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New Species of Gall Midges (Diptera, Cecidomyiidae) from Rovno Amber: Subfamily Lestremiinae, Tribes Micromyiini and Peromyiini

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Abstract—The origin and age of Rovno amber are reviewed. Eight new species of gall midges assigned to the genera *Micromyia, Aprionus*, and *Heterogenella* (Micromyiini) and *Peromyia* and *Conarete* (Peromyiini) are described from Rovno amber.

Key words: gall midges, Cecidomyiidae, Diptera, Rovno amber.

INTRODUCTION

In the problem of the origin of amber in the Ukrainian part of the Pripet Marshes (Polissya), the hypothesis that it was transported by sea currents from the Baltic Region to the sites of its deposition on the Ukrainian shield dominated for a long period (Katinas, 1971; etc.). A contrary hypothesis about the northern Ukrainian origin of Rovno amber has been proven on the basis of results of a comparative study of faunas (first of all, myrmecofaunas) of Rovno amber (mainly from the Klesov and Dubrovitsy excavations, Rovno region, Ukraine) and Baltic amber. Thus, nine new ant species were described during the first year of research (Dlussky, 2002; Dlussky and Perkovsky, 2002); 26% of the ants that were identified up to species level from Rovno amber belong to taxa that are unknown from Baltic amber (Dlussky and Perkovsky, 2002).

In a number of papers, the age of the amber-bearing deposits in the Klesov excavation was erroneously assigned to the Oligocene. The source of this mistake, as was admitted by Maidanovich (Maidanovich and Makarenko, 1988), was that, having correctly accepted the same age for the Klesov amber-bearing deposits and the Prussian Formation, he surmised an Early Oligocene age for the Prussian Formation.

The true gall-forming forms constitute the majority of the recent Boreal fauna of gall midges, although saprophagous gall midges are also quite common; however, the opposite situation occurs in the fauna of Baltic amber (Larsson, 1978). Not only Lestremiinae, but also saprophages of the subfamily Porrycondylinae (*Bryocrypta, Colpodia*, and *Colomyia*), are relatively common in Baltic amber.

Larsson (1978) believed that the type of gall-midge fauna in Baltic amber was determined by the subtropical climate of the amber forest and that the evolution of gall-forming cecidomyids occurred in the Boreal Region. The latest geological data demonstrate that the amber came from southern Scandinavia (Ritzkowski, 1997), where a conifer-oak-palm forest existed during the Late Eocene; this flora probably deserves separation into its own subprovince or even a province of the Tethys Region (Akhmetiev *et al.*, 1998). The study of Late Eocene gall midges of Rovno amber connected to the subtropical vegetation of the North Subprovince of the East European Province of the Tethys Region (Akhmetiev *et al.*, 1998) may be useful in testing Larsson's hypothesis.

The gall midges were one of the first insect groups recorded from the Rovno amber (Maidanovich and Makarenko, 1988). It should be noted that the photograph of a "gall midge from Klesov" presented by Maidanovich and Makarenko (1988) depicts a caddisfly and that the only "gall midge" mentioned from the collection of the Ukryantar factory in Rovno (Tutskij and Stepanjuk, 1999) turned out to be a sciarid (Perkovsky *et al.*, 2003). We identified the genera of 36 gall midge specimens from Rovno amber; 35 of them belong to 27 species unknown from Baltic amber, and 23 specimens belong to new species.

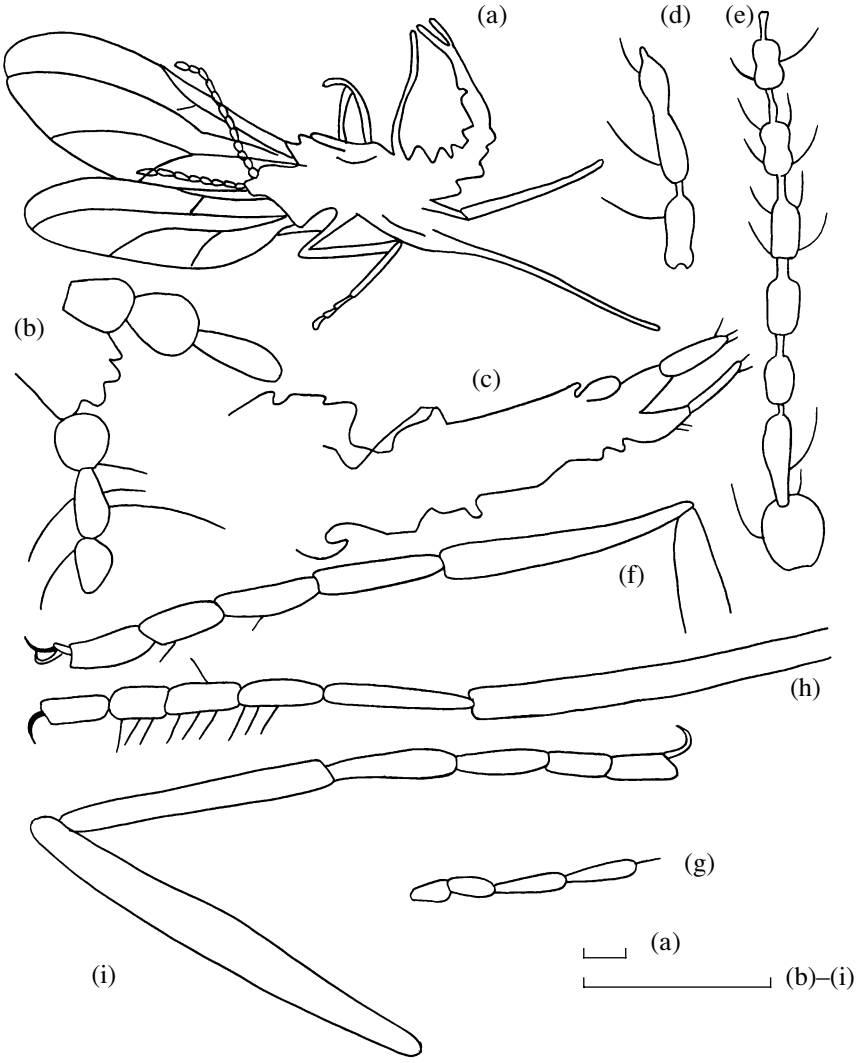

Fig. 1. *Micromyia convoluta* sp. nov., female, holotype SIZC, UA-142; (a) general appearance; (b) mouthparts; (c) tip of abdomen; (d) flagellomeres 7-8; (e) pedicel, flagellomeres 1-6; (f) hind tarsus; (g) palpus; (h) middle tarsus; (i) fore tibia and tarsus. Scale bar 0.1 mm in Figs. 1–8.

MATERIAL

The material being studied, including the types, is housed in the amber collection of the Schmalhausen Institute of Zoology, National Academy of Sciences of Ukraine (SIZC).

The systematic position of supraspecific taxa and morphological terminology used in this paper are given after Skuhravá (1986, 1997) and Fedotova (2000). All figures have been made using the MBI-3 microscope with Ra-1 drawing attachment.

SYSTEMATIC PALEONTOLOGY

Subfamily Lestremiinae Rondani, 1840

Tribe Micromyiini Rondani, 1856

Genus *Micromyia* Rondani, 1840

There are six species of this genus in the Old World: two species in the Nearctic and one species in the Neotropical Region (Gagné, 1994). Three species have been recognized in the Palearctic, from both Europe and Asia (Skuhravá, 1986, 1997). Representatives of this genus have not been previously recorded as fossils.

Micromyia convoluta Fedotova, sp. nov.

Etymology. From the Latin *convoluta* (rolled).

Holotype. SIZC, UA-142, deformed inclusion of female with partly missing legs; Rovno amber; Late Eocene.

Description (Fig. 1). Female. The body is 7.5 times as long as the head. The antennae are 2.8 times as long as the head and 2+8-segmented, the pedicel is spherical, and flagellomere 1 has an elongated basal node, which is 10 times as long as the stalk. Flagellomere 2 is 0.67 times as long as flagellomere 1,

and its basal node is oval. Each of the basal nodes of flagellomere 5 and the following flagellomeres has a constriction near its midlength. Flagellomere 5 is three times as long as it is wide, and the basal node is 1.7 times the size of the stalk. Flagellomere 8 has an attenuated thin tip and consists of two fused segments, the combined length of which is 1.7 times the length of flagellomere 7. The clypeus has rounded projections. The palpi are four-segmented. Segments 1 and 2 are almost ovoid, and segment 4 is thin, elongated, and slightly broadened apically. The ratio of segment lengths is 3 : 3 : 5 : 5. All tarsi are five-segmented. In anterior tarsi, the ratio of tarsomere lengths is 6 : 4 : 3 : 3 : 3. In posterior tarsi, the ratio of tarsomere lengths is 8 : 4 : 3 : 3 : 3 or 7 : 4 : 3 : 3 : 3, the tarsal claws are simple and weakly curved, and the empodium is barely visible. The wing is 2.9 times as long as it is wide. R_{4+5} enters the wing margin beyond its apex. R_1 between its tip and R_s is twice as long as R_s. M_{1+2} is simple and almost unrecognizable. M_{3+4} and Cu form a fork, which is a little closer to the wing base than the R_s–R_{1+2} fork. Apical abdominal segments 4–8 are strongly narrowed. The ovipositor is elongated, with bifurcated apical plates at its tip. Each apical plate consists of two segments; the apical segment is tapered at its tip and 2.6 times as long as the other segment. The ventral lobe is distinctly developed at the ovipositor tip.

Measurements, mm. Body length, 0.91; antenna length, 0.352; scape and pedicel length, 0.037 each; length of flagellomere 1, 0.039; length of flagellomere 5, 0.036; palpus length, 0.209; wing length, 0.968, wing width, 0.33; fore femur length, 0.264; fore tibia length, 0.253; fore tarsus length, 0.308; hind femur length, 0.198; hind tibia length, 0.209; hind tarsus length, 0.429; lengths of hind tarsomeres, 0.154, 0.088, 0.066, 0.055, and 0.066; ovipositor length, 0.319; and ovipositor width, 0.088.

Comparison. It differs from known representatives of the genus in the presence of distinct stalks in the flagellomeres of the female, a constriction near the midlength of the basal node, and the very long apical plates of the ovipositor. From *M. lucorum* Rondani, which is widely distributed in Europe and have been recorded from Africa, it differs in the stronger curved tarsal claws and elongated (rather than almost semicircular) wings. From *M. taurica* Mamaev, which has been described from a male, the new species differs in the second segments of the palpi not being elongated and in the last tarsomere not being thickened.

Remark. The size and shape of the segments of the palpi and tarsomeres are quite often the same in both males and females of Micromyiini.

Material. Holotype.

Genus *Aprionus* Kieffer, 1894

There are 73 species in the Palearctic fauna (Skuhravá, 1986; Mamaev, 1996, 1997, 1998a, 1998b; Berest, 1997). Larvae inhabit decaying wood, and a certain number of species occur in soil and leaf litter. They have been recorded in beech wood (on pale rot); in brown porous fir wood (on rust) (Mamaev and Krivosheina, 1965); in alder, elm, and Japan poplar wood; and in decaying *Ferula* roots (Mamaev, 1998a). This genus is unknown in Baltic amber.

Aprionus admirandus Fedotova, sp. nov.

Etymology. From the Latin *admirandus* (amazing).

Holotype. SIZC, UA-1371, well-preserved female inclusion with partly missing legs; Rovno amber; Late Eocene.

Description (Fig. 2). Female. The antennae are 1.5 times as long as the head and 2+12-segmented; the pedicel is globular and as long as the slightly elongated scape. Flagellomere 1 has a shortened node that is 4.3 times as long as the stalk. Flagellomere 2 is almost as long as flagellomere 1, and its basal node is oval, with shallow constrictions. Flagellomere 5 is 2.3 times as long as it is wide, and the basal node is 1.4 times as long as the stalk. Flagellomere 12 has a rounded tip, and flagellomere 11 is 1.3 times as long as flagellomere 12. The flagellomere stalks are smooth. The palpi are four-segmented. Segment 1 is rounded, segment 3 is almost oval, segments 2 and 4 are almost parallel-sided, the terminal segment is apically rounded, and the ratio of segment lengths is 1 : 4 : 3 : 4. All tarsi are five-segmented and densely and evenly covered with scales. In the forelegs, the ratio of tarsomere lengths is 12 : 7 : 6 : 5 : 5. In the hind legs, the ratio of tarsomere lengths is 3 : 4 : 6 : 9 : 12 or 2 : 2 : 2 : 3 : 4, the tarsal claws are simple and weakly curved, the empodium is almost as long as the claws, and the femur is 1.2 times as long as the tibia. The wing has its maximum width in the proximal half and is 2.3 times as long as it is wide. R_{4+5} terminates before the wing apex. R_1 between its tip and R_s is 2.8 times as long as R_s. M_{1+2} is simple and distinct. M_{3+4} and Cu form a fork, which is situated much farther from the wing base than the R_s–R_{1+2} fork. The apical segments of the abdomen are only slightly narrowed.

Measurements, mm. Body length, 1.05; lateral length of head, 0.176; lateral width of head, 0.22; antenna length, 0.858; length of flagellomere 5, 0.616; length of the basal node, 0.55; stalk length, 0.066; palpus length, 0.154; wing length, 1.08; wing width, 0.48; hind femur length, 0.385; hind tibia length, 0.33; and hind tarsus length, 0.385.

Comparison. In the 2+12-segmented antennae and in the presence of hairs on the tarsi, the new species is close to *A. similis*, larvae of which were found under the bark of a pine stub (Mamaev, 1963), but it differs from the latter in the smooth (not wrinkled and without swellings in their middle parts) stalks of the flagellomeres and in the smooth and simple claws, which are not toothlike and have no spines.

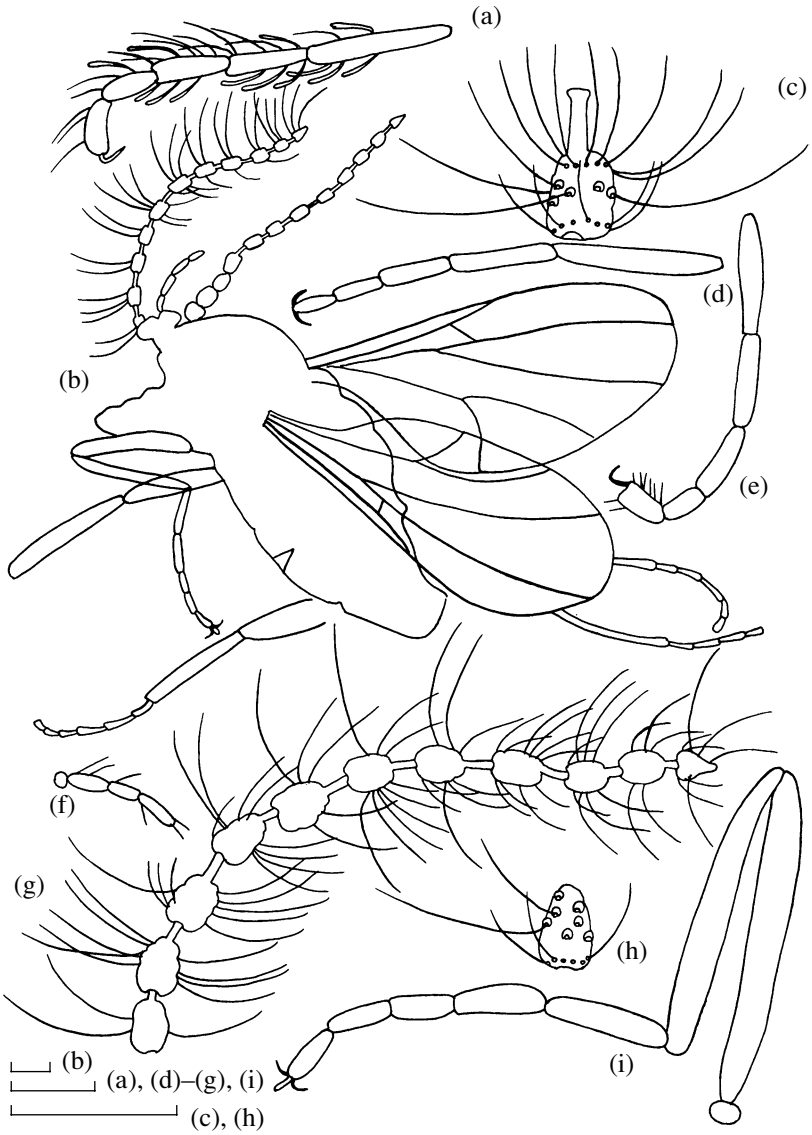

Fig. 2. *Aprionus admirandus* sp. nov., female, holotype SIZC, UA-1371; (a) fore tarsus; (b) general appearance; (c) flagellomere 5; (d) hind tarsus; (e) same (variability); (f) palpus; (g) flagellomeres 2-12; (h) flagellomere 12; and (i) anterior leg.

M a t e r i a l. In addition to the holotype, there are six paratypes in the same piece of amber.

Genus *Heterogenella* Mamaev, 1963

This Palearctic genus includes four species, which have been recorded in Europe and Asia (Japan) (Skuhravá, 1986, 1997). This genus has not been known from the fossil record.

Heterogenella sparsa Fedotova, sp. nov.

E t y m o l o g y. From the Latin *sparsa* (dispersed).

H o l o t y p e. SIZC, UA-32, poorly preserved inclusion of male with partly missing legs; Rovno amber; Late Eocene.

D e s c r i p t i o n (Fig. 3). Male. The antennae are 0.36 times as long as the body and 2+12-segmented; the pedicel is globular. Flagellomere 5 is twice as long as it is wide, and the basal node is 1.7 times as long as the stalk. Flagellomere 12 is conical, and flagellomere 11 is 1.3 times as long as flagellomere 12. The stalk of the penultimate flagellomere is elongated. The hind femora are slightly curved. All tarsi are five-segmented. The ratio of the lengths of the last three tarsomeres in the hind leg is 4 : 4 : 7, the tarsal claws are simple and weakly curved, and the empodium is barely visible. The wing is 2.1 times as long as it is wide. R_{4+5} enters the wing margin before its apex. M_{3+4} and Cu form a fork. Apical abdominal segments 4–8 gradually narrow toward the tip. The gonocoxites are elongated-oval and 1.6 times as long as they are wide. The gonostyle length

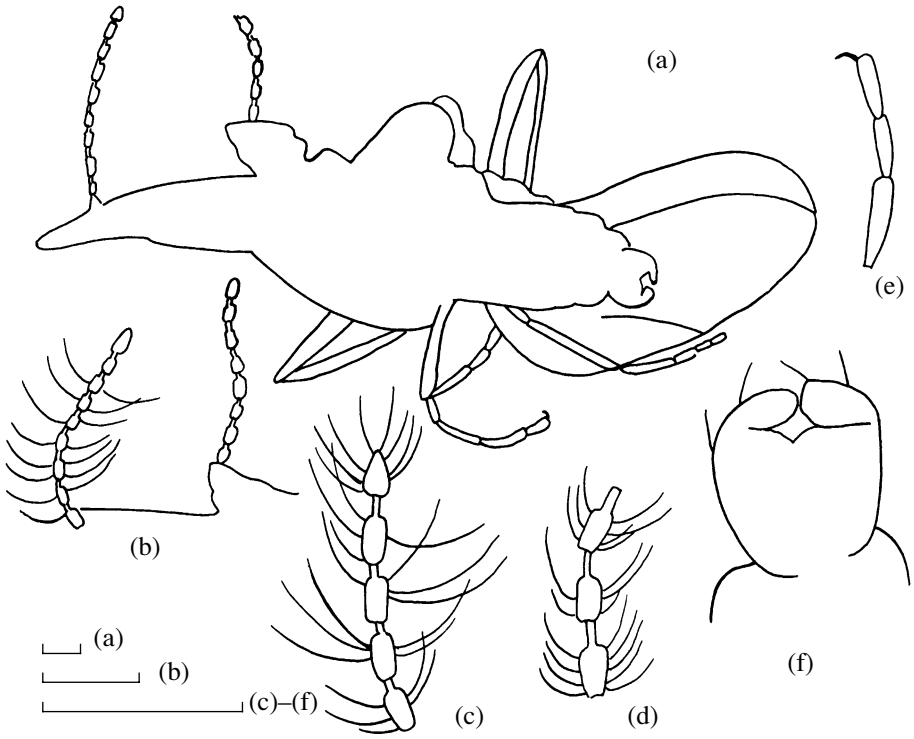

Fig. 3. *Heterogenella sparsa* sp. nov., male, holotype SIZC, UA-32; (a) general appearance; (b) fragments of antennae; (c) flagellomeres 8-12; (d) flagellomeres 5-7; (e) hind tarsomeres 3-5; and (f) genitalia.

is equal to the gonocoxite width. The gonostyles gradually broaden in their distal halves, are 1.7 times as long as they are wide, apically blunt, and covered with longish bristles.

Measurements, mm. Body length, 1.496; antenna length, 0.935; hind femur length, 0.407; hind tibia length, 0.396; hind tarsomere lengths, 0.198, 0.099, 0.099, 0.066, and 0.055; gonocoxite length, 0.077; and gonostyle length, 0.033.

Comparison. In the shape of antennomeres and male genitalia, it is close to the type species *H. hybrida* Mamaev but differs from the latter in the larger body, elongated stalk of the penultimate flagellomere, less curved claws, and the gonostyles being less widened before their tips.

Material. Holotype.

Tribe Peromyiini Kleesattel, 1979

Genus *Peromyia* Kieffer, 1894

There are 115 species recorded in the Palearctic Region from both Europe and Asia (Mamaev, 1996, 1998a, 1998b; Mamaev and Zaitsev, 1997; Skuhravá, 1997; Jaschhof, 2001). Their larvae have been recorded on wood rust, inside porous wood, and in pockets under heavily decayed bark of dead wood. They develop inside the rotten wood of deciduous trees when the bark and wood are decomposed by fungi and insect larvae and become loose and rich in burrows and cavities. They can develop on the surface and underside of wood remains, under the peeling bark of fir logs, on growing fungal mycelium, and, sometimes, on mold. They are recorded from fir, oak, alder, linden, and aspen and can be found in moss tussocks or in moss on tree trunks. Leaf-litter inhabitants are also known (Mamaev and Krivosheina, 1965).

Of the five specimens of *Peromyia* found in Rovno amber, four specimens are described, whereas one specimen (UA-1529) is insufficiently preserved and can be confidently identified only up to genus level.

Peromyia zherikhini Fedotova, sp. nov.

Etymology. In memory of the paleoentomologist V.V. Zherikhin.

Holotype. SIZC, UA-1365, female inclusion with invisible wing venation and uncertain number of antennomeres; Rovno amber; Late Eocene.

Description (Fig. 4). Female. The body is 6.1 times as long as the head. The pedicel is globular, flagellomere 1 has an enlarged basal node that is 7 times as long as the stalk and 1.5 times as long as flagellomere 2, which has a nearly globular basal node. The basal node of flagellomere 3 has a constriction near its midlength, and the basal nodes of the following flagellomeres are nearly rounded. Flagellomere 5 is 1.6 times as long as it is wide, and the basal node is

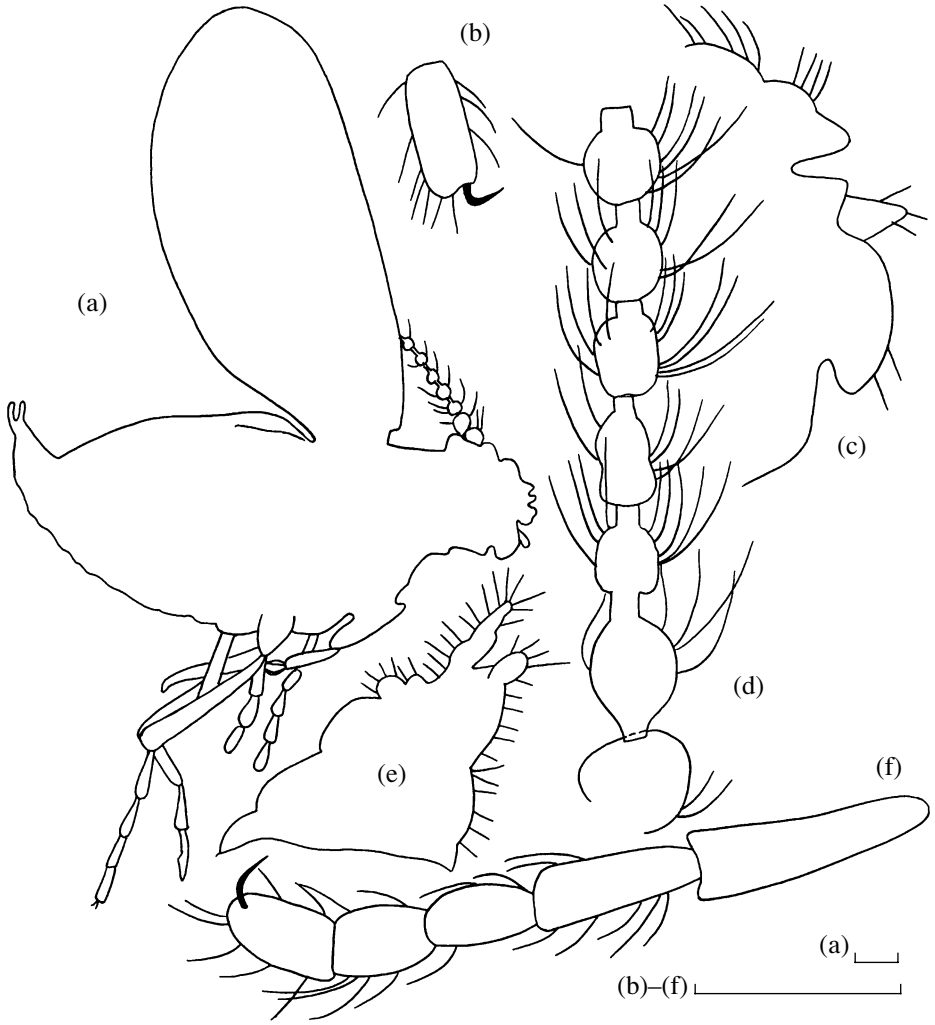

Fig. 4. *Peromyia zherikhini* sp. nov., female, holotype SIZC, UA-1365; (a) general appearance; (b) hind tarsal claw; (c) mouthparts laterally; (d) pedicel, flagellomeres 1–6; (e) tip of abdomen; and (f) fore tarsus.

1.3 times as long as the stalk. The clypeus is excavated at its midlength. The palpi are one-segmented, conical, and 1.4 times as long as they are wide. All tarsi are five-segmented. The tarsal claws are simple and basally curved, and the empodium is not developed. The wing is 2.2 times as long as it is wide, and the venation is obscure. The tip of the abdomen is upcurved. The apical plate of the ovipositor is 2.8 times as long as it is wide, and the ventral plate is 2.4 times as long as it is wide. Each apical plate bears elongated bristles at its tip. The ovipositor is directed dorsocaudally.

Measurements, mm. Body length, 1.32; lateral length of head, 0.242; lateral width of head, 0.253; antenna length, 0.495; pedicel length, 0.039; length of flagellomere 1, 0.61; width of flagellomere 1, 0.336; length of flagellomere 5, 0.045; width of flagellomere 5, 0.028; length of the basal node, 0.034; stalk length, 0.011; palpus length, 0.028; palpus width, 0.017; wing length, 1.155, wing width, 0.517; lengths of fore tarsomeres, 0.132, 0.066, 0.055, 0.044, and 0.044; and ovipositor length, 0.095.

Comparison. From the type species *P. leveillei* Kieffer, it differs in the one-segmented palpi, smooth claws that are curved basally and have no swellings, and the terminal plate of the ovipositor being elongated and thin in comparison with the two previous plates.

Material. Holotype.

***Peromyia sukachevae* Fedotova, sp. nov.**

Etymology. In honor of the paleoentomologist I.D. Sukacheva.

Holotype. SIZC, UA-8, deformed inclusion of male with partly missing legs; Rovno amber; Late Eocene.

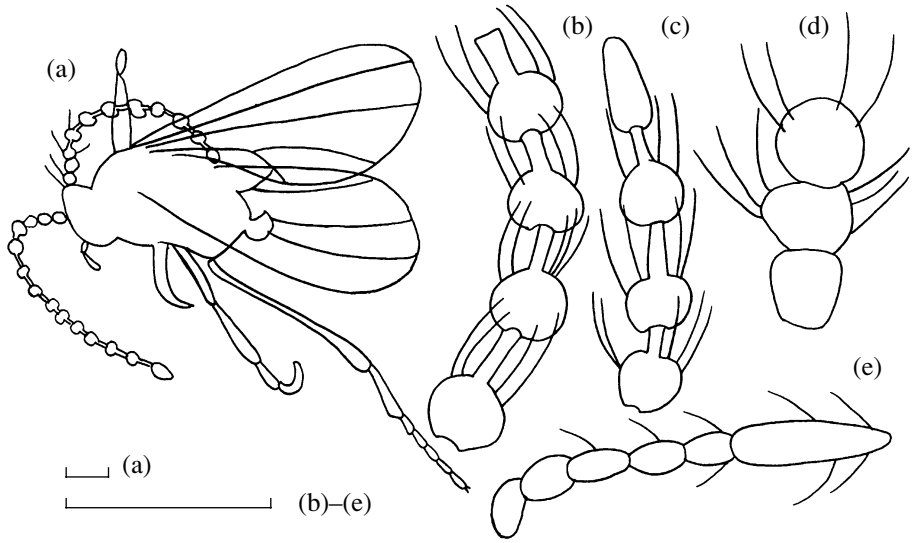

Fig. 5. *Peromyia sukachevae* sp. nov., male, holotype SIZC, UA-8; (a) general appearance; (b) flagellomeres 5–7; (c) flagellomeres 9–12; (d) scape, pedicel, and flagellomere 1; and (e) hind tibia and tarsus.

Description (Fig. 5). Male. The body is 5.2 times as long as the head. The abdomen is swollen and is similar to the thorax in shape and size. The antennae are 1.4 times as long as the head and 2+12-segmented; the pedicel is asymmetrical, broader than the scape, and 1.2 times as long as the latter; flagellomere 1 has a globular basal node and no stalk. Flagellomere 5 is 1.7 times as long as it is wide, and the basal node is 1.2 times as long as the stalk. The basal nodes have well-developed apical bristle circlets that reach the bases of the subsequent flagellomeres. Flagellomere 12 is as long as flagellomere 11 and has an attenuated and thin tip. The palpi are two-segmented, and segment 2 is thin, elongated, and slightly broadens toward the tip. The hind femur is 1.6 times as long as the tibia. All tarsi are five-segmented. The ratio of the lengths of the hind tarsomeres is 1 : 1 : 1.3 : 1 : 1, the tarsal claws are simple and weakly curved, and the empodium is barely visible. The wing is 2.4 times as long as it is wide, being widest in the distal half. R_{4+5} enters the wing margin well beyond the wing apex. R_s is near the wing midlength. M_{1+2} is simple, distinct, and closer to R_{4+5} than to M_{3+4}. M_{3+4} and Cu form a fork, which is slightly closer to the wing margin than to R_s and closer to the wing base than the R_s–R_{1+2} fork.

Measurements, mm. Body length, 0.051; lateral length of head, 0.154; lateral width of head, 0.121; antenna length, 0.561; length of flagellomere 5, 0.066; length of the basal node, 0.028; length of the stalk, 0.039; wing length, 0.67; wing width, 0.28; hind femur length, 0.198; hind tibia length, 0.198; and hind tarsus length, 0.176.

Comparison. From *P. zherikhini* sp. nov., it differs in the narrower wings, the absence of a stalk in flagellomere 1, and the two-segmented palpi. From *P. leveillei*, it differs in the more distinct and wider M_{1+2}, in the wing being the widest in the distal half (not at the midlength), and in the globular flagellomere 1 lacking a stalk. The new species is close to *P. monilifera* from Baltic amber (Meunier, 1904) in the shapes of the first and the last flagellomeres of the male but differs from the latter in the shorter antennae.

Material. Holotype.

***Peromyia miranda* Fedotova, sp. nov.**

Etymology. From the Latin *miranda* (striking).

Holotype. SIZC, UA-1290, well-preserved inclusion of male with unclear wing venation; Rovno amber; Late Eocene.

Description (Fig. 6). Male. The body is six times as long as the head. The antennae are 2.3 times as long as the head and 2+9-segmented; the pedicel is globular, flagellomere 1 is globular and lacks a stalk, and flagellomere 2 is 1.2 times as long as flagellomere 1. The basal nodes of flagellomeres 2–6 are rounded, and those of flagellomeres 7–9 are oval. Flagellomere 5 is 1.3 times as long as it is wide, and the basal node is three times as long as the stalk. Bristles of the apical circlet of flagellomeres reach the midlength of the subsequent segments. Flagellomere 8 is 1.3 times as long as flagellomere 7. The palpi are four-segmented. The tarsi are five-segmented and densely covered with scales. In the foreleg, the ratio of tarsomere lengths is 8 : 5 : 4 : 4 : 4. In the hind leg, the ratio of tarsomere lengths is 6 : 4 : 3 : 2 : 3, the tarsal claws are simple and weakly curved, and the empodium is not visible. The wing is 2.1 times as long as it is wide. R_{4+5} enters the wing margin far beyond the wing apex. M_{1+2} is simple,

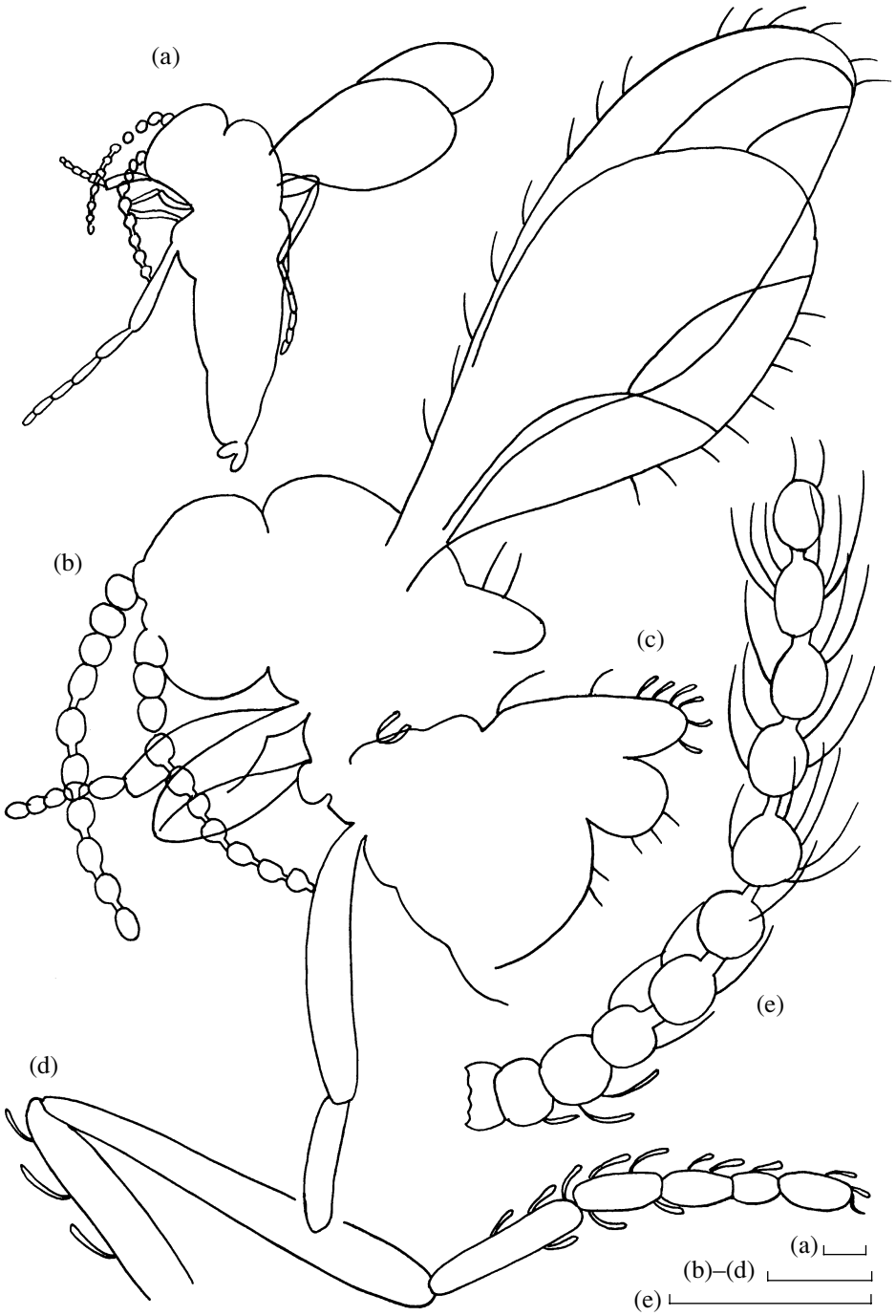

Fig. 6. *Peromyia miranda* sp. nov., male, holotype SIZC, UA-1290; (a) general appearance; (b) anterior part of the body; (c) posterior part of the body; (d) hind tibia and tarsus; and (e) scape, pedicel, and flagellomeres 1–9.

almost invisible, and enters the wing margin near R_{4+5}. M_{3+4} and Cu form a fork. The gonocoxite is 2.5–3.2 times as long as it is wide.

Measurements, mm. Body length, 0.847; lateral width of the head, 0.132; antenna length, 0.385; length of flagellomere 5, 0.039; wing length, 0.57; wing width, 0.27; hind femur length, 0.242; hind tibia length, 0.121; hind tarsus length, 0.187; and ovipositor length, 0.077.

Comparison. From *P. sukachevae* sp. nov., this new species differs in the 2+9-segmented antennae, shortened stalks of flagellomeres, four-segmented palpi, wings being widest near their midlength, and shorter femora of the hind legs.

Material. Holotype.

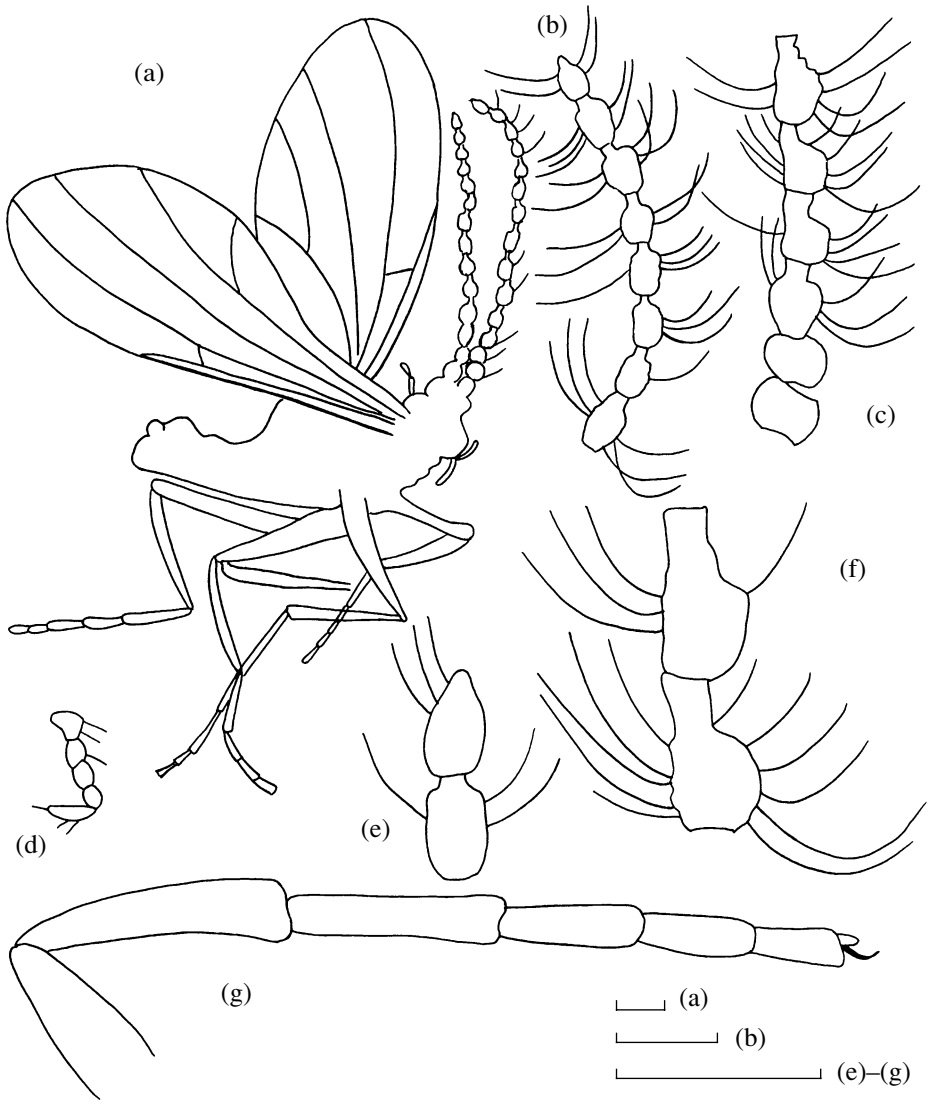

Fig. 7. *Peromyia autonoma* sp. nov., male, holotype SIZC, UA-174; (a) general appearance; (b) flagellomeres 6–12; (c) scape, pedicel, and flagellomeres 1–4; (d) palpus; (e) flagellomeres 11–12; (f) flagellomeres 2–3, and (g) hind tarsus.

***Peromyia autonoma* Fedotova, sp. nov.**

Etymology. From Latin *autonoma* (independent).

Holotype. SIZC, UA-174, well-preserved male inclusion; Rovno amber; Late Eocene.

Description (Fig. 7). Male. The body is 3.5 times as long as the head. The antennae are 3.5 times as long as the head, 2+12-segmented, and the scape and pedicel are transverse. All flagellomeres have distinct stalks and asymmetrical and nearly rounded bases. Flagellomere 1 is 1.2 times as long as flagellomere 2. Flagellomere 5 is twice as long as it is wide, and the basal node is twice as long as the stalk. Flagellomere 12 is almost ovoid, but with a more pointed tip. The palpi are four-segmented, with a distinct palpiger; segments 1–3 are oval, segment 4 is slightly curved and tapered, and the ratio of segment lengths is 1 : 1 : 1 : 2. The hind femur is 1.2 times as long as the tibia. All tarsi are five-segmented. In the foreleg, the ratio of tarsomere lengths is 6 : 4 : 3 : 3 : 3. In the hind leg, the ratio of tarsomere lengths is 11 : 9 : 6 : 5 : 4; the tarsal claws are simple and weakly curved at their midlength and twice as long as the empodium. The wing is 2.5 times as long as it is wide. R_{4+5} enters the wing margin beyond the wing apex. R_1 enters the wing margin beyond the wing midlength. R_1 between its tip and R_s is three times as long as R_s. M_{1+2} is simple. M_{3+4} and Cu form a fork that is level with the R_s–R_{1+2} fork. Apical abdomen segments 4–8 are considerably narrowed.

Measurements, mm. Body length, 0.715; lateral length of the head, 0.11; lateral width of the head, 0.198; palpus length, 0.011; antenna length, 0.77; length of flagellomere 1, 0.077, length of flagellomere 5, 0.044; wing length, 1.03; wing width, 0.1; hind

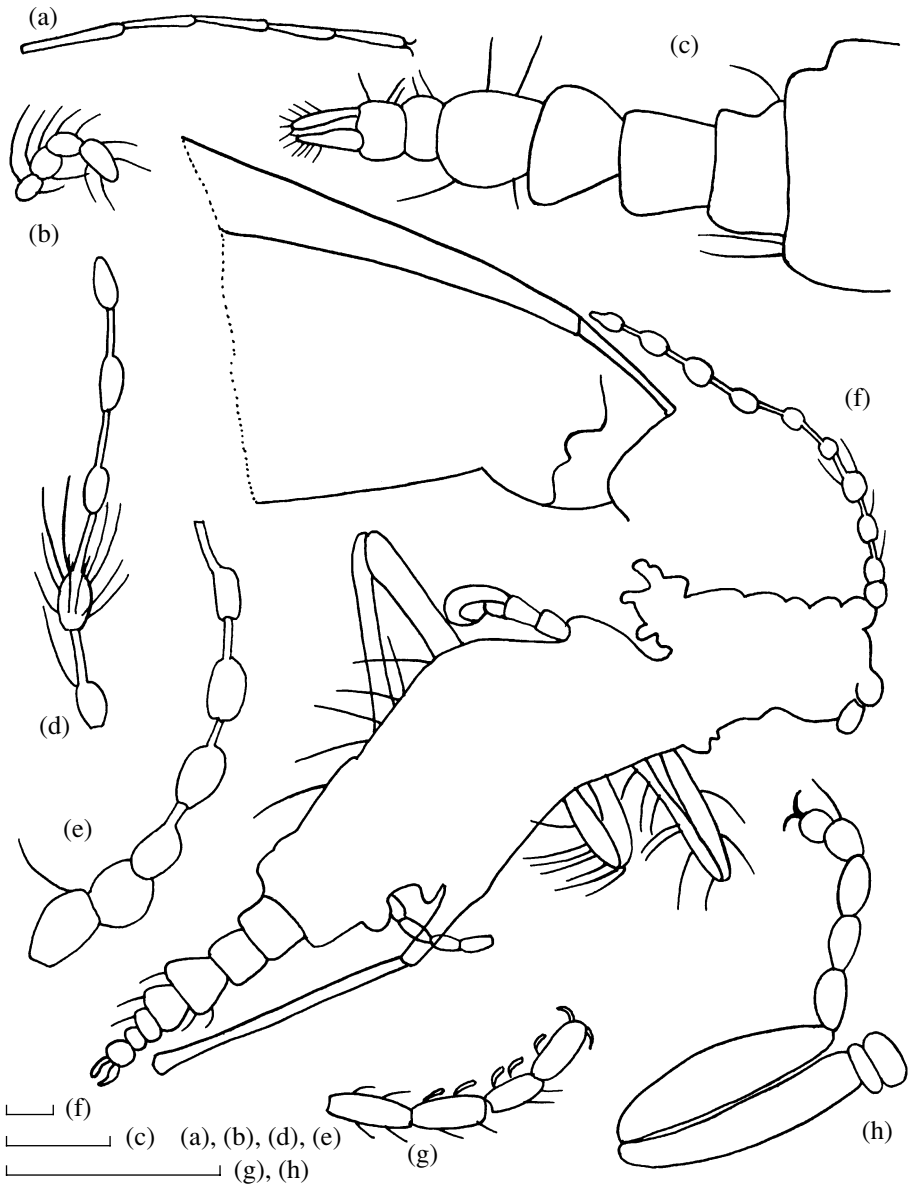

Fig. 8. *Conarete laesus* sp. nov., female, holotype SIZC, UA-133; (a) hind tarsus; (b) palpus; (c) tip of the abdomen; (d) flagellomeres 6–10; (e) scape, pedicel, and flagellomeres 1–4; (f) general appearance; (g) hind tarsus; and (h) middle leg.

femur length, 0.363, hind tibia length, 0.297; hind tarsus length, 0.363; and hind tarsomere lengths, 0.154, 0.066, 0.055, 0.044, and 0.044.

Comparison. It differs from the above species in the transverse scape and pedicel and in the asymmetrical flagellomeres, the basal nodes of which seem to be almost quadrate when viewed laterally. Additionally, it differs from *P. miranda* sp. nov. in the greater number of flagellomeres.

Material. Holotype.

Genus *Conarete* Pritchard, 1951

This genus comprises eight species, which are known from the Nearctic and Oriental regions (Skuhravá, 1997). This genus has not been known from the fossil record.

Conarete laesus Fedotova, sp. nov.

Etymology. From the Latin *laesus* (damaged).

Holotype. SIZC, UA-133, deformed inclusion of female with partly missing legs and jammed wings; Rovno amber; Late Eocene. Syninclusion—a larva of the millipede *Polyxenus*.

Description (Fig. 8). Female. The body is 8.1 times as long as the head. The antennae are 4.5 times as long as the head and 2+9-segmented; the scape is slightly elongated, the pedicel is globular and nearly as long as the scape, and flagellomere 1 has a slightly

shortened stalk. The subsequent stalks become longer toward the tip of the flagellum. Flagellomere 5 is 3.3 times as long as it is wide, and the stalk is 1.1 times as long as the basal node. Flagellomere 9 has attenuated tip, and segment 8 is twice as long as segment 9. The palpi are four-segmented, segments 1 and 3 are oval, segment 2 is the widest and nearly rounded, segment 4 is elongated and slightly swollen basally, and the ratio of segment lengths is 3 : 3 : 3 : 5. All tarsi are five-segmented. Tarsomere 1 in the hind leg is 1.5 times as long as other tarsomeres, the tarsal claws are simple and weakly curved, and the empodium is invisible. The wings are broad and long. R_{4+5} enters the wing margin beyond the wing apex. R_1 between its tip and R_s is 6.7 times as long as R_s. Other veins are indistinct. Abdominal segments 4–8 are considerably narrowed. The ovipositor is long and multisegmented.

Measurements, mm. Body length, 0.74; lateral length of head, 0.121; lateral width of head, 0.121; antenna length, 0.396; fore femur length, 0.11; fore tibia length, 0.099; middle femur length, 0.176; middle tibia length, 0.209; length of the hind tarsus, 0.143; wing length, about 0.583; wing width, 0.264; ovipositor length, 0.22; and ovipositor width, 0.055.

Comparison. It differs from known species in having 2+9-segmented (not 2+6–7-segmented) antennae, very long stalks of the flagellomeres that become longer than the basal nodes in the apical portion of the antenna, and a long and multisegmented ovipositor.

Material. Holotype.

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