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**New genera and species of gall midges
of the tribe Dicerurini from the Russian Far East
(Diptera, Cecidomyiidae, Porricondylinae)**

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Abstract

New taxa of gall-midges (Diptera, Cecidomyiidae) from the Russian Far East are described: *Dicerura cymbiformis* **sp. nov.**, *Neurepidosis (Lanepidosis) conchata* **subgen. nov. et sp. nov.**, *N. (L.) suffusa* **sp. nov.**, *N. (L.) paradistica* **sp. nov.**, *Crustepidosis delicata* **gen. nov. et sp. nov.**, *Nebulepidosis urceolata* **gen. nov. et sp. nov.**, *N. vellutina* **sp. nov.** The genus *Neurepidosis* is recorded for the Russian Far East for the first time. A key to subgenera and species of the genus *Neurepidosis* SPUNGIS, 1987 is given.

Zusammenfassung

Neue Arten von Gallmücken (Diptera, Cecidomyiidae) aus Russland-Fernost werden beschrieben: *Dicerura cymbiformis* **sp. nov.**, *Neurepidosis (Lanepidosis) conchata* **subgen. nov. et sp. nov.**, *N. (L.) suffusa* **sp. nov.**, *N. (L.) paradistica* **sp. nov.**, *Crustepidosis delicata* **gen. nov. et sp. nov.**, *Nebulepidosis urceolata* **gen. nov. et sp. nov.**, *N. vellutina* **sp. nov.** Die Gattung *Neurepidosis* wird für Russland-Fernost zum ersten mal gemeldet. Ein Schlüssel für die Untergattungen und Arten der Gattung *Neurepidosis* SPUNGIS, 1987 wird präsentiert.

Introduction

The tribe Dicerurini was established as subtribe by B.M. MAMAEV (1966). A generic key of the Palaearctic gall midges of the subfamily Porricondyliinae (including Dicerurini as tribe) was prepared by B.M. MAMAEV (1990).

This article is devoted to descriptions of seven new taxa of gall midges from the genera *Neurepidosis* SPUNGIS, 1987, *Crustepidosis* **gen. nov.** and *Nebulepidosis* **gen. nov.** collected in Primorskii krai, Lazovskii Reserve in 2005. Diagnosis of the tribe Dicerurini MAMAEV, genera *Dicerura* KIEFFER and *Neurepidosis* are added.

Holotypes and some paratypes of the new species are deposited in the Zoological Institute, St. Petersburg, Russia, the other paratypes in the collections of the Institute of Biology and Soil Science, Far Eastern Division of the Russian Academy of Sciences, Vladivostok, Russia. The abbreviations used in the descriptions and figure legends are as follows: F1, F2 ... F14 = flagellomeres 1, 2, ... 14; MT = Malaise trap.

Tribe Dicerurini MAMAEV, 1966

Diagnosis. Male antennae with 2+13 or 2+14-segmented, female 2+11-14-segmented. Male flagellomeres with basal enlargements, 1-2 times as long as broad; stem usually longer than enlargement. Male sensoria ring-shaped with elongated projection (Figs 21, 22, 34, 35, 43, 61, 64, 66); female sensoria with 1-2 ring-shaped, connected by two commissures (Figs 10-13), or sensoria filae reticulated (Figs 52, 54-56, 102-105). Eye bridge removed on frontal surface, occiput swollen. Palpi 1+4-segmented, sometimes longer than height of head. Wings long and narrow, vein R5 joins wing margin slightly beyond the top of wing. Rs situated under the acute angle to R5 or parallel to it; M+rm S-shaped or straight; M1+2 reduced; M3 developed completely or only distally. Cu simple. Legs very long, covered by scales and sparse hairs. Tarsal claw with one or series of denticles at the base, empodium shorter than claw or reduced. Genitalia often with yellow long microtrichia on gonostylus and tergite IX, and on pubescent lobes of gonostylus. Gonocoxites fused, usually with sclerotized roots. Tegmen usually with sclerotized parameres. Ovipositor telescopic, short, ventral lobes enlarged, dorsal lobes 2 or 3-segmented.

Most of the species are associated with decaying plants, sometimes develop in leaf sheath. In the Holarctic and Oriental regions the tribe includes 10 genera and 45 species (GAGNÉ 2004). Recently 2 new *Dicerura* species were described from the Far East of Russia (FEDOTOVA 2004; FEDOTOVA & SIDORENKO 2005).

Genus *Dicerura* KIEFFER, 1898

Type species: *Dicerura scirpicola* KIEFFER, 1898.

♂. Antennae 2+14-segments, slightly longer than wing. Flagellar segments with basal enlargement about 1.5 times as long as wide, stem 1.8 times shorter than basal enlargement, sensorial ring-shaped, lacking on last segment. Palpi with 1+4 segments, as long as height of head. Eyes bridge 1-2 facets. Rs and M+rm parallel to R5 or angulated to R5; M+rm slightly curved; Cu simple. M1+2, M3 and Cup sometimes developed fragmentary.

Legs about twice as long as wings, tibia as long as or slightly longer than femur and 1st tarsal segment with projection (Fig. 3). Tarsal claw bifid, empodium slightly shorter than claws. Gonostylus narrowed distally, medio-basally with numerous setae, without claw. tergite IX slightly emarginated, sternite X indistinguishable. Gonocoxites narrow, with dorsal apical pubescent lobe and distinct roots, transversal bridge long and narrow. Tegmen well developed, distally rounded, genital rod straight, longer than gonocoxites, distally forked. Aedeagus prominent. Ventral plate not emarginated or slightly emarginated.

♀. Antennae 2+14-segmented, about half as long as wings, flagellar segments with basal enlargement twice as long as broad (Figs 11, 13), stem 0.25-0.4 as long as body; sensorial of two laterally and medially connected rings on distal half of basal enlargement. Lamellae of ovipositor 3-segmented. Two sclerotized spermathecae (PANELIUS 1965; MAMAIEV 1966; SPUNGIS 1987).

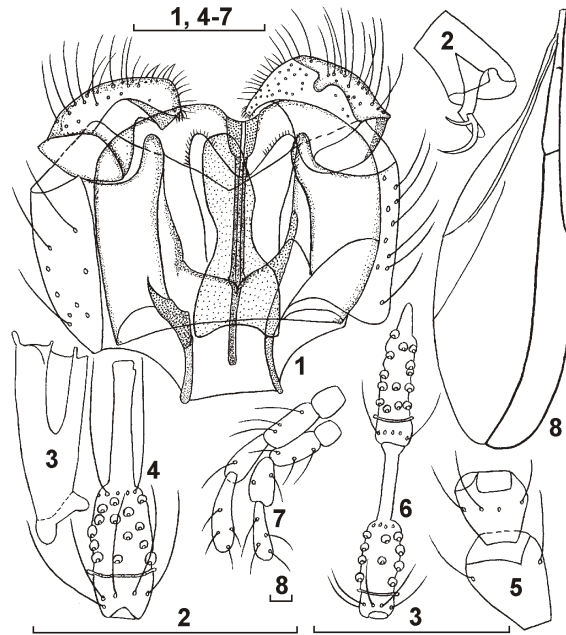
Holarctic and Oriental genus includes 28 species (GAGNÉ 2004; FEDOTOVA 2004; FEDOTOVA & SIDORENKO 2005). 5 species are known from Russian Far East: *Dicerura divaricata* FEDOTOVA, 2004, *D. foliicola* MAMAIEV, 1968, *D. infundibularis* FEDOTOVA & SIDORENKO, 2005, *D. padi* MAMAIEV, 1975 and *D. stipator* MAMAIEV, 1972.

***Dicerura cymbiformis* FEDOTOVA & SIDORENKO sp. nov.** (Figs 1-18)

Material. Holotype ♂ (slide 246/8088/1): Russia, Primorskii krai, Lazovskii Reserve, cordon America, river shore, MT, 19-20.VII.2005 (V. SIDORENKO). Paratypes 2 ♀♀ (slide 246/8089/2): Koreiskaya pad, MT, marge, 17-18.VI.2005 (V. SIDORENKO).

♂. Body dark-brown, length 1.85 mm, wing length 2.75 mm, wing width 0.8 mm, antennae length 1.18 mm. Eyes bridge medially 1-2 facets wide, with interval between it as wide as one facets. Scape elongated, 1.4 times as long as wide, enlarged distally, 1.5 times longer than pedicel. Antennae 2+14-segmented. Stem of mid flagellomeres slightly shorter than basal node, with ring of sensorial filae. F1 1.2 times longer than F2. F5 4.1 times as long as wide, basal enlargement 2.2 times as long as wide, 1.1 times longer than stem. F14 with long apical projection, 1.2 times shorter than F13. Palpi 4-segmented, its ratio 1:1.8 : 1.8 : 2.5, 3-4th segments enlarged distally. 1st tarsal segment with short projection. Tarsal claws thin, curved near middle, with long and thin denticle at the base, empodium slightly shorter than claw. Wing with long basal part, 3.3 times as long as wide. Vein R1+2 2.0 times shorter than wing. Cell R1+2 of wing very narrow. Vein M+rm slightly curved, 3.0 times shorter than wing. R5 slightly curved near apex, joins wing margin beyond the tip of wing. Rs under almost rectangular angle to R5. Vein Cu well developed, Cup thin, not reached to margin of wing, M3 developed distally, M1+2 absent. Abdominal tergites and sternites with transversal dark stripe. Genitalia transversal. Gonocoxites almost completely fused ventrally, with small triangular excision between it, not enlarged apically, with thin elongated dorsal medio-apical lobe, 1.9 times as long as wide. Lateral sides slightly rounded. Gonostylus pointed, curved apically and strongly enlarged basally, deeply excavated ventrally, 1.5 times as long as wide, without claw, covered by long basal and short apical setae, 1.7 times shorter than gonocoxites. IX tergite with oval lobes, divided by small excision, fused with genital rod. Tegmen widely rounded, thin, almost as long as gonocoxites, 2.5 times narrower than IX tergite, narrowed medially and widely enlarged basally. X sternite as long as tegmen, with triangular lobes and wide tri-

angular excision. Genital rode strongly sclerotized, with transparent central canal, strongly enlarged and forked apically. Roots of genitalia thin, slightly sclerotized, longer than genital rod in basal part.



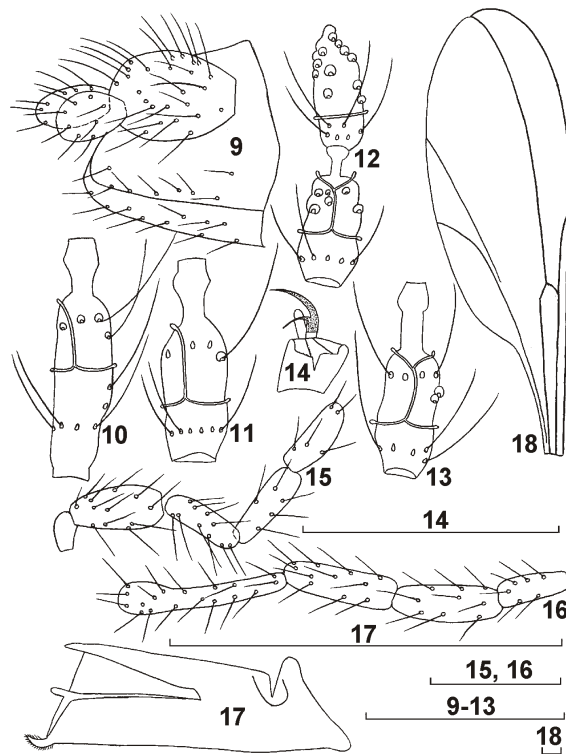
Figs 1-8. *Dicerura cymbiformis* sp. nov., male: 1 genitalia; 2 tarsal claw; 3 1st tarsal segment; 4 F5; 5 scape and pedicel; 6 F13 and F14; 7 palpi (variation of shape); 8 wing. Scale line = 0.1 mm.

♀. Body dark-brown, length 1.63-1.88 mm, wing length 2.25-2.7 mm, wing width 0.75-0.88 mm, antennae length 1.18 mm. Antennae 2+14-segmented. F1 4.3 times as long as wide, basal enlargement 3.1 times as long as wide, 3.3 times as long as stem. F1 1.2 times longer than F2. F5 3.2 times as long as wide, basal enlargement 2.3 times as long as wide, 1.7 times longer than stem. F14 with long apical projection, 1.1 times shorter than F13. Palpi 4-segmented, its ratio 1 : 1.4 : 1.5 : 2.2 or 1:0.9:1:0.9, 4th segments enlarged distally. 1st tarsal segment short, slightly pointed apically. Tarsal claws slightly curved, with thin denticle, empodium shorter than claw. Wing with long basal part and large anal lobe, 3.2 times as long as wide. Vein R1+2 1.9 times shorter than wing. Vein M+rm slightly curved, 2.7 times shorter than wing. Ovipositor not telescopic, as long as wide. Lobes of ovipositor situated dorsally, basal segment strongly swollen, 1.4 times as long as wide. Pair of apical segments oval, 1.4 times as long as wide, 1.8 times shorter than basal segment.

Relationship. New species closely related to *D. complicata* SPUNGIS, 1987 from Latvia

but differs from it by not reduced eyes bridge; by short stem (1.9 times longer than basal enlargement in *complicata*); by absence of M1+2; by transversal genitalia (as long as wide in *complicata*); by small apical lobes gonocoxites, by cordiform (trapezoid in *complicata*) cerci; by elongated (shorter than gonocoxites in *complicata*) tegmen; by curved (straight in *complicata*) roots of genitalia; by enlarged aedeagus to the end (straight in *complicata*); by short genital rod (much long roots of genitalia in *complicata*) and by small body size (2.8 mm in *complicata*).

Etymology. Name of new species is formed from Latin *cymbiformis* - in according of the shape of gonostylus.



Figs 9-18. *Dicerura cymbiformis* sp. nov., female: 9 ovipositor (laterally); 10 F1; 11 F2; 12 F3 and F4; 13 F5; 14 tarsal claw; 15, 16 palpi (variation of shape); 17 1st tarsal segment; 18 wing. Scale line = 0.1 mm.

Genus *Neurepidosis* SPUNGIS, 1987

Type species: *Neurepidosis gracilis* SPUNGIS, 1987: 39.

Diagnosis. ♂. Body length 1.0-1.3 mm. Eyes removed on frontal side of head (Fig. 48), very narrow, reduced, medially without facets or 2-3 facets wide. Antennae 2+14-segmented. Stem of middle flagellomeres longer than basal enlargement (Figs 22, 35, 43, 64, 66); sensorial filae sinuous, with 1-4 elongated projections, reached base or middle of stem; setae of distal whorl reached to the base of next flagellomeres. Palpi 4-segmented, shorter than height of head. Wing narrow, with reduced venation, Rs situated under the acute angle to R5, vein R5 joins with wing margin beyond the tip of wing, M1+2 absent, M3 developed distally, Cu well developed (subgenus *Neurepidosis*), sometimes M3 completely developed or fragmentary (Figs 32, 38, 45) (*Lanepidosis* subgen. nov.). 1st tarsal segment with short projection (Figs 31, 37, 46, 47). 1st tarsal segment with thin short projection, rounded apically, sometimes straight (Figs 31, 37) or curved and directed outward (Figs 46, 47). 2nd tarsal segment of hind legs longer than tibia. Tarsal claw smoothly curved, with one or some denticles at the base, empodium reduced or short (Figs 30, 41). Gonocoxites with medio-apical lobe (Figs 62, 67), or without it (Figs 19, 33, 39), short and swollen, fused ventrally. Gonostylus short, swollen, curved, pointed apically (Figs 60, 62, 67), with claw (Fig. 19), with lobe (Fig. 39) or with subapical wrinkle, covered by setae. Tegmen narrow, parallel-sided, slightly enlarged apically and curved basally in view of semicircular arched projection. Genital rod dark, sclerotized and strongly swollen at the base, ended near middle of genitalia. Aedeagus short, finger-like, forked rounded or curved apically. Transversal bridge thin or absent. Roots of genitalia long, sclerotized, diverged and curved (Figs 60, 62, 67) or absent (Figs 19, 33, 39).

♀ known only for the *Lanepidosis* subgen. nov. Antennae 2+11-segmented, flagellomeres with basal enlargement covered by sinuous and reticulate sensorial filae with loops; stem well developed, but shorter than basal enlargement (Figs 52, 54-56). Ovipositor protractile, telescopic, strongly sclerotized, curved dorsally, 3-segmented. IX abdominal segment swollen ventrally. Apical plates divided, subapical and basal segments fused.

Subgenus *Neurepidosis* s. str.

Diagnosis. Eyes bridge medially 2-3 facets wide. Basal enlargement of middle flagellomeres with sinuous sensorial filae, with two elongated projection, reached to base or middle of stem (Figs 64, 66). Wing narrow, with reduced venation, Cu well developed. Tarsal claw smoothly curved, with series of denticles at the base, empodium reduced. Gonocoxites short and swollen, fused ventrally, lateral sides rounded (Figs 60, 62, 67). Gonostylus pointed apically. Tegmen narrow, parallel-sided, slightly enlarged apically and curved basally in view of pair of semicircular arched projections. Genital rod dark, sclerotized and strongly swollen at the base, usually ended near middle of genitalia. Aedeagus short, finger-like. Transversal bridge thin. Roots of genitalia long, strongly sclerotized, diverged and curved.

Nominative subgenus includes 3 species: *N. (N.) gracilis* SPUNGIS, 1987 (Latvia); *N. (N.) minutus* SPUNGIS, 1987 (Latvia); *N. (N.) solinasi* MAMAEV & ZAITZEV, 1997 (Italy).

Subgenus *Lanepidosis* FEDOTOVA & SIDORENKO subgen. nov.

Type species: *Neurepidosis (Lanepidosis) conchata* FEDOTOVA & SIDORENKO sp. nov.

Description. ♀. Eyes removed on frontal surface of head (Fig. 48), devoid facets medially. Antennae and wing almost equal length. Basal enlargement of middle flagellomeres with ring-shaped sensorial filae, with elongated projection (Figs 22, 25, 43). Wing narrow, with reduced venation, Cu well developed, M3 developed (Fig. 45) or prominent distally (Figs 32, 38). Palpi 4-segmented, shorter than height of head. Tarsal claw slightly curved, with one large denticles at the base, empodium slightly shorter than claw (Figs 30, 41). Gonocoxites short and wide (Figs 19, 33, 39), fused ventrally, lateral sides almost straight. Gonostylus rounded apically, with large basal excision and subapical projection (Fig. 39), claw (Fig. 19) or wrinkle densely covered by setae (Fig. 33). Tegmen various shape, but not finger-like, with rounded or excavated apical margin, thin, enlarged or swollen basally. Genital rod dark, sclerotized and strongly swollen at the base, ended near middle of genitalia. Aedeagus with pair of apical lateral projections (Figs 19, 33) or hook-formed (Fig. 39). Transversal bridge and roots of genitalia absent.

♀. Antennae 2+11-segmented, flagellomeres with basal enlargement covered by sinuous and reticulate sensorial filae with loops; stem well developed, but shorter than basal enlargement (Figs 52, 54-56). Scape and pedicel transversal, strongly swollen, almost equal length (Fig. 55). F1 with basal enlargement, narrowed medially. Ovipositor protractile, telescopic, strongly sclerotized, curved dorsally, 3-segmented. IX abdominal segment swollen ventrally. Apical plates divided, subapical and basal segments fused.

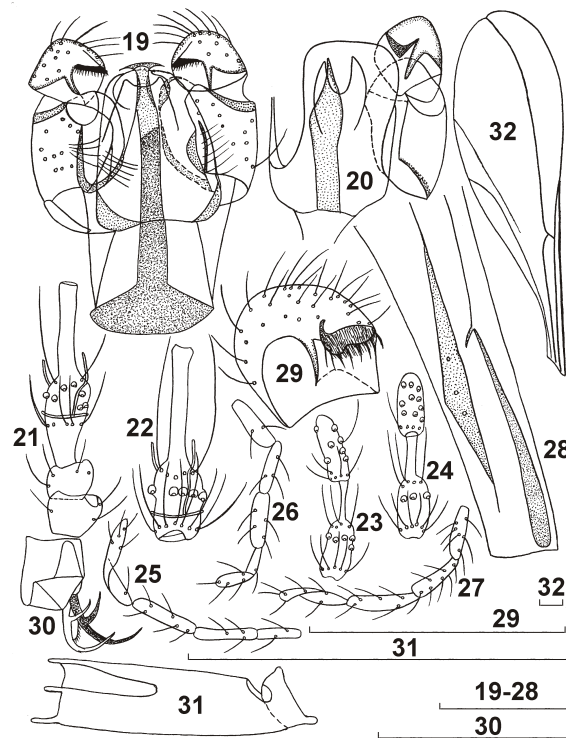
Relationship. New subgenus differs from nominative one by absence of genital roots and transversal bridge; by rounded apex of gonostylus (narrowed or pointed in *Neurepidosis*); by swollen or enlarged tegmen at the base (thin in *Neurepidosis*); by developed empodium (reduced in *Neurepidosis*); by presence of single denticle at the base of claw (series of denticles in *Neurepidosis*); by eyes bridge devoid facets.

New subgenus includes 3 new species described below.

***Neurepidosis (Lanepidosis) conchata* FEDOTOVA & SIDORENKO sp. nov.** (Figs 19-32)

Material. Holotype ♂ (slide 231/8090/1): Russia, Primorskii krai, Lazovskii Reserve, (slide 231/8102/1): Proselochnaya Bay, MT, 15-16.VII 2005 (V. SIDORENKO). Paratypes 2 ♂♂ (slide 231/8090/1-2): Koreiskaya pad', MT, river shore, 17-18.VI. 2005 (V. SIDORENKO).

Description. ♂. Body pale-brown, notum and occiput dark, length 1.2 mm, wing length 1.6 mm, wing width 0.45 mm, length antennae 1.63 mm. Scape enlarged apically, slightly longer than transversal pedicel. F1 4.2 times as long as wide, basal enlargement 1.1 times longer than stem. F2 1.2 times shorter than F1. F5 3.7 times as long as wide, basal enlargement 1.4 times shorter than stem. F14 fusiform, 1.4-1.7 times shorter than F13. Palpi 4-segmented, its ratio 1 : 1 : 1 : 1.2, 1 : 1 : 1.4 : 1.4 or 1 : 1.5 : 1.6 : 2.3, all segments almost parallel-sided, palpiger undeveloped. 1st tarsal segment with thin and straight projection (Fig. 31). Tarsal claws with denticle at the base. Wing with long and narrow basal part, 3.4 times as long as wide. Vein R1+2 1.9 times shorter than wing; vein M+rm 2.6 times shorter than wing, R5 curved near apex, joins wing margin slightly beyond the tip of wing.



Figs 19-32. *Neurepidosis (Lanepidosis) conchata* sp. nov., male: 19 genitalia; 20 part of genitalia (variation of shape); 21 scape, pedicel and F1; 22 F5; 23, 24 F13 and F14 (variation of shape); 25-27 palpi (variation of shape); 28 base of wing; 29 gonostylus (variation of shape); 30 tarsal claw; 31 1st tarsal segment; 32 wing. Scale line = 0.1 mm.

Rs situated under the acute angle to R5. Vein Cu simple, M3 well developed distally. Gonocoxites not fused, rounded medially, strongly enlarged apically, with small apical truncate lobe on inner side, 1.6 times as long as wide, with wide medial excision. Gonostylus semicircular, strongly excavated basally and ventrally, with thin protrusion between it, proximally with denticle, 2.1-2.3 times shorter than gonocoxites. Subapical claw of gonostylus covered by long and short setae. IX tergite whole, longer than gonocoxites, widely rounded apically, enlarged proximally. X tergite 1.8 times almost as long as and narrower than IX tergite, with short lobes, divided by wide oval excision. Tegmen enlarged apically, with two pointed lateral projections. Aedeagus slightly sclerotized, enlarged near apex and pointed on the end. Genital rod strongly sclerotized, basally swollen with lateral points, 1.3 times shorter than gonocoxites.

♀ unknown.

Relationship. New species differs from other known species of genus *Neurepidosis* by excavated X tergite, by medial sclerotized protrusion of gonostylus. New species closely related to *N. gracilis* SPUNGIS, 1987 from Latvia but differs by very wide and excavated gonostylus, by presence of lateral points on basal swelling of genital rod (rounded in *gracilis*), by absence of medio-apical swollen lobe. New species differs from *N. (L.) paradisica* sp. nov. by form and by size of genital rod; by absence of ventral lobe of gonostylus and by short stem of medial flagellomeres.

Etymology. Name of new species is formed from Latin *conchata* - in according to the shape of gonostylus.

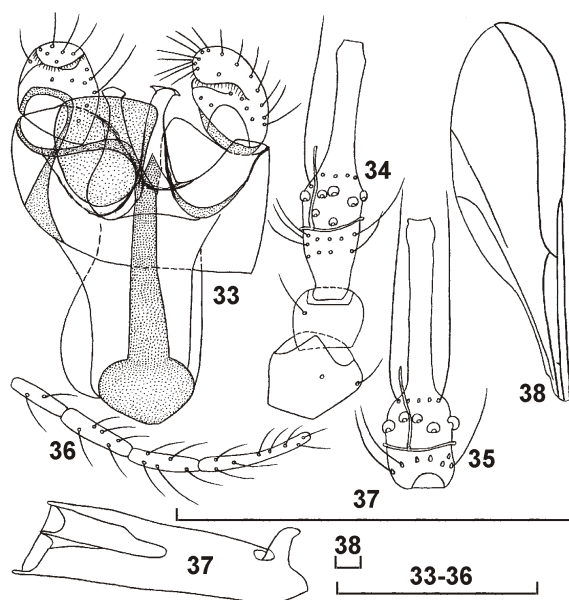
***Neurepidosis (Lanepidosis) suffusa* FEDOTOVA & SIDORENKO sp. nov.** (Figs 33-38)

Material. Holotype ♂ (slide 232/8094/1): Russia, Primorskii krai, Lazovskii Reserve, cordon America, river shore, MT, 18-19. VII. 2005 (V. SIDORENKO).

Description. ♂. Body pale-yellow, notum dark, length 1.25 mm, wing length 1.6 mm, wing width 0.48 mm. Scape enlarged apically, 1.4 times as long as pedicel. Pedicel transversal. Sensoria developed on all flagellomeres. F1 4.4 times as long as wide, basal enlargement almost as long as stem. F2 slightly shorter than F1. F5 4.1 times as long as wide, basal enlargement 1.8 times shorter than stem. Palpi light, 1.3 times shorter than height of head, 4-segmented, its ratio 1 : 1.3 : 1.3 : 2.0, last segment longer and narrower, palpiger undeveloped. 1st tarsal segment with short, thin, straight projection (Fig. 37). Wing with long and narrow basal part, 3.4 times as long as wide. Vein R1+2 1.9 times shorter than wing; R5 slightly curved near apex, joins wing margin slightly beyond the tip of wing. Rs situated under the angle to R5. Vein M+rm 2.5 times shorter than wing. Vein Cu well developed, M3 developed only distally. Abdominal tergites and sternites widely divided, in view of two stripes. Gonocoxites wide, 1.4 times as long as wide, with very small medio-apical lobe, ventral margin sclerotized apically. Gonostylus wavy divided apically, in view of wrinkle, without apical denticle, enlarged basally, 1.3 times shorter than gonocoxites, 2.7 times as long as wide. IX tergite not curved, enlarged apically, whole, reached to apex of gonocoxites. Tegmen strongly enlarged basally, almost parallel-sided distally, as wide as aedeagus subapically, as long as IX tergite. Aedeagus enlarged apically, with two pointed lateral projections. Genital rod strongly sclerotized with very broad basal enlargement.

♀ unknown.

Relationships. New species differs from other known species of the genus *Neurepidosis* by absence of roots of genitalia. Closely related to *N. (N.) solinasi* MAMAEV & ZAITZEV, 1997 from Italy but differs by rounded swelling of genital rod (pear-shaped in *solinasi*), by enlarged apex of gonostylus (rounded in *solinasi*), by parallel-sided 1st and 2nd palpal segments, by presence of rounded apical protrusion of gonostylus (pointed apically in *solinasi*); by elongated wing, 3.4 times as long as wide (2.2 in *solinasi*); by wide gonostylus (2.5 times as long as wide in *solinasi*); by strongly dilated tegmen basally (medially in *solinasi*); by enlarged apically IX tergite (rounded in *solinasi*). New species differs from *N. (L.) paradisica* sp. nov. by small swelling of genital rod; by not excavated IX tergite; by short straight projection of 1st tarsal segment.

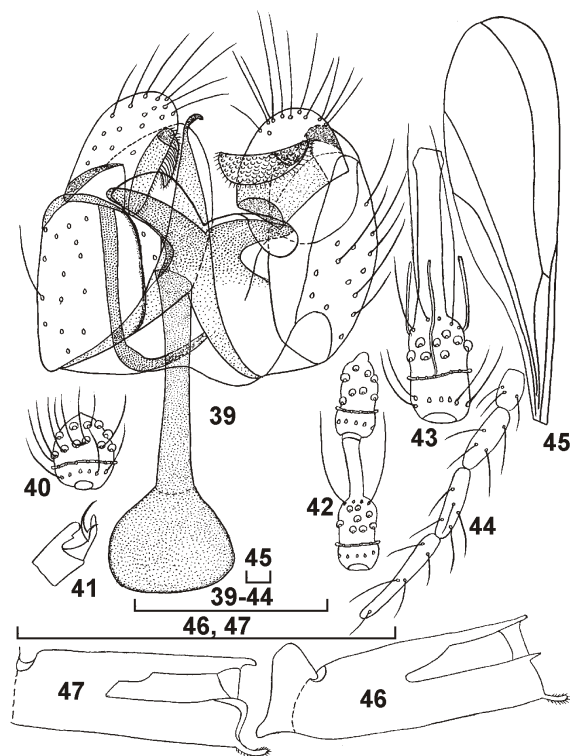


Figs 33-38. *Neurepidosis (Lanepidosis) suffusa* sp. nov., male: 33 genitalia; 34 scape, pedicel and F1; 35 F5; 36 palpi; 37 1st tarsal segment; 38 wing. Scale line = 0.1 mm.

***Neurepidosis (Lanepidosis) paradisica* FEDOTOVA & SIDORENKO sp. nov.** (Figs 39-59)

Material. Holotype ♂ (slide 242/8089/1): Russia, Primorskii krai, Lazovskii Reserve, Koreiskaya pad', MT, marge 17-18.VI. 2005 (V. SIDORENKO). Paratypes 7 ♀♀ (slides 242/8083/2-3): Koreiskaya pad', MT, river shore, 17-18.VI. 2005 (V. SIDORENKO).

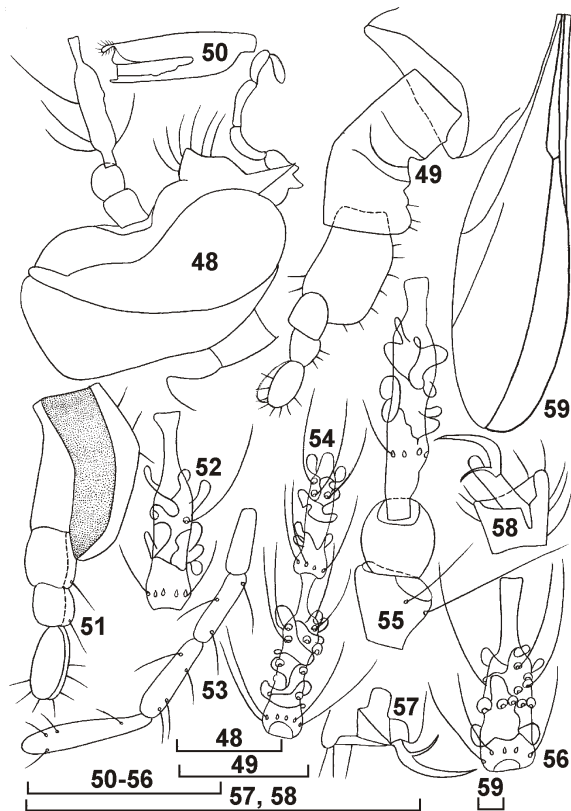
Description. ♂. Body light-brown with dark notum, length 1.3 mm, wing length 1.8 mm, wing width 0.5 mm, antennae length 1.8 mm. Notum with three stripes. Body bridge medially 2 facets wide. Scape enlarged apically, as long as transversal pedicel. Antennae 2+14-segmented, F1-F11 with sensorial filae. F1 1.1 times longer than F2. F5 4.7 times as long as wide, basal enlargement 1.8 times shorter than stem. F14 pointed apically, elongated, 1.6 times shorter than F13 or rounded. Palpi light, 1.4 times shorter than height of head (without mouth parts), 4-segmented, its ratio 1 : 1.7 : 1.7 : 2.6, last segments narrowed distally. 1st tarsal segment with short projection, thin, curved and directed outward (Fig. 47). Tarsal claws with denticle at the base, empodium shorter than claw. Wing with long and narrow basal part, 3.6 times as long as wide. Vein R1+2 2.2 times shorter than wing. Vein M+rm strongly curved, 2.7 times shorter than wing. M3 well developed, R5 curved near apex, joins wing margin slightly beyond the tip of wing. Gonocoxites rounded laterally, not enlarged apically, with strongly developed apical lobe, 1.7-2.1 times as long as wide, with wide medial excision. Gonostylus fusiform, strongly excavated basally, with



Figs 39-47. *Neurepidosis (Lanepidosis) paradisica* sp. nov., male (39-46) and female (47): 39 genitalia; 40 F14; 41 tarsal claw; 42 F13 and F14; 43 F5; 44 palpi; 45 wing; 46, 47 1st tarsal segment. Scale line = 0.1 mm.

wide subapical lobe, situated medially on inner side and covered by scales and short setae, 1.4-1.6 times shorter than gonocoxites; slightly sclerotized plate with small setae situated under claw wide. IX tergite whole, longer than gonocoxites, narrowed subapically and widely rounded basally. X tergite X-formed, 2.1 times wider than IX tergite, with long lobes, divided by wide triangular excision, almost as long as tegmen. Tegmen wide, forked apically, with rounded or truncated lateral projections. Aedeagus slightly sclerotized, enlarged basally and hook-formed on the end. Genital rod strongly sclerotized, reached only to middle of gonocoxites, with very broad basal rounded enlargement, basal part 1.3 times longer than gonocoxites.

♀. Body length 1.73-2.0 mm, wing length 1.9-2.08, wing width 0.53-0.58 mm, antennae length 1.03-1.18 mm. Antennae 2+11-segmented, basal enlargement covered by sinuous and reticulate sensorial filae with loops. Scape and pedicel transversal, strongly swollen,



Figs 48-59. *Neurepidosis (Lanepidosis) paradisiaca* sp. nov., female: 48 head laterally; 49 ovipositor; 50 1st tarsal segment; 51 apical segments of ovipositor; 52 F2; 53 palpi; 54 F10 and F11; 55 scape, pedicel and F1; 56 F5; 57, 58 tarsal claw; 59 wing. Scale line = 0.1 mm.

almost equal length. F1 with basal stem, narrowed medially, 5.4 times as long as wide, basal enlargement 4.3 times as long as wide, 4.1 times longer than stem. F1 1.2 times as long as F2. F5 3.5 times as long as wide, basal enlargement 2.3 times as long as wide, 1.8 times as long as stem. F11 with apical swelling and narrowed basally, 1.3 times as long as F10. F10 4.0 times as long as wide, basal enlargement 3 times as long as wide, 3 times longer than stem. Palpi 4-segmented, its ratio 1 : 1 : 1.5 : 1.8 or 1 : 1.2 : 1.3 : 1.9, segments almost parallel-sided, 4th - swollen apically. Tarsal claw with large denticle, empodium absent or very short. 1st tarsal segment with curved projection. Wing parallel-sided, 3.6 times as long as wide, R1 2.1 times shorter than wing, M+r_m 2.9 times shorter than wing,

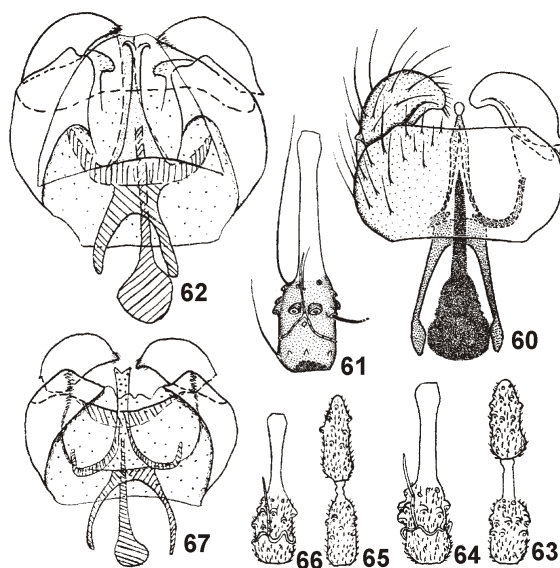
1.4 times shorter than R1. Ovipositor strongly sclerotized, curved dorsally. Basal segment 1.5 times as long as subapical. Apical pair of segments 1.8 times as long as wide.

Relationship. New species differs from other new species of the subgenus by very large claws of gonostylus in view of lobe; by aedeagus with hook on the end; by very long genital rod. New species closely related to *N. (N.) minutus* SPUNGIS, 1987 from Latvia but differs by parallel-sided gonocoxites (rounded in *minutus*); by absence of medial lobes gonocoxites; by more long stem of F5 (1.2 times in *minutus*); by not equal palpal segments; by not wide IX tergite.

Key to subgenera and species of genus *Neurepidosis* SPUNGIS

1. Genital roots and transversal bridge developed (Figs 60, 62, 67). Gonostylus pointed apically, with small basal excision. Tegmen finger-like, with fork or excavated apically. Tarsal claw with small denticles, empodium rudimentary. (*Neurepidosis*) . . . 2
- Genital roots and transversal bridge absent (Figs 19, 33, 39). Gonostylus rounded apically, with large basal excision. Tegmen swollen basally, hook-formed (Fig. 39) or with two lateral projections apically (Figs 19, 33). Tarsal claw with one large denticle (Figs 30, 41), empodium slightly shorter than claw. (*Lanepidosis* subgen. nov.) . . . 4
2. Genital rod with rounded basal swelling (Figs 62, 67). Gonostylus with group of dense apical setae. Tegmen excavated apically or with pair of hook-formed projections. Genital roots without basal swelling. Ventral plate with rounded excision. Stem of middle flagellomeres 1.2-1.3 times as long as basal enlargement (Figs 64, 66) 3
- Genital rod with pear-shaped basal swelling (Fig. 60). Gonostylus curved and free of setae apically. Tegmen with rounded swelling on the end. Genital roots with basal swelling. Ventral plate without excision. Stem of middle flagellomeres 1.5 times as long as basal enlargement (Fig. 61). Body yellow, length 1.0 mm, wing length 1.5 mm. *N. (N.) solinasi* MAMAEV & ZAITZEV
3. Gonocoxites with medio-apical swollen projection (Fig. 62). Tegmen with lateral hook-formed projections. Genital rod strongly swollen basally. Thorax with three dark stripes. Body orange-brown, length 1.2 mm, wing length 1.4 mm. *N. (N.) gracilis* SPUNGIS
- Gonocoxites with pointed medio-apical lobe (Fig. 67). Tegmen excavated apically. Thorax more darker apically, without stripes. Genital rod not strongly swollen basally. Body brown, length 1.5 mm, wing length 1.5 mm *N. (N.) minutus* SPUNGIS
4. Gonostylus with with subapical wrinkle (Fig. 33). IX tergite almost oval, small, strongly sclerotized, without apical excision. Tegmen with two apical projections. Stem of middle flagellomeres 1.8 times longer than basal enlargement (Fig. 35). Body length 1.25 mm, wing length 1.6 mm *N. (L.) suffusa* FEDOTOVA & SIDORENKO sp. nov.
- Gonostylus with subapical claw (Fig. 19) or subapical swelling (Fig. 39). IX tergite with apical excision (Fig. 39), elongated and wide (Fig. 19), slightly sclerotized . . . 5
5. Gonostylus with subapical swelling, covered by scale-form setae (Fig. 39). Tegmen hook-formed apically. Genital rod with large rounded basal swelling. Stem of middle flagellomeres 1.8 times longer than basal enlargement (Fig. 43). Body length 1.3 mm,

- wing length 1.8 mm *N. (L.) paradisica* FEDOTOVA & SIDORENKO
 - Gonostylus with subapical setose claw (Fig. 19). Tegmen with two apical projections.
 Genital rod with lateral points on basal swelling. Stem of middle flagellomeres 1.4
 times longer than basal enlargement (Fig. 22). Body length 1.2 mm, wing length 1.6
 mm *N. (L.) conchata* FEDOTOVA & SIDORENKO



Figs 60-67. *Neurepidosis (N.) solinasi* MAMAEV & ZAITZEV (60, 61); *N. (N.) gracilis* SPUNGIS (62-64); *N. (N.) minutus* SPUNGIS (65-67), male: 60, 62, 67 genitalia; 61, 64, 66 F5; 63, 64 F13 and F14. (SPUNGIS 1987; MAMAEV & ZAITZEV 1997).

Genus *Crustepidosis* FEDOTOVA & SIDORENKO gen. nov.

Type species: *Crustepidosis delicata* FEDOTOVA & SIDORENKO sp. nov.

Description. ♂. Body light, length 1.43 mm, wing almost as long as antennae. Eyes bridge in view of thin stripe without facets. Antennae 2+14-segmented, stem of middle flagellomeres slightly longer than basal enlargement (Fig. 71). Palpi 4-segmented (Figs 74, 75). Tarsal claw with long basal denticle, empodium longer than claw (Fig. 69). Wing slightly enlarged medially, with narrow cell R5 (Fig. 77), M+rm strongly curved, Cu well developed, with dark aureole around it, especially basally. Vein R1 joins C near wing middle, R5 almost straight, joins C slightly beyond wing apex. M3 developed only distally. Gonocoxites fused ventrally, without apical lobes; dorsally very wide, with narrow cleft along genital rod (Fig. 68). Ventral plate without excision, straight. Gonostylus with wide basal excision, swollen dorsally; with dark claw, elongated along gonostylus and

covered by scale-form setae. IX tergite wide, slightly excavated apically, X tergite and sternite with deep excision. Genital rod almost transparent, with small spherical swelling on basal end. Roots of genitalia very sclerotized, thin, as long as genital rod in basal part. Tegmen thin, finger-like, rounded apically, with sclerotized semicircular basal arches and lateral inner bands. Transversal bridge undeveloped.

Relationship. New genus closely related to the genus *Neurepidosis* but differs by absence of apical lobe of gonocoxites; by absence of genital roots and transversal bridge; by presence of wide claw of gonostylus (as in genus *Neotetraneuromyia* SPUNGIS, 1987); by presence of empodium longer than claw (shorter in *Neurepidosis*); by very wide dorsal sides of gonocoxites; by wide basal excision and rounded apex of gonostylus; by short stem of middle flagellomere; by absence of elongated projection of sensorial filae; by absence of excision on ventral plate (deep triangular excision in *Neurepidosis*); by absence of facets on eyes bridge (2-3 facets in *Neurepidosis*); by absence of large basal swelling of genital rod and transversal bridge; by presence of long empodium and one-denticle tarsal claw (rudimentary empodium and claw with series of denticles in *Neurepidosis*); by absence of apical lobe of gonocoxies and large forked sclerotized tegmen.

Etymology. Crusta/ae - кора, чешуя, накипь. На гоногстиле неясственное чешуеподобное покрытие вместо когтя (crusta - because of the surface of gonostylus).

***Crustepidosis delicata* FEDOTOVA ET SIDORENKO sp. nov.** (Fig. 68-77)

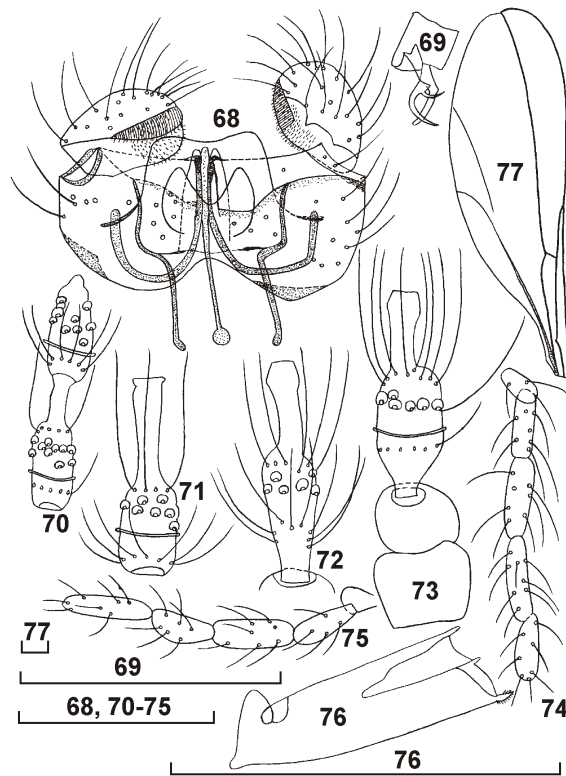
Material. Holotype ♂ (slide 244/8089/1): Russia, Primorskii krai, Lazovskii Reserve, Koreiskaya pad', MT, marge 17-18.VI. 2005 (V. SIDORENKO).

Description. ♂. Body light, notum slightly darker, without stripes. Body length 1.43 mm, wing length 1.63 mm, wing width 0.48 mm, antennae length 1.38 mm. Scape and pedicel slightly lighter than flagellum. Scape and pedicel wider than flagellomeres, scape 1.3 times longer than pedicel. Antennae 2+14-segmented, F1 3.2 times as long as wide, basal enlargement 2.0 times as long as wide, 1.8 times shorter than stem. F2 1.2 times shorter than F1. F5 3.9 times as long as wide, basal enlargement 2.3 times as long as wide, 1.4 times shorter than stem. F14 conical apically, 2.6 times as long as wide; basal enlargement F13 1.9 times as long as wide, 1.8 times longer than stem. Palpi 1.3 times shorter than height of head, 4-segmented, its ratio 1.0 : 1.3 : 1.0 : 1.3 or 1 : 1.2 : 1.2 : 0.9, 1-4th segments almost parallel-sided. Tarsal claw strongly curved medially, with hook-formed denticle, empodium thin. Wing 3.2 times as long as wide. Gonocoxites very wide, transversal, as long as wide, strongly sclerotized along medial margin, lateral sides widely rounded. Gonostylus 1.6 times as long as wide; 1.1 times shorter than gonocoxites. IX tergite wide, slightly excavated and thin sclerotized along margin, X tergite cordiform, X sternite 1.9 times narrower than X tergite. Genital rod and roots of genitalia very thin, almost as long as gonocoxites; roots apically hook-formed. Tegmen laterally strongly sclerotized, with semicircular sclerotized arches.

♀ unknown.

Relationship. New genus closely related to *Neurepidosis* but differs by absence of large basal swelling of genital rod and transversal bridge; by absence of apical lobe of gonocoxites; by presence of wide claw of gonostylus (as in genus *Neotetraneuromyia* SPUNGIS, 1987); by presence of empodium as long as claw (shorter in *Neurepidosis*); by very wide

dorsal sides of gonocoxites; by wide basal excision of gonostylus; by absence of facets on eyes bridge.



Figs 68-77. *Crustepidosis delicata* sp. nov., male: 68 genitalia; 69 tarsal claw; 70 F13 and F14; 71 F5; 72 F1; 73 scape, pedicel and F1 (variation of shape); 74, 75 palpi (variation of shape); 76 1st tarsal segment; 77 wing. Scale line = 0.1 mm.

Genus *Nebulepidosis* FEDOTOVA & SIDORENKO gen. nov.

Type species: *Nebulepidosis urceolata* FEDOTOVA & SIDORENKO sp. nov.

Description. ♂. Eyes almost completely reduced, with thin sclerotized stripe between it, in view of eye bridge without facets (Figs 99, 100). Antennae 2+14-segmented. Scape transversal or as long as wide, pedicel rounded (Figs 80, 92, 99, 100). Basal enlargement of mid flagellomeres shorter than stem (Figs 81, 93). Basal enlargement elongated, swollen roundly, with basal, medial, apical whorls of setae and ring-shaped sensoria. Stem of flagellomere strongly enlarged near apex and narrowed on the end. Palpi light, shorter

than height of head, 4-segmented, segments elongated or swollen, various form (Figs 79, 83, 90, 91, 107). 1st tarsal segment with short thin projection (Figs 85, 95, 106). Tarsal claws dentated, empodium shorter than claw (Fig. 86). Wing narrow, slightly enlarged medially, with areas of sclerotization at the base (Figs 87, 94). Vein R1+2 joins with C far before wing middle; R5 with one pore slightly behind Rs, joins with C not far beyond wing apex. Rs formed angle with R5 (not the same direction as R5). Vein M+rm strongly curved (Fig. 87) or formed obtuse angle near joining with Rs (Fig. 94). Vein Cu simple, M3 in view of short короткого fragment, sometimes with areas of sclerotization around it. Gonocoxites short and wide, with large or small inner apical lobe (Figs 78, 88, 89). Gonostylus polygonal, very wide and short, with apical and basal inner cavity and strongly dissected or lobed margin, covered by microtrichiae and setae, slightly shorter than gonocoxites. IX tergite wide, bilobed and with triangular excision. X sternite wide, with triangular sclerotized apical part (Fig. 88), with long medial sclerotized stripes along aedeagus. Tegmen narrow, with inner sclerotized lateral sides, elongated apically (Fig. 88) or tegmen with lateral sclerotized sides (Fig. 78), basally with semicircular sclerotized arches. Aedeagus very thin, slightly sclerotized or unsclerotized, longer than gonocoxites. Roots of gonocoxites strongly sclerotized, parallel to aedeagus. Abdomen curved dorsally.

♀. Antennae 2+11-segmented, flagellomeres with elongated stem, shorter than basal enlargement. Numerous sinuous filae with loops covered basal enlargement. Ovipositor short, telescopic, 3-segmented, pair of apical segments not fused.

Relationship. New genus related to the genus *Dicerura* but differs by long eyes bridge devoid of facets (eyes bridge with medial 2 and more facets in *Dicerura*); by female with 2+11 antennal segments; by absence of forked aedeagus, by presence of very thin tegmen with stripes of sclerotization; by short gonostylus with numerous lobes and cavities (one ventral cavity in *Dicerura*); by short empodium (almost as long as tarsal claw in *Dicerura*); by reduced venation; by presence of only fragment vein M3; by absence of sensorial ring on female flagellomeres. New genus also closely related to the genus *Neurepidosis* but differs by absence of basal genital swelling; by absence of claw on gonostylus; by vein Rs situated under angle to R5; by short ovipositor.

New genus includes 2 new species described below.

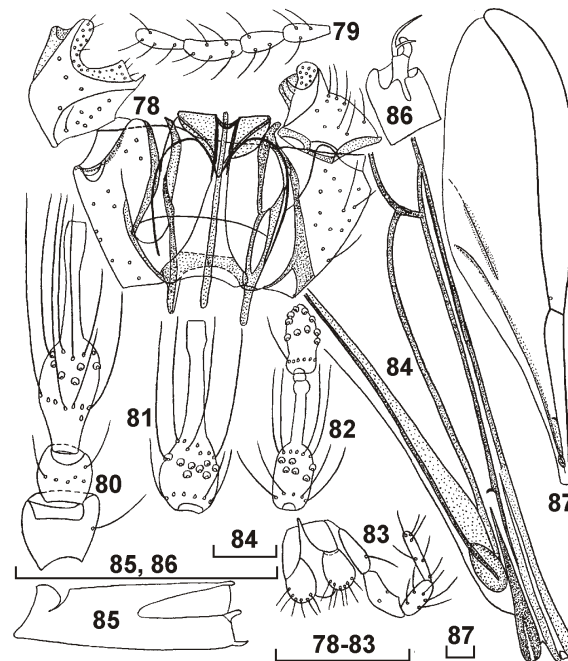
***Nebulepidosis urceolata* FEDOTOVA & SIDORENKO sp. nov.** (Fig. 78-87, 96-98)

Material. Holotype ♂ (slide 233/8087/1): Russia, Primorskii krai, Lazovskii Reserve, cordon America, MT, forest, 19-20 VII.2005 (V. SIDORENKO). Paratype ♀ (slide 233/8095/2): cordon America, MT, marge, 18-19 VI.2005 (V. SIDORENKO).

Description. ♂. Body pale-brown, length 1.85 mm, wing length 1.88-2.0 mm, wing width 0.55 mm, face light, abdomen curved dorsally, thorax without stripes. Eyes bridge thin, without facets. Antennae 2+14-segmented, scape and pedicel light, flagellum dark, basal enlargement of flagellomeres may be swollen (Figs 80, 81) or almost parallel-sided (Fig. 97). Scape 1.4 times longer than pedicel. F1 4.1 time as long as wide, basal node 2.0 times as long as wide, 1.1 times shorter than stem. F2 1.2 times shorter than F1. F5 3.4 times as long as wide, basal node 1.3 times as long as wide, 1.7 times shorter than stem. F14 1.9 times shorter than F13, basal node F13 1.4 times as long as wide, 1.1 times shorter than stem. Palpi 4-segmented, its ratio 1.0 : 1.0 : 1.3 : 1.0, 1-3rd segments swollen, last

narrower than other. 1st tarsal segment short, slightly pointed, directed straight. Tarsal claw slightly curved medially, with long basal denticle. Wing almost parallel-sided, with narrow cell R5, 3.8 times as long as wide, strongly sclerotized around base of Cu. Vein R1+2 2.3 times shorter than wing; R5 and Cu almost parallel. Veins Cu and fragment M3 with spot of sclerotization around it. Vein R1+2 2.3 times shorter than wing. Vein M+rm curved, 2.7 times shorter than wing. Gonocoxites with very short medio-apical lobes, with wide inner cavity, 1.4-1.5 times as long as wide, lateral sides almost straight. Gonostylus rounded dorsally, strongly enlarged apically, variable, 1.3-1.6 times shorter than gonocoxites, width 1.1 times narrower than length. X sternite strongly sclerotized in distal part, straightly truncated apically. IX tergite with rounded lobes, with small triangular excision, unsclerotized, 1.2 times wider than X sternite. Tegmen narrow, with sclerotized lateral sides. Aedeagus thin, slightly sclerotized.

♀ unknown.

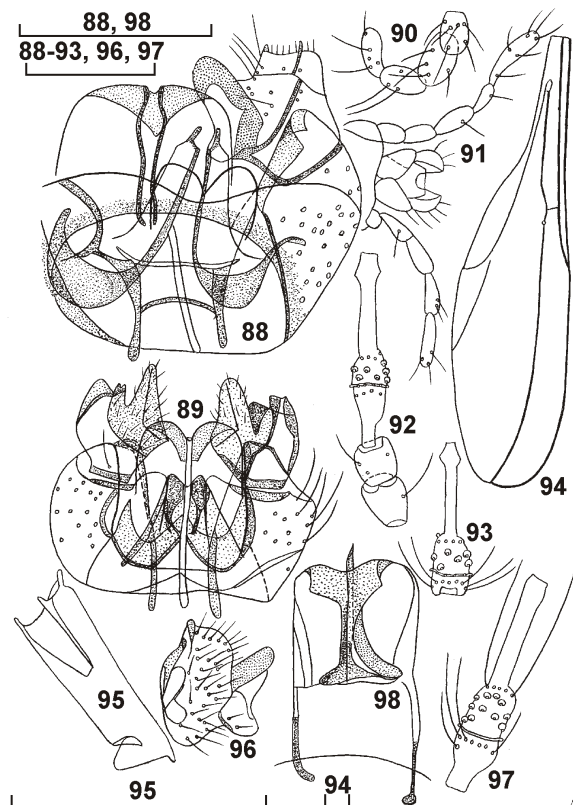


Figs 78-87. *Nebulepidosis urceolata* sp. nov., male: 78 genitalia; 79 palpi; 80 scape, pedicel and F1; 81 F5; 82 F13 and F14; 83 mouth parts; 84 base of wing; 85 1st tarsal segment; 86 tarsal claw; 87 wing. Scale line = 0.1 mm.

Relationship. New species related to *Dicerura cymbiformis* sp. nov. described above, but differs by short, strongly excavated ventrally and basally gonostylus; by narrow IX

tergite; by wide X tergite with areas of sclerotization and apical excision (cordiform in *cymbiformis*); by thin tegmen, excavated apically (finger-like with whole apex in *cymbiformis*); by short empodium; by transversal scape; by stem of middle flagellomeres longer than basal enlargement (equal length in *cymbiformis*); by absence of vein Cup; by not forked aedeagus; by eyes bridge devoid facets.

Etymology. Name of new species is formed from Latin *urceolata* - in according of form of gonostylus.



Figs 88-98. *Nebulepidosis velutina* sp. nov. (88-95) and *N. urceolata* sp. nov. (96-98), male: 88, 89 genitalia (variation of shape); 90 palpi; 91 mouth parts; 92 scape, pedicel and F1; 93 F5; 94 wing; 95 1st tarsal segment; 96 gonostylus; 97 F1; 98 X tergite and aedeagus. Scale line = 0.1 mm.

***Nebulepidosis velutina* FEDOTOVA & SIDORENKO sp. nov.** (Figs 88-95, 99-107)

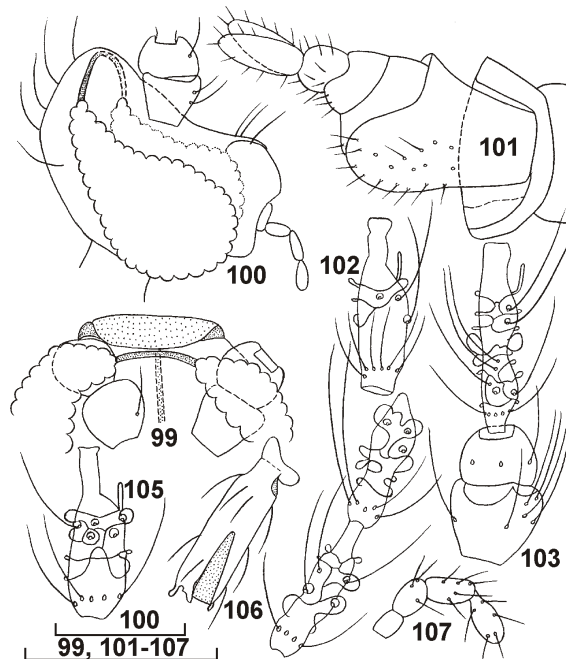
Material. Holotype ♂ (slide 245/8083/1): Russia, Primorskii krai, Lazovskii Reserve, Koreiskaya pad', MT, river shore, 17-18.VI. 2005 (V. SIDORENKO). Paratypes 1 ♂ (slide 245/8095/2): cordon America, MT, marge, 18-19 VI.2005 (V. SIDORENKO); 1 ♀ (slide 245/8083/3): Koreiskaya pad', MT, river shore, 17-18.VI. 2005 (V. SIDORENKO).

Description. ♂. Body pale-brown, strongly covered by scales, length 1.2-1.5 mm, wing length 1.53-1.90 mm, wing width 0.45-0.50 mm. Eye bridge thin, without facets. Face sclerotized, brownish-red. Palpi light, 1.7 times shorter than height of head. Scape 1.1-1.3 times longer than pedicel. Antennae 2+14-segmented, F1 5.4 times as long as wide, basal node 2.5 times as long as wide, 1.1 times shorter than stem. F2 1.1 times shorter than F1. F5 3.7 times as long as wide, basal node 1.3 times as long as wide, 1.8 times shorter than stem. 1st tarsal segment with long straight projection. Palpi 4-segmented, its ratio 1.0 : 1.4 : 1.2 : 1.3 if segments swollen or 1 : 1.2 : 0.8 : 1.8 if segments elongated. Wing almost parallel-sided, with narrow dorsal cell, 4.0 times as long as wide, unsclerotized around base of Cu. Vein R1 joins C far before wing middle, 2.0 times shorter than wing; cell R5 slightly enlarged distally. Vein M+rm slightly curved, curved near Rs, 2.6 times shorter than wing. Gonocoxites with medio-apical large lobes, with wide inner cavity, 1.7-2.4 times as long as wide, lateral side wide rounded. Gonostylus strongly enlarged apically, with long triangular ventral lobe, covered by short thin microtrichiae, 1.3-1.5 times shorter than gonocoxites, width 1.2 times narrower than length, basally with ventral rectangular projection. IX tergite strongly sclerotized along apical rounded margin. Tegmen strongly sclerotized, slightly enlarged basally and with semicircular sclerotized arched projection; with small rounded excision, 2.1 times narrower than IX tergite. X sternite with rounded or triangular lobes. Aedeagus unsclerotized.

♀. Body pale-brown, length 1.95 mm, wing length 2.0 mm, width length 0.6 mm, antennae length 1.0 mm. Antennae 2+11-segmented, scape and pedicel swollen, scape 1.4 times longer than pedicel, F1 narrowed medially, 4.9 times as long as wide, basal enlargement 3.7 times as long as wide, 3.3 times longer than stem. F1 1.1 times as long as F2. F5 3.1 times as long as wide, basal enlargement 2.2 times as long as wide, 2.6 times longer than stem. F10 4.2 times as long as wide, basal enlargement 3.2 times as long as wide, 3.4 times longer than stem. F11 narrowed medially, conical apically. Palpi 4-segmented, its ratio 1 : 1.4 : 1.7 : 1.9, segments swollen. 1st tarsal segment with short narrow projection, directed outward. Ovipositor protractile, 2.3 times as long as wide, apical segment oval, 1.8 times as long as wide.

Relationship. New species closely related to *N. urceolata* sp. nov. described above, but differs by presence of rectangular ventral projection on gonostylus; by presence of semi-circular arched basal projection at the base of tegmen; by absence of areas of sclerotization around vein Cu and M3, by almost undeveloped apical lobes of gonocoxites; by presence of angulate bend of vein M+rm near Rs; by 1st tarsal segment with projection, directed outward (straight in *urceolata*); by other form of sclerotization X sternite and by small body size.

Etymology. Name of new species is formed from Latin *velutina* - in according of surface of gonostylus.



Figs 99-107. *Nebulepidosis velutina* sp. nov., male (99) and female (100-107): 99 eyes bridge and part of head; 100 head laterally; 101 ovipositor; 102 F2; 103 scape, pedicel and F1; 104 F10 and F11; 105 F5; 106 1st tarsal segment; 107 palpi. Scale line = 0.1 mm.

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Literaturbesprechung

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Das exakte Abbild (Image) einer Festplattenpartition bietet beste Gewähr für Datensicherung und -wiederherstellung sowie Konservierung einer intakten Kopie des Betriebssystems. Bei der heutigen Komplexität von Rechnerkonfigurationen bringt es einen unglaublichen Produktivitätsgewinn, wenn beim Systemcrash nicht mühsam neu aufgebaut, sondern schnell und elegant wiederhergestellt werden kann.

Die O&O DiskImage 2 Professional Edition leistet genau diese Dienste. Mit dem Werkzeug kann die Festplatte gesichert und wiederhergestellt werden. Dabei unterstützt O&O DiskImage alle wichtigen Funktionen verbunden mit einer einfachen Bedienung, um schnell und einfach vorzugehen. Mit O&O DiskImage ist die Erstellung von inkrementellen Datensicherungen (ausgewählte Dateien oder Ordner) genauso kein Problem wie das Sichern eines vollständigen Systems. Die gesicherten Daten können dabei in verschiedenen Stufen komprimiert und auch verschlüsselt werden. Das Aufteilen einer Sicherung auf verschiedene Datenträger kann individuell festgelegt werden oder O&O DiskImage entscheidet selbstständig über die Aufteilung.

Muß aufgrund eines Fehlers im Betriebssystem, einer mißglückten Installation oder eines Virus die gesicherte Partition wieder hergestellt werden, geschieht dies mittels der mitgelieferten Programm-CD als Bootmedium. Während sich das Handbuch ausführlich über die Herstellung eines Image ausläßt, erfährt man so gut wie nichts über die Wiederherstellung der Partition bzw des Laufwerks. Und das ist ein großes Manko, denn da kann man auch was falsch machen. Üblicherweise listet das Betriebssystem das in mehrere Einzeldateien (z.B. Sicherung20080101(1), ...(2) usw.) aufgeteilte Image mit der ersten Datei beginnend auf. Nicht so, wenn mit der Boot-CD gearbeitet wird. Wer da nicht aufpaßt, klickt auf die falsche „erste“ Datei und das Image wird nicht zurückgeschrieben. Trotzdem meldet das Programm eine erfolgreiche Wiederherstellung und der Anwender wundert sich beim Hochfahren des Rechners über eine weiterhin fehlerhafte Installation. Werden aus einer Sicherung nur einzelne Dateien oder Ordner benötigt, so muß nicht die gesamte Sicherung wiederhergestellt werden. Das Laden einer Sicherung als Laufwerk und damit der Zugriff auf alle enthaltenen Daten sind mit O&O DiskImage kein Problem. Für eine schnelle Sicherung und Wiederherstellung unterstützt O&O DiskImage Professional Edition nativ die 64bit-Edition von Windows XP/Vista und auch die Multiprozessor-technologie. O&O DiskImage Professional Edition läuft unter Windows XP/2000/Vista (alle Editionen).

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