** and *Zephyrepidosi* **gen.n.** closely related to the genus *Monepidosis* are described. Seven new species: *Monepidosis laccata* **sp.n.**, *M. yukawai* **sp.n.**, *Dendrepidosi obstipa* **sp.n.**, *Pseudepidosis dives* **sp.n.**, *Glomepidosis solida* **sp.n.**, *Recessepidosis umbonis* **sp.n.**, *Ancorepidosis electa* **sp.n.** *Dendrepidosi pilifera* (Fedotova et Sidorenko, 2005, **comb.n.**) transferred to the genus *Zephyrepidosi* **gen.n.**, while *Monepidosis munita* (Fedotova et Sidorenko, 2005, **comb.n.**) — to the genus *Stomatocolpodia* (*Avicolpodia* **subgen.n.**). Key to the genera related to *Monepidosis* and key to the species of the genera *Monepidosis* Mamaev, *Pseudepidosis* Mamaev, *Dendrepidosi* Mamaev, *Stomatocolpodia* Mamaev are given.

РЕЗЮМЕ. По материалам с Дальнего Востока России описываются 4 новых для науки рода *Glomepidosis* **gen.n.**, *Recessepidosis* **gen.n.**, *Ancorepidosis* **gen.n.** и *Zephyrepidosi* **gen.n.**, близкие к роду *Monepidosis*. Описываются 7 новых для науки видов: *Monepidosis laccata* **sp.n.**, *M. yukawai* **sp.n.**, *Dendrepidosi obstipa* **sp.n.**, *Pseudepidosis dives* **sp.n.**, *Glomepidosis solida* **sp.n.**, *Recessepidosis umbonis* **sp.n.**, *Ancorepidosis electa* **sp.n.** *Dendrepidosi pilifera* (Fedotova et Sidorenko, 2005, **comb.n.**) перемещён в род *Zephyrepidosi* **gen.n.**, а *Monepidosis munita* (Fedotova et Sidorenko, 2005), **comb.n.** — в *Stomatocolpodia* (*Avicolpodia* **subgen.n.**). Составлены ключи для определения родов, близких к роду *Monepidosis* и ключи для определения видов родов *Monepidosis* Mamaev, *Pseudepidosis* Mamaev, *Dendrepidosi* Mamaev, *Stomatocolpodia* Mamaev.

Introduction

This article is devoted to descriptions of new taxa of gall midges from the genera *Monepidosis* Mamaev, *Dendrepidosi* Mamaev, 1990, *Pseudepidosis* Mamaev, 1966, *Glomepidosis* **gen.n.**, *Recessepidosis* **gen.n.**, *Ancorepidosis* **gen.n.**, *Zephyrepidosi* **gen.n.** collected in Primorskii krai, Lazovskii Reserve in 2005. One species from genus *Dendrepidosi* and one from *Monepidosis* are transferred to genera *Zephyrepidosi* **gen.n.** and *Stomatocolpodia* Mamaev, 1990 respectively.

Holotypes and some paratypes of new species are deposited in the Zoological Institute, St.-Petersburg, Russia, the other paratypes in the collections of the Institute of Biology and Soil Sciences, Far Eastern Division of the Russian Academy of Sciences, Vladivostok.

Tribe PORRICONDYLINI Kieffer, 1913

DIAGNOSIS. Male. Antennae with 2+14 segments; flagellomeres with basal enlargements, 1–2 times as long as broad; stem usually longer than basal enlargement; sensorial filae ring-shaped. Palpi 1+4-segments, sometimes much longer than height of head. Wings with M_{1+2} absent or only distally visible, Cu forked or absent, if absent, M_3 absent too. $M+rm$ S-shaped or straight. Caudal setae of abdominal tergites in transverse row. IX tergite with indistinct, weakly sclerotized margin, X tergite and sternite bilobed. Tegmen usually with sclerotized parameres. Gonocoxites rounded, usually with sclerotized roots. Gonostylus usually with apical claw or spine.

Female. Antennae with 2+10–11 segments; flagellomeres cylindrical, with short stem, sensoria consists of 2 complete medially and laterally connected rings; ovipositor with 2-segmented lamellae. 2 sclerotized spermathecae.

A lot of species are associated with fungi growing on detritus and under tree' bark. Cosmopolitan tribe with 23 genera and 175 species [Gagné, 2004]. Recently some new

taxa were described from Russian Far East [Fedotova, 2004; Fedotova & Sidorenko, 2005].

KEY TO GENERA RELATED TO THE GENUS *MONEPIDOSIS* (MALES)

1. 1-st tarsal segment with short blunt (Fig. 57) or with rhomboid projection (Figs 17, 47, 92–93). Tarsal claws with basal denticle (Figs 11, 18, 49, 58, 73, 90). Vein R_5 very slightly curved apically and joining with margin of wing not far beyond it apex 2
- 1-st tarsal segment with long, acute, curved projection (Fig. 85). Tarsal claw simple (Fig. 80). Vein R_5 very strongly curved apically and joining with margin of wing very far behind it apex (Fig. 86) 6
2. Each paramere consists of two long strongly sclerotized hook-formed (Figs 1, 13) or curved and conical projections (Fig. 89) or of two very wide and short triangular or rounded projections (Figs 68–69). Gonostylus without claw (Fig. 89) or with lamellar claw (Figs 1–3, 5, 41, 68, 70–71) or with ventral lamella (Figs 13, 31, 37, 39, 42) 3
- Paramere whole, sclerotized (Figs 30, 51), sometimes with apical projections or outgrowths (Figs 35, 36). Gonostylus with setose claw (Figs 51, 62, 64–65, 67) or transparent spine (Figs 30, 34, 35) 5
3. Gonostylus without claw (Fig. 89). Veins M_{1+2} , M_3 , Cu_p , genital roots undeveloped (Fig. 94). Each paramere consists of two parts — curved and conical (Fig. 89) ones. Ventral plate of genitalia with U-formed projection. Empodium longer than tarsal claw (Fig. 90). Body pale *Ancorepidosis* **gen.n.**
- Gonostylus with lamellar claw (Figs 40–41, 68) or with very long ventral lamella (Figs 37, 39, 42). Veins M_{1+2} , M_3 , Cu_p (Figs 12, 21, 50), genital roots well developed. Empodium very short (Figs 11, 18) or rudimentary. Body dark 4
4. Gonostylus with apico-ventral lamellar claw (Fig. 37), sometimes changeable form (Figs 1–3, 5, 13) or with 1–2 very long ventral lamella (Figs 31, 39, 42). Parameres hook-formed. Ventral plate of genitalia slightly excavated, with medial sclerotized bilobed projection. Aedeagus swollen or pointed apically, without subapical long and thin projection. Vein M_3 developed *Monepidosis* Mamaev
- Gonostylus with apical spherical lamellar claw (Figs 68, 70–71), surrounded by 2–3 spines. Parameres strongly enlarged, with short triangular and rounded projections (Figs 68–69). Ventral plate of genitalia with round excision, without medial projection. Aedeagus very thick, wide rounded apically, with subapical long and thin projection. Vein M_3 undeveloped *Glomepidosis* **gen.n.**
5. Parameres thin, with 2–3 apical or subapical outgrowths (Figs 30, 35–36, 43). Gonostylus wide and swollen, with transparent spine. Empodium shorter than tarsal claw (Fig. 49) *Dendrepidosis* Mamaev
- Parameres thick, pointed or curved apically (Figs 51, 60, 62, 64–65, 67). Gonostylus long and narrowly ended by long setose claw. Empodium as long as tarsal claw or slightly longer (Fig. 58) *Pseudepidosis* Mamaev
6. Gonostylus without claw, narrowed apically (Fig. 78). Each parameres consist of two strongly sclerotized protrusions, at the base with loop-shaped structure. Empodium as long as claw or slightly shorter (Fig. 80) *Recessepidosis* **gen.n.**
- Gonostylus with ventral lobe and transparent claw subapically (Figs 34, 95) or apically (Figs 96–99). Parameres very long, strongly sclerotized, enlarged subapically, with large apical hook. Empodium slightly longer than claw *Stomatocolpodia* Mamaev

Genus *Monepidosis* Mamaev, 1966

Type species: *Monepidosis pectinata* Mamaev, 1966.

DIAGNOSIS. Male antennae 2+14. Stem of flagellomeres more than 2.0 times longer than basal enlargement (Figs 6, 32), sensorial ring of filae not curved. Tarsal claw sharply curved (Figs 11, 18), with denticle at the base, empodium not longer than 1/3–2/3 of length of claw. Palpus longer than height of head (Figs 4, 14, 15). All legs with 2-nd tarsal segment longer than tibia; femur longer than tibia. 1-st tarsal segment with short rhomboid projection (Fig. 17). Wing long, with long basal part; R_5 parallel to R_5 ; $M+rm$ strongly curved; R_5 strongly curved and joining to wing margin beyond wing apex. Distal fragment M_{1+2} , M_3 , Cu_p developed, Cu forked (Figs. 12, 21). Cell R_5 of wing very narrow, parallel-sided. Parameres not connected by transversal bridge, strongly sclerotized, each with two pointed projections (Figs 1, 13, 31, 39–42). Ventral plate slightly excavated, with medial bilobed sclerotized projection for fixation of the apex of aedeagus (Figs 1, 13, 31, 38–40, 42). Aedeagus long, strongly sclerotized, deposited in sheath, formed by parameres. Gonostylus with thin pointed claw (Figs 40, 41) or swollen with obtuse apical claw (Figs 1–3, 5), with some claw-form lamellar projections along margin and apically (Figs 31, 37, 39, 42). X tergite bilobate. Ovipositor with two separated lobes (Fig. 22).

Holarctic genus *Monepidosis* includes seven species: *M. bulgarica* Mamaev et Dimitrova, 1992 — Bulgaria (Figs 31, 32); *M. carolinae* (Felt, 1907) — USA (Fig. 41); *M. duplicis* Mamaev, 1998 — Russia: Primorskiy krai (Fig. 37); *M. furcata* Mamaev, 1966 — Russia: Moscow Region, Latvia (Fig. 40); *M. laccata* **sp.n.** — Russia: Primorskiy krai (Figs 1–29); *M. pectinata* Mamaev, 1966 — Russia: Moscow Region, Netherlands, Germany, Latvia, Poland (Fig. 39).

REMARK. One species previously redescribed as *M. pectinata* Mamaev [Yukawa, 1971], here considered as new species — *M. yukawai* Fedotova et Sidorenko **sp.n.** (Fig. 42). Other species, *Monepidosis munita* Fedotova et Sidorenko, 2005 transferred here to the genus *Stomatocolpodia* (**comb.n.**) (Fig. 34).

Monepidosis laccata Fedotova et Sidorenko, **sp.n.**

Figs 1–29

MATERIAL. **Holotype**, ♂ — RUSSIA: Primorskiy krai, Lazovskii Reserve, Proselochnaya Bay, Malaise trap, 30–31.VIII 2005, slide 243/8089/1, Sidorenko (ZISP). **Paratypes**: 4 ♂, 1 ♀ — the same data as holotype, slide 243/8089/2–6; 1 ♂ — Proselochnaya Bay, Malaise trap, sea' shore, 15–16.VII 2005, slide 243/8103/7, Sidorenko (IBSS).

DESCRIPTION. MALE. Body length 1.88–2.2 mm, wing length 2.5–2.85 mm, wing width 0.83–0.98 mm. Body pale-yellow, scape, pedicel white, flagellomeres pale-brown. Thorax with 3 brown stripes. Eye bridge medially 4–5 facets wide. Scape slightly elongated, enlarged medially, 1.7 times longer than pedicel. Antennae 2+14-segmented. 1-st flagellomere 1.3 times longer than 2-nd one. 5-th flagellomere 4.2 times as long as wide, basal node 1.4 times as long as wide, 2.0 times shorter than stem. 14-th flafellomere with pointed apex, 1.6 times shorter than 13-th one. Palpi 1.3–1.5 times longer than height of head, 4-segmented, almost parallel-sided, their ratio 1:1.4:1.7:2.6 or 1:1.9:1.9:3.2, if 4-th segment completely divided on two segments, their ratio 1:1.7:1.5:1.5:1.5 or 1:0.9:1.2:1.2:0.9. Fore femur 1.1 times as long as tibia; 2-nd tarsal segment 1.2 times as long as tibia; 3-rd one 2.3 times shorter than 2-nd; 4-th one 2.4 times as long as 5-th. Mid femur 1.1 times as long as tibia; 2-nd tarsal segment 1.2 times as long as tibia; 3-rd 2.3 times shorter than 2-nd; 4-th one 3.1 times as long as 5-th. Hind femur 1.2 times as long as tibia; 2-nd



Figs 1–12. *Monepidosis laccata* sp.n., male: 1 — genitalia; 2, 3, 5 — gonostylus (variation of shape); 4 — palpi; 6 — 5-th flagellomere; 7 — 13-th and 14-th flagellomeres; 8 — scape and pedicel; 9 — 5-th sternite; 10 — 5-th tergite; 11 — tarsal claw; 12 — wing. Scales: 0.1 mm.

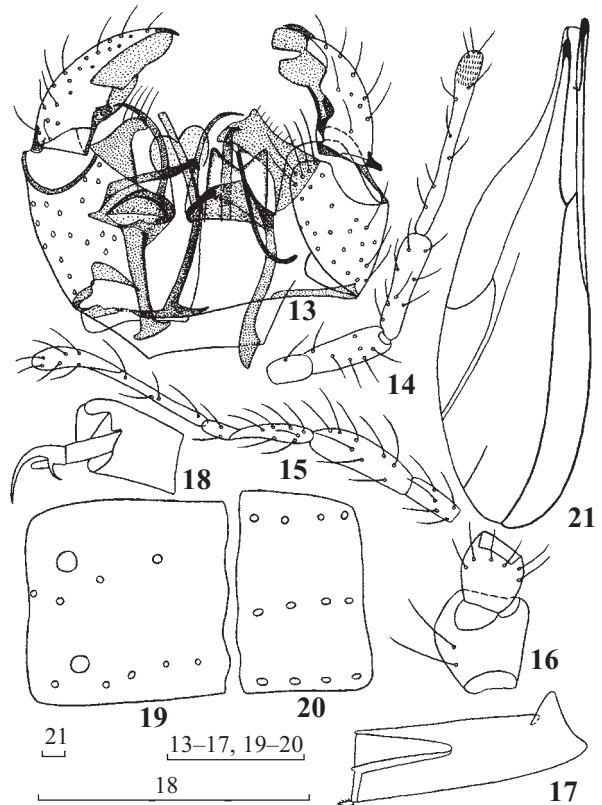
Рис. 1–12. *Monepidosis laccata* sp.n., самец: 1 — гениталии; 2, 3, 5 — гоностиль (изменчивость формы); 4 — щупик; 6 — 5-й членок жгутика; 7 — 13-й и 14-й членки жгутика; 8 — скапус и педицел; 9 — 5-й стернит; 10 — 5-й тергит; 11 — коготок лапки; 12 — крыло. Масштаб: 0.1 мм.

tarsal segment 1.2 times as long as tibia; 3-rd 2.2 times shorter than 2-nd; 4-th one 2.6 times as long as 5-th. 1-st tarsal segment with short rhomboid projection. Tarsal claws thin, curved near middle, with denticle at the base, empodium 0.6 times as long as claw. Wing with short and wide (Fig. 12) or more long and narrow basal part (Fig. 21), 2.9–3.3 times as long as wide. Vein R_{1+2} 1.9–2.1 times shorter than wing. $M+rm$ strongly curved, parallel to R_{1+2} , 2.8–3.1 times shorter than wing. Abdominal tergites with medial group and distal rows of setae; 1–3 lacunae situated in front of row of setae. Abdominal sternites with three groups or three rows of setae. Gonocoxites separated, with oblique truncated apex and medial-apical rounded or rectangular protrusion, 1.3–1.4 times as long as wide; strongly excavated apically. Lateral sides of gonocoxites almost straight or very slightly rounded. Gonostylus swollen, always asymmetrical, each one various form, 2.0–3.4 times as long as wide; 1.2 times shorter than gonocoxites, strongly excavated basally, pointed or obtused apically, with dark lamellar claw. Sometimes large lamellae situated ventro-apically or numerous small lamellae along ventral side present. Parameres with pair of long curved and pair of long hook-form protrusions, longer than gonocoxites. Aedeagus thin, strongly sclerotized, almost parallel-sided, not swollen api-

cally, T-formed basally. Ventral plate with medial sclerotized large cordiform projection. X tergite with triangular lobes and excision. Roots of genitalia thick, slightly longer than aedeagus, swollen on the end.

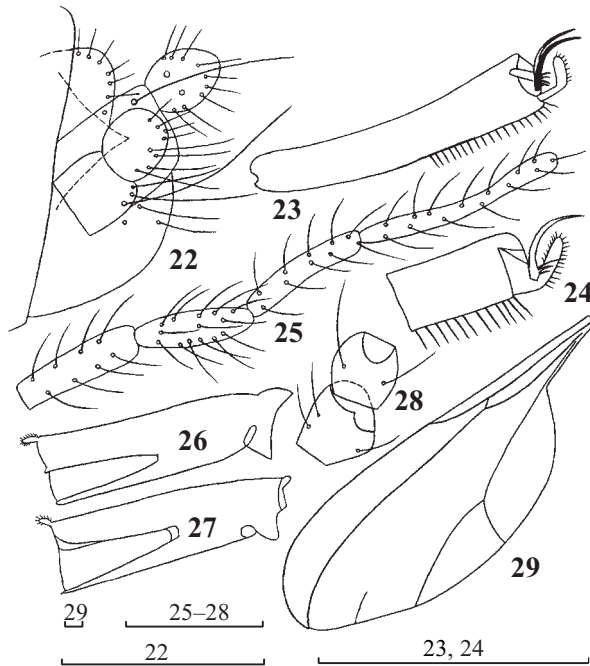
FEMALE. Body pale-yellow, length 2.25 mm, wing length 3.05 mm, wing width 1.0 mm. Scape 1.3 times longer than almost rounded pedicel. Palpi 4-segmented, almost parallel-sided, their ratio 1:0.9:1.0:1.6, 4-th segment rounded. 5-th tarsal segment with ventral row of thick long setae, occupied less than half of length of segment. Tarsal claws thin, curved near middle, with three denticles at the base, empodium shorter than claw. Hind femur 1.1 times as long as tibia; tibia 1.2 times as long as mid tarsus. Ovipositor 2-segmented. Apical segment almost rounded, 1.1–1.2 times as long as wide; subapical one parallel-sided, 1.7 times longer than apical one. IX tergite widely oval. X sternite triangular, slightly sclerotized.

RELATIONSHIPS. New species differs from other known species by strongly swollen gonostylus with apical wide lamellae different form; by very long and thin parameres; by not swollen aedeagus on the end; by very wide projections on ventral plate. New species closes to *M. carolinae* by presence of single projection on ventral side of gonostylus (Figs 2, 41), by very wide base of parameres, but differs by thin and long parameres, by absence of apical lobes and denticles of gonocoxites; by more wide projections on ventral plate and by more long roots of genitalia.



Figs 13–21. *Monepidosis laccata* sp.n., male: 13 — genitalia; 14, 15 — palpi (variation of shape); 16 — scape and pedicel; 17 — 1-st tarsal segment; 18 — tarsal claw; 19 — 5-th tergite; 20 — 5-th sternite; 21 — wing. Scales: 0.1 mm.

Рис. 13–21. *Monepidosis laccata* sp.n., самец: 13 — гениталии; 14, 15 — щупик (изменчивость формы); 16 — скапус и педицел; 17 — 1-й членок передней лапки; 18 — коготок лапки; 19 — 5-й тергит; 20 — 5-й стернит; 21 — крыло. Масштаб: 0.1 мм.



Figs 22–29. *Monepidosis laccata* sp.n., female: 22 — ovipositor; 23, 24 — tarsal claw; 25 — palpi; 26, 27 — 1-st tarsal segment (variation of shape); 28 — scape and pedicel; 29 — wing. Scales: 0.1 mm.

Рис. 22–29. *Monepidosis laccata* sp.n., самка: 22 — яйцеклад; 23, 24 — коготок лапки; 25 — щупик; 26, 27 — 1-й членик передней лапки (изменяемость формы); 28 — скапус и педицел; 29 — крыло. Масштаб: 0.1 мм.

***Monepidosis yukawai* Fedotova et Sidorenko, sp.n.**

Fig. 42

The detailed description of species was given by Prof. J. Yukawa [1971] as redescription of *M. pectinata* Mamaev, 1966. We consider that species collected in Japan (Kyushu) rather differs from type species of the genus — *M. pectinata*, described from Moscow Region and widely distributed in Europe.

DIAGNOSIS. New species differs from *M. pectinata* by stem of middle flagellomeres about 1.8 times as long as basal enlargement (more 2.0 times in *M. pectinata* (Fig. 39); by claws of all legs trifid (bifid in *M. pectinata*); by smaller body size; by absence of apical lobe of gonocoxites, by gonostylus longer than gonocoxites (shorter in *M. pectinata*); by less wide and not dentated lamella on ventral side of gonostylus; by parameres not reached to apex of gonocoxites (almost reached in *M. pectinata*); by presence of crossed outgrowths of parameres (basal and lateral outgrowths of parameres not situated rectangularly in *M. pectinata*); by pointed apex of aedeagus (swollen apically in *M. pectinata*), by more wide distance between roots and by more short basal part of aedeagus, not swollen on the end.

ETYMOLOGY. Species named in honor of world famous Japanese ceccidologist Prof. J. Yukawa (Kagoshima University, Japan).

KEY TO SPECIES OF *MONEPIDOSIS* MAMAEV

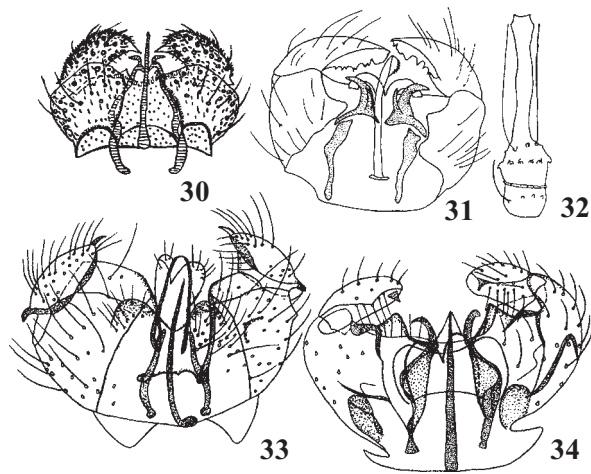
1. Genitalia transversal, gonostylus with wide light ventral lamella or lamellar claw (Figs 1, 13, 31, 39, 41, 42) ..
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- Genitalia elongated, gonostylus longer than gonocoxites with narrow apical lamellar long dark claw and 3–4 subapical marginal spines (Fig. 40). Ventral plate with short V-formed projection. Stem of mid flagellomeres 1.5 times as long as basal enlargement. Body length 2.8 mm *M. furcata* Mamaev
- 2. Gonostylus enlarged basally with apical claw or lamella (Figs 1, 13, 41). Pair of parameres long and thin, almost equal in length, crossed near apex 3
- Gonostylus enlarged medially, with ventral wide lamella. Pair of parameres short and thick, different form, length and width 4
- 3. Form of lamellas strongly various on each gonostylus (Figs 1–3, 5, 13). Gonocoxites with apical hook-formed projections. Stem of middle flagellomeres 2.0 times as long as basal enlargement (Fig. 6) Body length 1.88–2.2 mm, wing length 2.5–2.85
..... *M. laccata* Fedotova et Sidorenko, sp.n.
- Form of apical lamellar denticle the same on each gonostylus (Fig. 41). Gonocoxites without apical projections ..
..... *M. carolinae* (Felt)
- 4. Ventral wide lamella of gonostylus consists of two separated denticles (Figs 39, 42). Parameres crossed apically. Ventral plate with short projections for fixation of aedeagus 5
- Ventral wide lamella of gonostylus whole, not divided onto two parts (Figs 31, 37) 6
- 5. Gonocoxite with apical lobe (Fig. 39), lateral sides almost straight. Stem of middle flagellomeres more than 2.0 times as long as basal enlargement. Claws of all legs bifid. Empodium rudimentary. Aedeagus with subapical dentated swelling. Body length 2.5 mm
..... *M. pectinata* Mamaev
- Gonocoxite without apical lobe (Fig. 42), lateral sides swollen. Stem of middle flagellomeres 1.8 times as long as basal enlargement. Claws of all legs trifid. Empodium very short. Aedeagus pointed apically. Wing length 2.3–2.5 mm *M. yukawi* Fedotova et Sidorenko, sp.n.
- 6. Gonostylus with narrow lamella. Ventral plate with two wide, thick sclerotized projections, formed “sheath” for aedeagus (Fig. 31). Gonocoxite without medial lobe. Stem of middle flagellomeres 2.1 times as long as basal enlargement (Fig. 32). Empodium shorter than tarsal claws. Aedeagus with subapical dentated swelling. Body length 1.9 mm
..... *M. bulgarica* Mamaev et Dimitrova
- Gonostylus with wide lamella (Fig. 37). Ventral plate without projection. Gonocoxites with medial lobe. Empodium as long as tarsal claw. Aedeagus forked apically and curved. Wing length 3.0 mm *M. duplicis* Mamaev

Genus *Dendrepidosis* Mamaev, 1990

Type species: *Dendrepidosis trispinula* Mamaev, 1990a: 21

DIAGNOSIS. Male. Body length 1.8–2.5 mm, wing longer than body and slightly shorter than antennae. Eyes bridge moved on the frontal surface of the head, medially 3–7 facets wide. Antennae with 2+14 segments. Stem of middle flagellomeres as long as basal enlargement or 1.5–1.7 times longer than enlargement; ring-shaped antennal sensoriae sinuous on 1–13th flagellar segments (Figs 44, 45). Palpi 4-segmented, longer than height of head, segments light, thin, almost parallel-sided (Fig. 46). Labrum wide. All femur longer than tibia; tibia longer than 2-nd tarsal segment. Tarsal claws strongly curved medially, with semicircular denticle at the base; empodium rudimentary or almost invisible (Fig. 49). Projection of the 1-st tarsal segment blunt and short or



Figs 30–34. 30 — *Dendrepidosis longipennis* (Spungis); 31–32 — *Monepidosis bulgarica* Mamaev et Dimitrova; 33 — *Zephyrepidosis pilifera* (Fedotova et Sidorenko); 34 — *Stomatocolpodia munita* Fedotova et Sidorenko; 30–31, 33–34 — male genitalia; 32 — 5-th flagellomere [after Spungis, 1981, Mamaev, Dimitrova, 1992, Fedotova & Sidorenko, 2005].

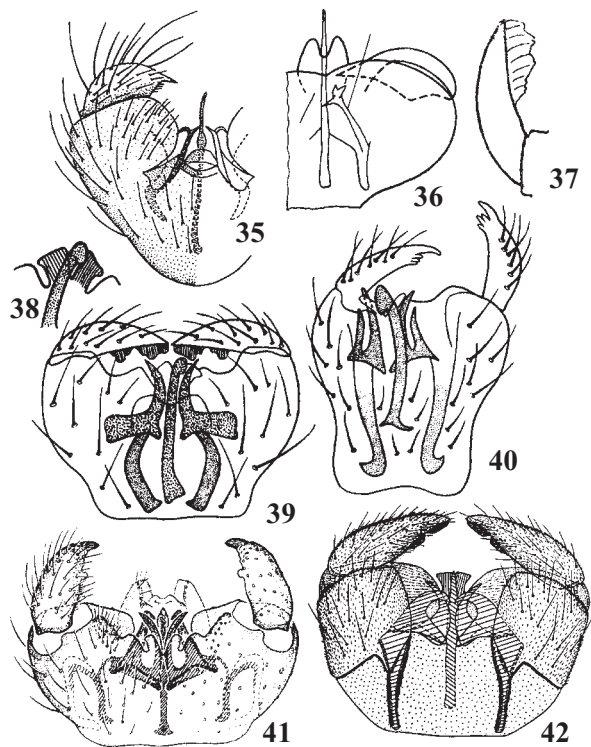
Рис. 30–34. 30 — *Dendrepidosis longipennis* (Spungis); 31–32 — *Monepidosis bulgarica* Mamaev et Dimitrova; 33 — *Zephyrepidosis pilifera* (Fedotova et Sidorenko); 34 — *Stomatocolpodia munita* Fedotova et Sidorenko; 30–31, 33–34 — гениталии самца; 32 — 5-й членик жгутика [по: Спунгису, 1981, Мамаеву, Димитровой, 1992, Федотовой, Сидоренко, 2005].

almost rhomboid (Figs 47–48). Wing with long and thin basal part, 3.0 times as long as wide (Fig. 50). Cell R_5 enlarged distally. R_5 straight, $M+rm$ curved, R_5 slightly curved near apex, joining with C on tip of wing. Vein Cu forked, M_3 developed distally, M_{1+2} and Cu_p rudimentary. Abdominal tergites and sternites transversally not interrupted, with distal sclerotized stripe and one row of setae on tergites and 1–2 rows of setae on sternites. Gonocoxites fused ventrally, lateral sides slightly rounded (Fig. 43) or strongly rounded (Figs 30, 35–36). Gonostylus swollen medially (Figs 30, 43) and pointed distally (Figs 35–36), terminated by small transparent claw. Parameres strongly sclerotized, connected at the base by transverse bridge, strongly narrowed distally, with oblique, thin complicated structures with of 2–3 projection (Figs 30, 35–36) or crescent (Fig. 43). Genital rod very thin, gradually narrowed to apex, longer than gonocoxites. X tergite longer than gonocoxites (Figs 36, 43), wide, with rounded apical lobes and wide excision between it. X sternite bilobed, strongly enlarged at base. Apodema of male postabdomen with curved short (Figs 35–36) and long thick sclerotized roots (Figs 30, 43) in view of two projections, as long as genital rod at the base or shorter than it.

Female unknown.

Palearctic genus *Dendrepidosis* includes four species, one of them new species described below: *D. trispinula* Mamaev, 1990 — Russia: Moscow region (Fig. 36); *D. bifidula* Mamaev et Zaitzev, 1998 — Russia: Yaroslavl region (Fig. 35); *D. longipennis* (Spungis, 1981) (*Porricondyla*) — Latvia (Fig. 30); *D. obstipa* Fedotova et Sidorenko, **sp.n.** — Russia: Primorskii krai (Figs. 43–50).

REMARKS. *Dendrepidosis pilifera* Fedotova et Sidorenko, 2005 erroneously described in the genus *Dendrepidosis* replaced here into new genus, *Zephyrepidosis* described below.



Figs 35–42. 35 — *Dendrepidosis bifidula* Mamaev et Zaitzev; 36 — *D. trispinula* Mamaev; 37 — *Monepidosis dupliscis* Mamaev; 38–39 — *M. pectinata* Mamaev; 40 — *M. furcata* Mamaev; 41 — *M. carolina* (Felt); 42 — *M. yukawai* **sp.n.**; 35–36, 39–42 — male genitalia; 37 — gonostylus; 38 — projections of ventral plate and apex of aedeagus [after Mamaev, 1966; 1990a, 1998; Mamaev, Zaitzev, 1998; Gagné, 1981; Yukawa, 1971].

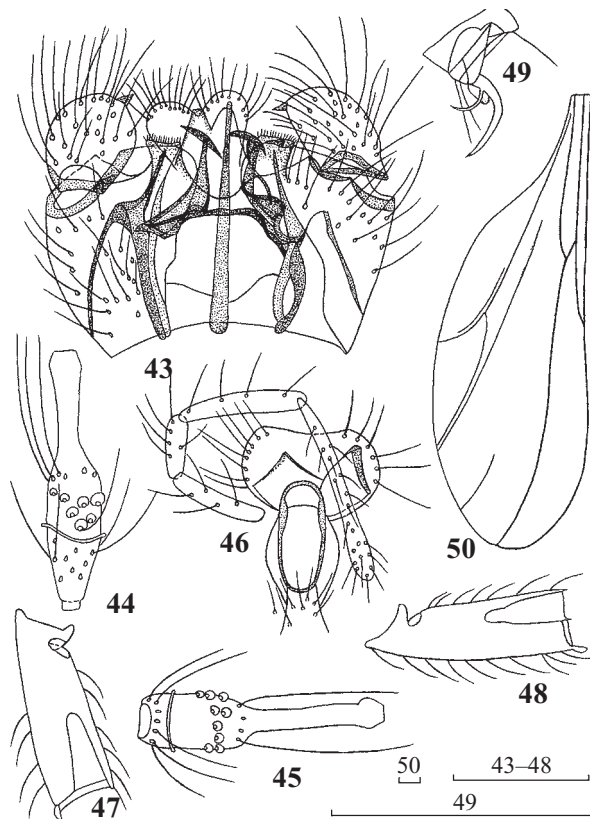
Рис. 35–42. 35 — *Dendrepidosis bifidula* Mamaev et Zaitzev; 36 — *D. trispinula* Mamaev; 37 — *Monepidosis dupliscis* Mamaev; 38–39 — *M. pectinata* Mamaev; 40 — *M. furcata* Mamaev; 41 — *M. carolina* (Felt); 42 — *M. yukawai* **sp.n.**; 35–36, 39–42 — гениталии самца; 37 — гоностиль; 38 — выросты вентральной пластинки и вершины эдеагуса [по: Мамаеву, 1966; 1990a, 1998; Мамаеву, Зайцеву, 1998; Ганье, 1981; Юкаве, 1971].

Dendrepidosis obstipa Fedotova et Sidorenko, **sp.n.**

Figs 43–50

MATERIAL. **Holotype**, ♂ — **RUSSIA**: Primorskii krai, Lazovskii Reserve, cordon America, Malaise trap, river' shore, 18–19.VI 2005, slide 348/8094/1, Sidorenko (ZISP).

DESCRIPTION. **MALE**. Body length 2.25 mm, wing length 2.55 mm, wing width 0.9 mm, antennae 2.13. Eyes bridge medially 4 facets wide. Thorax darker than body with three dorsal dark stripes. Scape, pedicel and flagellomeres uniformly sclerotized. 1-st flagellomere 4.7 times as long as wide, with very short basal stem, basal enlargement 2.8 times as long as wide, 1.5 times longer than stem. 2-nd flagellomere 1.1 times shorter than 1-st one. 5-th flagellomere 3.8 times as long as wide, basal node 3.8 times as long as wide, 1.7 times shorter than stem. 14-th flagellomere with elongate-oval protrusion, 1.3 times shorter than 13-th one. Palpi 1.1 times as long as height of head; 4-segmented, palpiger developed, segments almost parallel-sided, last ones enlarged apically, their ratio 1:0.7:1.4:2.1. Labrum wide, not dissected. Hind femur 1.1 times longer than tibia; tibia 1.1 times longer than 2-nd tarsal segment. Tarsal claws strongly sclerotized, curved



Figs. 43–50. *Dendrepidosis obstipa* sp.n., male: 43 — genitalia; 44 — 1-st flagellomere; 45 — 5-th flagellomere; 46 — mouth part; 47–48 — 1-st tarsal segment (variation of shape); 49 — tarsal claw; 50 — wing. Scales: 0.1 mm.

Рис. 43–50. *Dendrepidosis obstipa* sp.n., самец: 43 — гениталии; 44 — 1-й членик жгутика; 45 — 5-й членик жгутика; 46 — ротовые органы; 47–48 — 1-й членик лапки (изменчивость формы); 49 — коготок лапки; 50 — крыло. Масштаб: 0.1 мм.

medially, empodium very short. Projection of the 1-st tarsal segment short and almost rhomboid. Wing 3.0 times as long as wide. Vein R_{1+2} 2.0 times shorter than wing. Cell R_{1+2} very dark. $M+rm$ slightly curved, 2.86 times shorter than wing. R_{1+2} 1.4 times longer than $M+rm$. Gonocoxites fused ventrally, 1.1 times as long as wide. Gonostylus 1.3 times as long as wide, 1.8 times shorter than gonocoxites, swollen medially and pointed distally, terminated by small claw, dorsal side with very long setae. Ventral plate distally with blunt projection, covered by very short setae. Parameres strongly sclerotized, connected at the base by transverse bridge, strongly narrowed distally, with oblique thin crescent structures. Genital rod very thin, gradually narrowed toward apex. X tergite 1.3 times as long as X sternite. Apodeme with thick sclerotized roots, each consists of two curved parts, as long as aedeagus at the base.

RELATIONSHIPS. New species closely related to *D. bifidula* (Fig. 35), described from Yaroslavl region [Mamaev & Zaitzev, 1996] but differs by parameres longer than gonocoxites (Fig. 43), by parallel-sided genitalia (triangularly narrowed basally in *D. bifidula*); by eyes bridge 3–4 facets wide (6–7 facets in *D. bifidula*); by gonostylus 1.3 times as long as wide (2.0 times in *D. bifidula*); by roots of genitalia almost as long as genital rod at the base (almost rudimentary in *D. bifidula*); by more large body size (2.1 mm in *D. bifidula*).

KEY TO SPECIES OF THE GENUS *DENDREPIDOSIS*

1. Mid flagellomeres with stem as long as basal enlargement. Parameres with subapical and apical hook-like projections (Fig. 30), situated at different levels. Roots of genitalia much longer than genital rod. Gonocoxites strongly rounded laterally. Body length 1.8–2.5 mm *D. longipennis* (Spungis)
- Mid flagellomeres with stem, 1.5–1.7 times as long as basal enlargement. Parameres with bifurcated projections (Figs 35–36, 43). Roots of genitalia almost as long as genital rod at the base (Figs 36, 43) or much shorter (Fig. 35) 2
2. Parameres very short, ended by 3 projections (Fig. 36). Gonocoxites strongly rounded laterally. Roots of genitalia almost as long as genital rod at the base. Eyes bridge 6–7 facets wide. Body length 2.0 mm *D. trispinula* Mamaev
- Parameres long, ended by 2 projections (Figs. 35, 43). Gonocoxites with straight lateral sides 3
3. Parameres shorter than gonocoxites (Fig. 35). Genitalia triangular, narrowed basally. Gonostylus 2.0 times as long as wide. Eye bridge 6–7 facets wide. Roots of genitalia much shorter than genital rod at the base. Body length 2.1 mm *D. bifidula* Mamaev et Zaitzev
- Parameres longer than gonocoxites (Fig. 43). Genitalia parallel-sided. Eyes bridge 3–4 facets wide. Gonostylus 1.3 times as long as wide. Roots of genitalia almost as long as genital rod at the base. Body length 2.25 mm, wing length 2.55 mm *D. obstipa* Fedotova et Sidorenko, sp.n.

Genus *Pseudepidosis* Mamaev, 1966

Type species: *Pseudepidosis lunaris* Mamaev, 1966: 233.

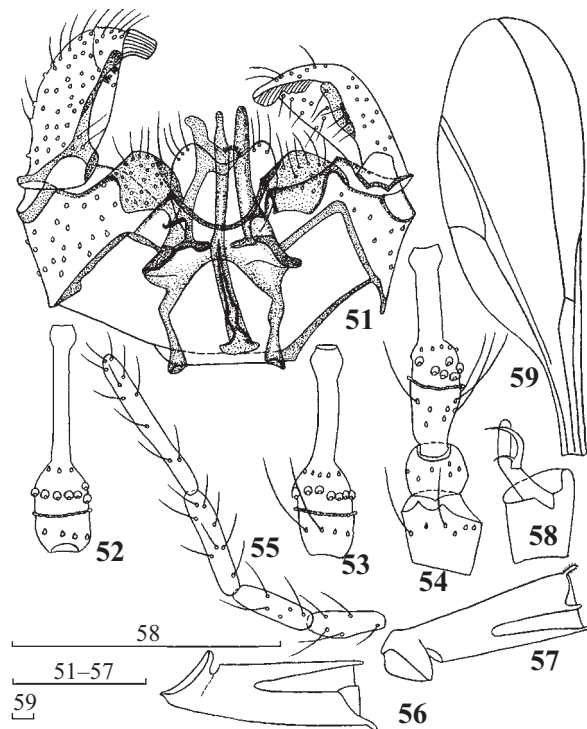
DIAGNOSIS. Body length 1.8–2.5 mm. Wings wide (Fig. 59). R_2 strongly curved and joined to wing margin behind apex or slightly curved and joined to wing apex. M_3 developed, Cu forked. Male antennae 2+14-segmented, female one — 2+11. Eye bridge wide, but 3–4 facets wide in new species. Palpi 4-segmented (Fig. 55). Tarsal claw crescent, with denticle at the base, empodium equal in length claw (Fig. 58). 1-st tarsal segment with short straight blunt projection (Figs 56–57). Gonocoxites short, with medio-apical rounded lobe, covered by setae (Figs 51, 60, 62, 64, 67) or with apical pointed lobe (Fig. 66). Gonostylus longer than gonocoxites, curved, with series of setae on the end. Aedeagus sharply curved medially (Fig. 63), strongly dentated and enlarged apically (Figs 60–62, 65, 67) or not enlarged (Figs 64–65). Parameres separated, curved apically (Figs 60–63, 67), rudimentary (Fig. 64) or almost straight (Figs 51, 65). Parameres of a new species not enlarged apically, but one paramere with projection subapically (Fig. 51). Ovipositor 2-segmented.

Palearctic genus includes seven species: *Pseudepidosis armilla* Mamaev, 1994 — Russia: Kamchatka (Fig. 66); *P. bifida* Spungis, 1981 — Latvia (Figs 61–62); *P. lunaris* Mamaev, 1966 — Russia: Moscow region (Figs 63–64); *P. recusata* (Fedotova et Sidorenko, 2005), **comb.n.** (*Holoneurus*) — Russia: Primorskii krai (Fig. 67); *P. trifida* Mamaev, 1966 — Russia: Moscow region, Latvia (Fig. 60); *P. dives* Fedotova et Sidorenko, sp.n. — Russia: Primorskii krai (Figs. 51–59) and *P. zonata* Mamaev, 1990b — Russia: Taimyr (Fig. 65).

Pseudepidosis dives Fedotova et Sidorenko, sp.n.

Figs 51–59

MATERIAL. Holotype, ♂ — RUSSIA: Primorskii krai, Lazovskii Reserve, Proselochnaya Bay, Malaise trap, 15–16.VI 2005, slide 346/8074/1, Sidorenko (ZISP).



Figs. 51–59. *Pseudepidosis dives* sp.n., male: 51 — genitalia; 52 — 5-th flagellomere; 53 — 2-nd flagellomere; 54 — scape, pedicel, 1-st flagellomere; 55 — palpi; 56–57 — 1-st tarsal segment (variation of shape); 58 — tarsal claw; 59 — wing. Scales: 0.1 mm.

Рис. 51–59. *Pseudepidosis dives* sp.n., самец: 51 — гениталии; 52 — 5-й членик жгүтика; 53 — 2-й членик жгүтика; 54 — скапус, педицел, 1-й членик жгүтика; 55 — щупик; 56–57 — 1-й членик лапки (изменчивость формы); 58 — коготок лапки; 59 — крыло. Масштаб: 0.1 мм.

DESCRIPTION. MALE. Body length 1.8 mm, wing length 2.5 mm, wing width 0.83 mm. Thorax dark. Eyes bridge moved on frontal surface of head, medially 3 facets wide. Scape and pedicel transversal, light; flagellomeres dark. Pedicel 1.5 times shorter than scape. Stem of middle flagellomeres much longer than basal node, with ring of sensorial filae. 1-st flagellomere with very short basal stem, almost as long as 2-nd one. 1-st flagellomere 4.3 times as long as wide, basal node 4.3 times as long as wide, 1.3 times shorter than stem. 5-th flagellomere 3.5 times as long as wide, basal node 1.4 times as long as wide, 1.5 times shorter than stem. Palpi 4-segmented, 1-st segment swollen, 2–4-th ones almost parallel-sided and thin, their ratio 1:1.2:1.6:2.2, 4-th one with rounded apex. Tarsal claws thick, curved medially, with thin denticle at the base, empodium as long as claw. Wing with long and narrow basal part, 2.0 times as long as wide. Vein R_{1+2} 2.0 times shorter than wing. Cell R_5 very narrow, slightly enlarged near apex. R_s straight, $M+rm$ strongly curved, 2.8 times shorter than wing. R_3 strongly curved near apex, joining wing margin on the tip of wing. Abdominal tergites and sternites whole, without lacunas. Gonocoxites fused by medial narrow slightly sclerotized bridge, strongly excavated dorso-basally, with medial-apical rounded sclerotized lobes and straight lateral sides, 1.2 times as long as wide; dorsal part of gonocoxites very short. Gonostylus swollen at middle, narrowed basally, 2.0 times as long as wide and gonocoxites, with large apical setose denticle, strongly excavated basally, along margin with short setose areas. Parameres longer than gonocoxites, very wide, strongly scler-

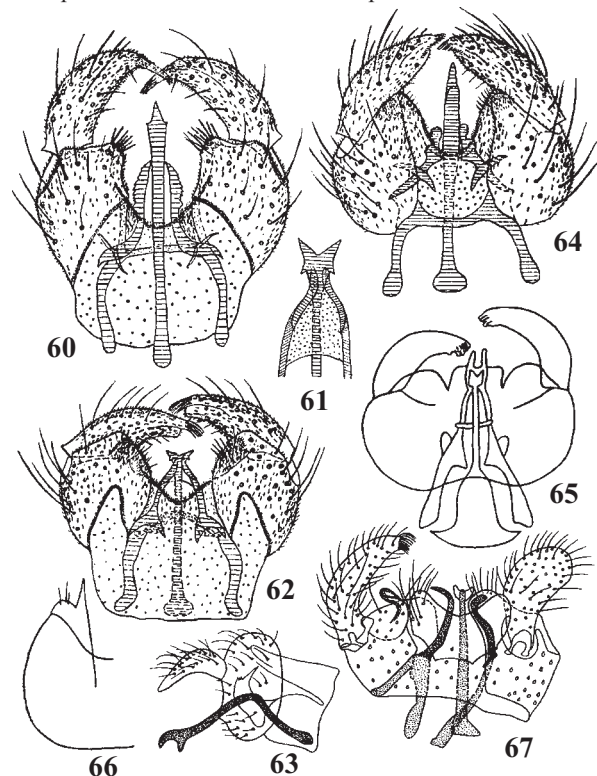
rotized, narrowed apically, with medial narrow bridge. One of the parameres submedially with large dentated swelling. Aedeagus wide, sclerotized, narrowed subapically and T-formed basally. Apodeme of male postabdomen with curved thick sclerotized roots, longer than aedeagus in basal part. X tergite small, with lateral lobe and wide excision between it. X sternite unclear.

FEMALE unknown.

RELATIONSHIPS. New species differs from other known species of genus by presence of asymmetrical projection on one of the parameres; by sclerotized medio-apical lobes of gonocoxites; by strongly swollen gonostylus; by pointed aedeagus (bi- or trifold). New species closely related to *P. bifida* from Latvia but differs by body size (2.4–2.5 mm in *P. bifida*); by almost parallel-sided parameres (crossed in *P. bifida*); by not dentated apex of aedeagus; by more short ventral part of gonocoxite; by R_5 not strongly curved apically.

KEY TO SPECIES OF *PSEUDOEPIDOSIS* MAMAEV

1. Apical lobe of gonocoxites pointed (Fig. 66); gonostylus in view of wide curved plate with marginal comb of short unscrotized setae. Parameres confluent *P. armilla* Mamaev
- Apical lobe of gonocoxites rounded (Figs 51, 60, 62, 64–65, 67); gonostylus much longer than their width, with apical setose claw. Parameres separated 2



Figs. 60–67. *Pseudepidosis* spp., male genitalia: 60 — *P. trifida* Mamaev; 61–62 — *P. bifida* Spungis; 63–64 — *P. lunaris* Mamaev; 65 — *P. zonata* Mamaev; 66 — *P. armilla* Mamaev; 67 — *P. recusata* (Fedotova et Sidorenko) [after Mamaev, 1966; 1990b, 1994; Spungis, 1981, Fedotova & Sidorenko, 2005].

Рис. 60–67. *Pseudepidosis* spp., гениталии самцов: 60 — *P. trifida* Mamaev; 61–62 — *P. bifida* Spungis; 63–64 — *P. lunaris* Mamaev; 65 — *P. zonata* Mamaev; 66 — *P. armilla* Mamaev; 67 — *P. recusata* (Федотовой, Сидоренко) [По: Мамаеву, 1966; 1990b, 1994; Спунгису, 1981; Федотовой, Сидоренко, 2005].

2. Aedeagus forked apically, as long as or shorter than gonocoxites (Figs 62, 65, 67), much longer than their width. Parameres separated 3
 — Aedeagus pointed or rounded apically, longer than gonocoxites (Figs 51, 64) 5
3. Aedeagus swollen basally (Fig. 65). Parameres straight apically, longer than aedeagus. Stem of middle flagellomeres 1.2 times as long as basal enlargement. Body length 4.5 mm *P. zonata* Mamaev
 — Aedeagus not swollen basally (Figs 51, 60, 62, 64, 67). Parameres curved apically, not longer than aedeagus. Body length 1.15–2.6 mm 4
4. Parameres curved outward apically, not forked basally (Fig. 67). Stem of middle flagellomeres 1.2 times as long as basal enlargement. Body length 1.15 mm, wing length 1.75 mm *P. recusata* (Fedotova et Sidorenko), **comb.n.**
 — Parameres curved inward, forked basally (Figs 61–62). Stem of middle flagellomeres 1.5 times as long as basal enlargement. Body length 2.4–2.6 mm
 *P. bifida* Spungis
5. One of the parameres with subapical swollen projection (Fig. 51). Aedeagus narrowed apically, without dentated swelling. Stem of middle flagellomeres 1.5 times as long as basal enlargement. Body length 1.8 mm, wing length 2.5 mm *P. dives* Fedotova et Sidorenko, **sp.n.**
 — Parameres symmetrical (Figs 60, 64). Aedeagus with two or three outgrowths apically 6
6. Stem of 5-th flagellomere 2.0–2.5 times as long as basal enlargement. Aedeagus with two outgrowths apically, curved dorsally (Figs 63–64). Body length 2.5–3.0 mm
 *P. lunaris* Mamaev
 — Stem of 5-th flagellomere 1.5–1.7 times as long as basal enlargement. Aedeagus with three outgrowths apically (Fig. 60). Body length 3.0–3.5 mm
 *P. trifida* Mamaev

Genus *Glomepidosis* Fedotova et Sidorenko, **gen.n.**

Type species: *Glomepidosis solida* Fedotova et Sidorenko, **sp.n.**

DESCRIPTION. MALE. Body light, length 1.5–1.3 mm. Antennae 2+14-segmented. Stem of middle flagellomeres longer than basal node; node with slightly visible ring of sensorial filae (Fig. 75). Stems of flagellomeres strongly shortened toward apex (Fig. 74). Palpi longer than height of head, 4-segmented, 4-th segment longer than other (Fig. 76). 1-st tarsal segment with short rhomboid projection (Fig. 77), covered by short setae. All legs with 2-nd tarsal segment longer than tibia, femur longer than tibia. Tarsal claws with denticle at the base, empodium shorter than claw (Fig. 73). Wing with well developed anal lobe, 3.1 times as long as wide, R_s parallel to R_5 , R_5 strongly curved near apex, joining wing margin far beyond tip of wing. Vein M_{1+2} developed. Vein Cu forked. Abdominal tergites and sternites without lacunas, with sclerotized stripes, covered by setae (Figs 87–88). Gonocoxites fused (Fig. 68), with medio-apical hook-like (Fig. 69) or rounded projection (Fig. 69). Gonostylus swollen dorsally, almost straight ventrally, with rounded transparent apical claw, surrounded by setae. Apical claw with 1–2 additional dorsal and lateral sclerotized black spines. Parameres very wide and strongly sclerotized, rounded apically, not fused medially. Aedeagus wide and sclerotized, as one of parameres, asymmetrical, consists of genital rod and lateral projection. Roots of genitalia thick and sclerotized, as well genitalial rod and slightly longer than rod. X tergite very wide, cordiform (Fig. 69). X sternite narrower than X tergite, with excision.

FEMALE unknown.

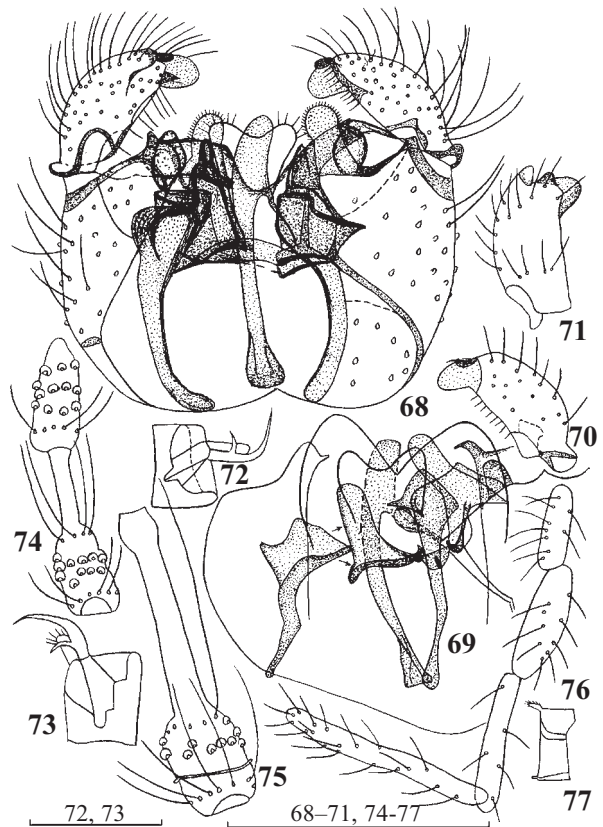
RELATIONSHIPS. New genus differs from other known genera of the tribe Porricondyliini by asymmetrical aedeagus with thin lateral projection; by not fused and thick parameres not pointed apically and not divided on two projections (pointed and divided in *Monepidosis*); by swollen gonostylus (thin in *Monepidosis*) with apical rounded transparent projection, without ventral marginal lamella. Aedeagus not situated in special “sheath” formed by projections of ventral plate of genitalia as in *Monepidosis*.

Glomepidosis solida Fedotova et Sidorenko, **sp.n.**

Figs 68–77, 87–88

MATERIAL. Holotype, ♂ — RUSSIA, Primorskii krai, Lazovskii Reserve, Koreiskaya pad', yellow trap, 16–17.VII.2005, slide 252/8085/1, Sidorenko (ZISP). **Paratype,** ♂ — Koreiskaya pad', Malaise trap, merge, 17–18.VI.2005, slide 252/8089/2, Sidorenko (IBSS).

DESCRIPTION. MALE. Body light, length 2.20–2.43 mm, wing length 3.0–3.25 mm, wing width 1.08–1.2 mm, antennae 3.25 mm. Eyes bridge medially 5 facets wide. Thorax pale-brown, with three brown dorsal stripes. Scape almost rounded. Antennae 2+14-segmented. 1-st flagellomere 1.3 times longer than 2-nd one. 1-st flagellomere 5.0 times as long



Figs. 68–77. *Glomepidosis solida* sp.n., male: 68 — genitalia; 69 — часть гонококситов, парамеры и стерниты; 70–71 — гоностили (изменчивость формы); 72–73 — коготок лапок (изменчивость формы); 74 — 13-й и 14-й членики жгутика; 75 — 5-й членик жгутика; 76 — щупик; 77 — дистальный край коготка передней лапки. Масштаб: 0.1 мм.

Рис. 68–77. *Glomepidosis solida* sp.n., самец: 68 — гениталии; 69 — часть гонококситов, парамеры и стерниты; 70–71 — гоностили (изменчивость формы); 72–73 — коготок лапок (изменчивость формы); 74 — 13-й и 14-й членики жгутика; 75 — 5-й членик жгутика; 76 — щупик; 77 — дистальный край коготка передней лапки. Масштаб: 0.1 мм.

as wide, basal enlargement 2.4 times as long as wide, 1.1 times shorter than stem. 5-th flagellomere 3.8 times as long as wide, basal enlargement 1.2 times as long as wide, 2.0 times shorter than stem. 14-th flagellomere narrowed apically, with rounded apex, 1.5 times shorter than 13-th one. Palpi 1.3–1.4 times longer than height of head, 4-segmented, almost parallel-sided, their ratio 1:1.4:2.0:2.5 or 1:1.2:1.4:2.3, 4-th segment parallel-sided, longer than other, 2-nd segment slightly rounded. Fore femur 1.5 times as long as tibia; 2-nd tarsal segment 1.3 times as long as tibia and 2.3 times as long as 3-rd tarsal segment; 4-th tarsal segment 2.1 times as long as 5-th. Middle femur 1.2 times as long as tibia; 2-nd tarsal segment 1.2 times as long as tibia and 2.1 times as long as 3-rd tarsal segment; 4-th tarsal segment 2.1 times as long as 5-th. Hind femur 1.1 times as long as tibia; 2-nd tarsal segment 1.1 times as long as tibia and 2.0 times as long as 3-rd tarsal segment; 4-th tarsal segment 2.1 times as long as 5-th. Tarsal claws thin, curved near middle, with denticle at the base, empodium shorter than claw. Wing with short and narrow basal part, 3.1 times as long as wide. Vein R_{1+2} 2.5 times shorter than wing. $M+rm$ slightly curved, 2.5 times shorter than wing. R_3 strongly curved near apex, joining wing margin far beyond the tip of wing. Abdominal tergites

without lacunas, with distal row of setae and medial group of setae near lateral side, situated on sclerotized plate (Fig. 87). Sternites with fragmental distal and medial rows of setae on sclerotized areas and irregular proximal groups of setae (Fig. 88). Gonocoxites fused, with oblique truncate apex and medio-apical rounded or hook-form sclerotized protrusions, 1.7 times as long as wide. Lateral sides of gonocoxites almost straight or slightly rounded. Gonostylus changeable, 2.9 times as long as wide, sometimes with setose plate around claw, strongly excavated basally (Figs 68, 71), 1.7–2.5 times shorter than gonocoxites. Parameres widely rounded or swollen apically, strongly sclerotized and enlarged basally. Aedeagus curved distally, with thin lateral projection not far from apex. Roots of genitalia slightly curved. X tergite with wide lobes and triangular excision between its, longer than gonocoxites. X sternite slightly excavated apically, 2.3 times narrower than cerci.

FEMALE unknown.

Genus *Recessepidosis* Fedotova et Sidorenko, gen.n.

Type species: *Recessepidosis umbonis* Fedotova et Sidorenko, sp.n.

DIAGNOSIS. New species differs from *Monepidosis* by very long outgrowths of parameres; by not enlarged at the base, but formed loop-shaped rods; by absence of sheath for aedeagus formed by parameres; by simple tarsal claw and long empodium, by 1-st tarsal segment with long acute projection; by absence of distal fragment of vein M_{1+2} , by lamellar projections on gonostylus and by short stem of flagellomeres.

DESCRIPTION. MALE. Body length 1.75 mm, wing and antennae 1.4 times as long as body. Eye bridge 6 facets wide. Antennae 2+14-segmented. Stem of middle flagellomeres longer than basal enlargement, with ring of sensorial filae (Fig. 82). 1-st flagellomere with very long basal stem (Fig. 83). 14-th flagellomere pointed apically (Fig. 81). Palpi longer than height of head, 4-segmented, segments almost parallel-sided and thin (Fig. 84). All 2-nd tarsal segment much longer than tibia; femur longer than tibia. Tarsal claws simple, thin, curved distally, empodium as long as or slightly shorter than claw (Fig. 80). 1-st tarsal segment with long acute and curved projection (Fig. 85). Wing with long and narrow basal part (Fig. 86). Vein R_3 slightly curved near apex, joining wing margin beyond tip of wing. $M+rm$ slightly curved, formed small obtuse bend. Vein Cu forked, but point of bifurcation unclear; M_3 visible only near fork Cu ; Cu_p undeveloped; M_{1+2} absent. Abdominal tergites without lacunas, with distal row of setae. Gonocoxites fused, with rounded apex, strongly excavated (Fig. 78). Lateral sides of gonocoxites slightly rounded. Gonostylus swollen proximally, almost semicircular, narrowed distally, with rounded apical lobe, covered by long setae, without claw; ventral side with setose area. Ventral plate almost semicircular. Parameres consist of two pointed parts, thick and thin, with loops of strongly sclerotized and crimped rods, connected at the base by thin bridge. Aedeagus thin, strongly sclerotized, swollen and widely rounded apically, curved and enlarged basally. Roots of genitalia short, look like numerous hook-form rods. X tergite and sternite bilobed, not longer than gonocoxites.

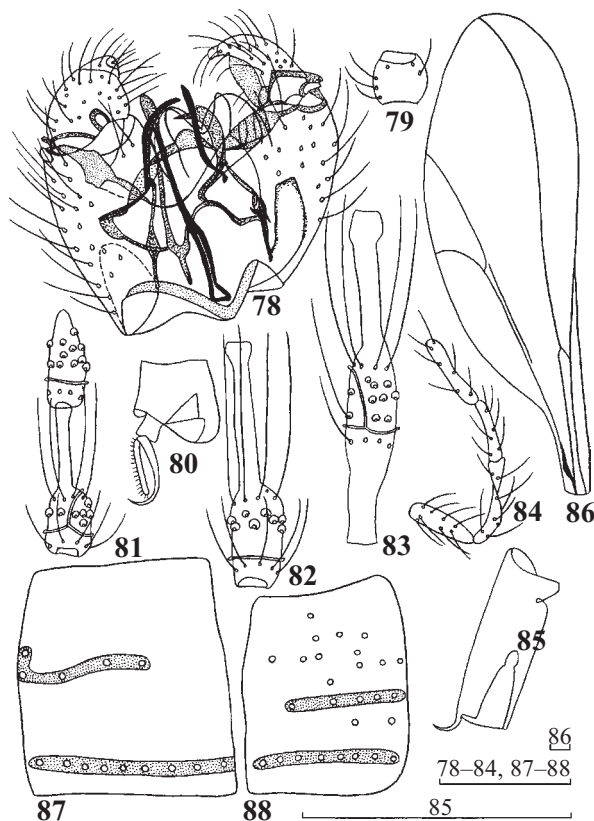
FEMALE unknown.

Recessepidosis umbonis Fedotova et Sidorenko, sp.n.

Figs 78–86

MATERIAL. Holotype, ♂ — RUSSIA: Primorskii krai, Lazovsky Reserve, Koreiskaya pad', Malaise trap, river shore, 17–18.VII.2005, slide 253/8090/1, Sidorenko (ZISP).

DESCRIPTION. MALE. Body length 1.75 mm, wing length 2.5 mm, wing width 0.8 mm, antennae 2.43 mm. Body light, scape, pedicel, flagellomeres uniformly dark.



Figs. 78–88. 78–86 — *Recessepidosis umbonis* sp.n.; 87–88 — *Glomepidosis solida* sp.n., males: 78 — genitalia; 79 — pedicel; 80 — tarsal claw; 81 — 13-th and 14-th flagellomeres; 82 — 5-th flagellomere; 83 — 1-st flagellomere; 84 — palpi; 85 — 1-st tarsal segment; 86 — wing; 87 — 5-th tergite; 88 — 5-th sternite. Scales: 0.1 mm.

Рис. 78–88. 78–86 — *Recessepidosis umbonis* sp.n.; 87–88 — *Glomepidosis solida* sp.n., самцы: 78 — гениталии; 79 — педицел; 80 — коготок лапки; 81 — 13-й и 14-й членики жгутика; 82 — 5-й членик жгутика; 83 — 1-й членик жгутика; 84 — щупик; 85 — 1-й членик передней лапки; 86 — крыло; 87 — 5-й тергит; 88 — 5-й стернит. Масштаб: 0.1 мм.

Body bridge medially 6 facets wide. Pedicel almost rounded. Antennae 2+14-segmented. 1-st flagellomere with basal stem, 1.9 times shorter than distal stem; 1.3 times longer than 2-nd one. 1-st flagellomere 6.8 times as long as wide, basal enlargement and basal stem 3.8 times as long as wide, 1.3 times shorter than stem. 5-th flagellomere 4.5 times as long as wide, basal node 1.9 times as long as wide, 1.3 times shorter than stem. 14-th flagellomere with pointed apex, 2.2 times as long as wide; 1.5 times shorter than 13-th one. Palpi 1.1 times as long as height of head, 4-segmented, their ratio 1:1.3:1.0:1.2, 4-th segment with rounded apex. Fore femur 1.3 times longer than tibia; 2-nd tarsal segment 1.2 times as long as tibia; 3-rd segment 2.0 times shorter than 2-nd; 4-th 2.3 times as long as 5-th. Middle femur 1.2 times longer than tibia; 2-nd tarsal segment 1.2 times as long as tibia; 3-rd segment 2.1 times shorter than 2-nd; 4-th 2.5 times as long as 5-th. Hind femur 1.2 times longer than tibia; 2-nd tarsal segment 1.2 times as long as tibia; 3-rd segment 2.0 times shorter than 2-nd; 4-th 2.5 times as long as 5-th. Tarsal claws and empodium very thin. Wing widely rounded medially, 3.1 times as long as wide. Vein R_{1+2} 2.5 times shorter than wing. R_5 2.5 times shorter than wing, strongly curved near apex, joining wing margin far beyond the tip of wing. Gonocoxites 1.8 times as long as wide. Gonostylus strongly swollen medially, 1.4 times as long as wide, with apical lobe without claw, strongly excavated basally, 2.1 times shorter than gonocoxites. Outer paramere thick, strongly curved and swollen, beaked apically. Inner paramere very thin, curved and parallel-sided. Both parameres joined and then forked. Aedeagus slighter sclerotized apically than other part. Roots of genitalia loop-shaped and thin. X tergite with widely rounded lobes and triangular excision. X sternite narrowed medially, with widely rounded lobes and rounded excision, 1.7 times narrower than X tergite.

FEMALE unknown.

Genus *Ancorepidosis* Fedotova et Sidorenko, **gen.n.**

Type species: *Ancorepidosis electa* Fedotova et Sidorenko, **sp.n.**

DIAGNOSIS. New genus notably differs from other known genera of Porricondylinae by absence of roots of genitalia, claws of gonostylus, veins M_3 and M_{1+2} , Cu_1 ; very small X tergite and sternite; by more longer empodium than tarsal claw; by presence of rectangular lobe on apex of gonocoxites; presence of sclerotized double parameres. New genus differs from the genus *Porricondyla* Rondani, 1840 by not crossed parameres, by absence of roots of genitalia, by slightly visible vein Cu_2 .

DESCRIPTION. MALE. Body length 1.03 mm. Body, palpi, antennae, abdomen and thorax very light, legs densely covered by setae. Eyes moved on the frontal surface of the head, medially 4–5 facets wide. Palpi longer than height of head, 4-segmented, segments slightly swollen (Fig. 89). Tarsal claws widely rounded medially, with thin denticle at the base, empodium slightly longer than claw (Fig. 90). 1-st tarsal segment with short rhomboid projection (Figs 92–93). All femur longer than tibia. Wing with long and narrow basal part and large anal lobe (Fig. 94). Cell R_5 almost parallel-sided, $M+rm$ slightly curved. R_5 parallel to R_3 , curved near apex and joining wing margin far beyond the tip of wing. Vein Cu forked, Cu_2 unclear. Abdominal tergites and sternites very light, without lacunas, with distal row of setae. Gonocoxites with apical rectangular lobe, fused, with apical lobe (Fig. 89). Ventral plate with U-form excision and slightly visible areas of sclerotization along margin. Gonostylus widely oval, without claw.

Parameres strongly sclerotized, consist of two parts: one — long, curved, thick and forked apically; second — short and triangular. Genital rod very thin, narrowed apically, swollen basally, slightly sclerotized. X tergite very small, wide, with wide excision between rounded lobes. X sternite narrower than X tergite.

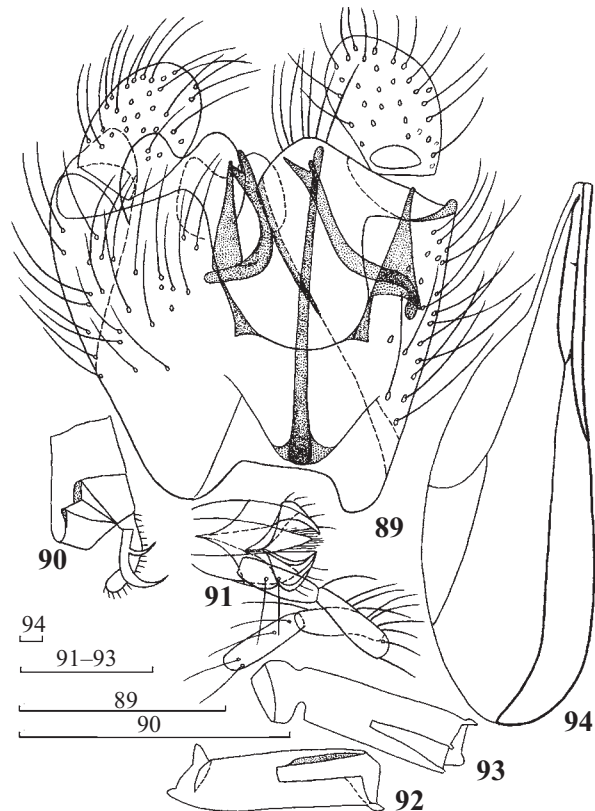
FEMALE unknown.

Ancorepidosis electa Fedotova et Sidorenko, **sp.n.**

Figs 89–94

MATERIAL. Holotype, ♂ — RUSSIA: Primorskii krai, Lazovskii Reserve, Koreiskaya pad', Malaise trap, forest, 3–4.IX.2005. slide 359/8101/1, Sidorenko (ZISP).

DESCRIPTION. MALE. Body light, length 1.03 mm, wing length 1.38 mm, wing width 0.53 mm. Eyes bridge 3–4 facets wide. Palpi 4-segmented, 1–3-rd segments slightly swollen laterally, thin, 4-th parallel-sided and rounded apically, their ratio 1:1.1:1.1:1.1. Tarsal claws thick, widely rounded, with large denticle at the base. Hind and fore femora 1.1 times longer than tibia. Hind tibia as long as 2-nd tarsal segment; 3-rd segment almost 2.0 times longer than 4-th; both 2.8 times as long as 5-th. Fore tibia 1.1 times as long as 2-nd tarsal segment; 3-rd 1.6 times longer than 4-th; 4-th 2.4 times as long as 5-th. Wing 3.3 times as long as wide. Vein R_{1+2} 2.1 times shorter than wing. $M+rm$ slightly curved, 1.5 times shorter than R_{1+2} , 3.1 times shorter than wing. Gonocoxites with rectangular apical lobe, 2.5 times



Figs. 89–94. *Ancorepidosis electa* sp.n., male: 89 — genitalia; 90 — tarsal claw; 91 — mouth parts; 92, 93 — 1-st tarsal segment (variation of shape); 94 — wing. Scales: 0.1 mm.

Рис. 89–94. *Ancorepidosis electa* sp.n., самец: 89 — гениталии; 90 — коготок лапки; 91 — ротовые органы; 92, 93 — 1-й членок лапки (изменчивость формы); 94 — крыло. Масштаб: 0.1 мм.

as long as wide, covered by sparse large pores. Lateral sides of gonocoxites almost straight. Gonostylus slightly enlarged medially, 1.5 as long as wide, 2.7 times shorter than gonocoxites. Parameres short, situated in distal half of gonocoxite. Genital rod almost as long as gonocoxite. X tergite and sternite equal in length, but X tergite 1.1 times wider than X sternite.

Genus *Stomatocolpodia* Mamaev, 1990

Type species: *Stomatocolpodia iridis* Mamaev, 1990: 17.

DIAGNOSIS. Body size 1.07–2.0 mm. Eye bridge narrow, 3–4 facets wide, moved on frontal surface of the head; occiput somewhat dilated; mouth parts enlarged. Wings wide, more than 3.0 times longer than wide; R_2 joining with wing margin near apex or usually sharply curved and joining wing margin far behind tip of wing (*Avicolpodia* **subgen.n.** and *S.* (s. str.) *munita*). M_3 developed, *Cu* forked. Male antennae 2+14-segmented, female — 2+11, stem of male antenna distinctly longer than basal enlargement, ring-shaped sensoria on 1-st–7-th flagellar segments or absent. Palpi 4-segmented, longer than height of head. Tarsal claw crescent, simple, empodium as long as claw. 1-st tarsal segment with long, acute, curved projection. Gonocoxites short and wide (Figs 34, 95–96, 99) or elongated and narrow (Fig. 98), with medio-apical sclerotized lobe; sometimes with small subapical denticle on inner side (Figs 98–99). Gonostylus swollen, with subapical (Figs 34, 95) or apical claw (Figs 96–99) and ventral lobe, claw transversal, sometimes slightly dissected (Fig. 98). X tergite and sternite bilobed. Ventral plate with U-form excision. Aedeagus strongly sclerotized, pointed (Figs 34, 96) or enlarged apically (Figs 98–99). Parameres separated, strongly curved apically (Fig. 34), or with apical hook

(Figs 95, 98–99) or straight (Fig. 96), grown together with inner margin of gonocoxites on dorsal side. Genital roots short (Figs 34, 95) or long (Figs 97–99). Ovipositor non-protractile, with 2-segmented lamellae.

Palearctic genus includes 5 species from 2 subgenera: *S.* (s. str.) *iridis* Mamaev, 1990a — Lithuania (Fig. 95); *S.* (s. str.) *munita* Fedotova et Sidorenko, **comb.n.**, 2005 (*Monepidosis*) — Russia: Primorskii krai (Fig. 34); *S.* (*Avicolpodia*) *sinuosa* Mamaev et Zaitzev, 1998 — Russia: Primorskii krai (Fig. 99); *S.* (*A.*) *gracilis* Fedotova et Sidorenko, 2005 — Russia: Primorskii krai (Fig. 98); *S.* (*A.*) *unidentata* (Marikovskij, 1958) (*Holoneurus*) — Russia: Amur, european part of Russia; Moldova, Kazakhstan (Figs 96, 97).

Subgenus *Avicolpodia* Fedotova et Sidorenko, **subgen.n.**

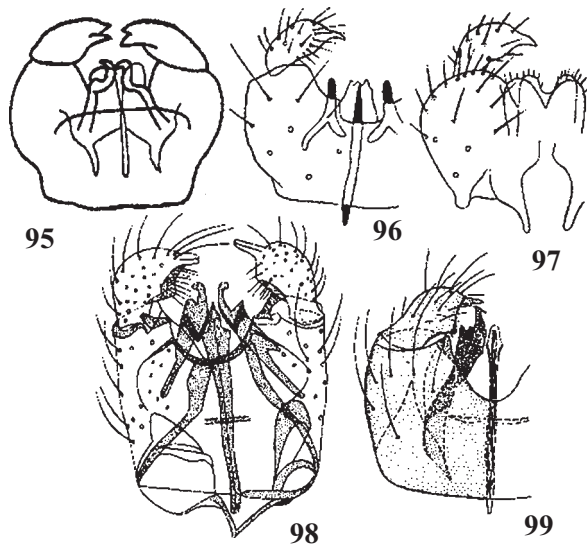
Type species: *Stomatocolpodia* (*Avicolpodia*) *gracilis* Fedotova et Sidorenko, 2005: 91.

DIAGNOSIS. Gonostylus strongly swollen medially, as bird'head with long apical claw, with ventral triangular or oval lobe (Figs 96–98), sometimes basally narrowed as (Figs 98–99). Parameres longer than gonocoxites, remind of bird' outline (Figs 98–99), strongly enlarged distally and dentated, with thin projection on the end (as bird' head) or parameres straight distally, shorter than gonocoxites (Figs 96–97). Aedeagus strongly enlarged near apex (Figs. 98–99), or pointed (Fig. 96). Lateral sides of gonocoxites almost straight (Figs. 98–99) or rounded (Figs 96–97). Genitalia strongly elongated (Fig. 98); almost as long as wide (Fig. 99) or transversal (Figs 96–97).

ETYMOLOGY. Shape of parameres and gonostylus with large apical tooth remind of bird' outline.

KEY TO THE SUBGENERA AND SPECIES OF THE GENUS *STOMATOCOLPODIA* MAMAEV

- Gonostylus elongated, with lateral cavity and short subapical claw (Figs 34, 95). Parameres not swollen, hook-form (Fig. 95) or strongly curved (Fig. 34) apically. (Subgenus *Stomatocolpodia* s. str.) 2
 - Gonostylus swollen distally (Figs 96–97), with long apical claw and ventral triangular (Figs 98–99) or oval (Figs 96–97) lobe. Parameres swollen and dentated (Figs 98–99) or straight distally near apex. (Subgenus *Avicolpodia* Fedotova et Sidorenko, **subgen.n.**) 3
- Middle flagellomeres with stem 1.5 times as long as basal enlargement. Parameres hook-form distally (Fig. 95). Vein R_2 joining with wing margin near tip. Body length 1.3 mm *S.* (s. str.) *iridis* Mamaev
 - Middle flagellomeres with stem 2.1 times as long as basal enlargement. Parameres strongly curved distally (Fig. 34). Vein R_2 strongly curved apically, joining with wing margin far behind tip. Body length 1.07 mm, wing length 2.99 mm *S.* (s. str.) *munita* (Fedotova et Sidorenko), **comb.n.**
- Genitalia elongated. Hooks of parameres directed to gonostylus (Fig. 98). Body length 1.26 mm, wing length 2.49 mm *S.* (*A.*) *gracilis* Fedotova et Sidorenko
 - Genitalia transversal. Hooks of parameres directed to aedeagus (Fig. 93) or parameres straight (Fig. 96).. .. 4
- Hooks of parameres directed to aedeagus (Fig. 99). Ventral lobe of gonostylus triangular (Figs. 98–99). Vein *Cu* well-developed. Body length 2.0 mm *S.* (*A.*) *sinuosa* Mamaev et Zaitzev
 - Parameres straight (Fig. 96). Ventral lobe of gonostylus oval. Vein Cu_2 unclear. Body length 1.8 mm *S.* (*A.*) *unidentata* Marikovskij



Figs. 95–99. *Stomatocolpodia* spp: 95 — *S.* (s. str.) *iridis* Mamaev; 96–97 — *S.* (*Avicolpodia*) *unidentata* (Marikovskij); 98 — *S.* (*A.*) *gracilis* (Fedotova et Sidorenko); 99 — *S.* (*A.*) *sinuosa* Mamaev et Zaitzev; 95–96, 98–99 — male genitalia ventrally; 97 — the same dorsally [after Marikovskij, 1958; Mamaev, 1990a; Mamaev & Zaitzev, 1998; Fedotova & Sidorenko, 2005].

Рис. 95–99. *Stomatocolpodia* spp: 95 — *S.* (s. str.) *iridis* Mamaev; 96–97 — *S.* (*Avicolpodia*) *unidentata* (Marikovskij); 98 — *S.* (*A.*) *gracilis* (Fedotova et Sidorenko); 99 — *S.* (*A.*) *sinuosa* Mamaev et Zaitzev; 95–96, 98–99 — гениталии вентрально; 97 — то же дорсально [По: Мариковскому, 1958; Мамаеву, 1990а; Мамаеву, Зайцеву, 1998; Федотовой, Сидоренко, 2005].

Genus *Zephyrepidosis* Fedotova et Sidorenko, **gen.n.**

Type species: *Dendrepidosis pilifera* Fedotova et Sidorenko, 2005: 96 Fig. 33

DIAGNOSIS. New genus differs from other genera of the tribe Porricondyliini by form of narrow tegmen, completely emarginated by thin sclerotized stripe, not interrupted apically; presence of elongated inner-medial cleft of gonocoxites; by presence of apical single transparent claw of gonostylus. New genus closely related to the genus *Parepidosis* Kieffer, 1913 by presence of large apical lobes of gonocoxites and sclerotized margin of tegmen not dissected apically, but differs from it by form of sclerotized margin of tegmen, by single transparent (setose in *Parepidosis*) claws of gonostylus, by well-developed empodium, not shorter than claw (rudimentary or short in *Parepidosis*), by strongly curved vein R_3 , joining with margin of wing very far from top of wing.

DESCRIPTION. MALE. Body light, length 2.14 mm, wing 1.2 times shorter than body. Eye bridge 6 to 9 facets wide medially. Middle flagellomeres 3.8 times as long as wide; basal enlargement 1.8 times shorter than stem. Basal enlargement of flagellomeres with three whorls of setae, without basal circumfilar. 1-st flagellomere 5.0 times as long as wide, with short basal stem. Palpi longer than height of head; segments slightly enlarged distally; 4-th segment 1.7 times longer than 3-rd. 1-st tarsal segment with short rhomboid projection covered by short setae or slightly visible. Tarsal claws strongly rounded distally, with denticle at the base, empodium as long as claw. Wing with elongated base, maximally enlarged medially, 3.0 times as long as wide, anal lobe well-developed. Vein R_{1+2} joining C near middle of wing, R_5 S-formed, parallel to R_3 , strongly curved apically. Cu forked. Veins M_{1+2} , M_3 , Cup undeveloped. Gonocoxites strongly triangularly swollen, especially apically, 1.2 times as long as wide, apical wide lobe well-developed, situated along narrow inner-medial cleft of gonocoxites. Gonostylus elongated, swollen medially, with long transparent claw and basal protrusion, slightly sclerotized along ventral elongated excision, 2.6 times as long as wide. X tergite and sternite cordiform. Tegmen slightly narrowed apically, emarginated by sclerotized stripe. Aedeagus acerated, shorter than gonocoxites, slightly curved and enlarged basally, strongly sclerotized, shorter than gonocoxites, pointed apically.

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