Entomologica, Bari, 31, (1997): 125-132

BORIS MAMAEV [1] - ALEXANDER ZAITZEV [2]

Records of freedeveloping gall midges in Italy, with the description of four new species (Diptera, Cecidomyiidae)

ABSTRACT

Twenty six species of Lestremiinae, Porricondylinae and Cecidomyiinae are recorded in Italy, 19 of them are new for Italian fauna, four species (*Polyardis pontignanorum, Peromyia mica*, *Neurepidosis solinasi*, *Stomatosema spinellosa* spp. n.) are described as new.

Key words: Italy, freedeveloping gall midges, fauna, new species.

INTRODUCTION

Nearly all species of gall midges, previously recorded in Italy, belong to phytophagous forms of subfamily Cecidomyiidae. Only 9 species of the subfamilies Lestremiinae and Porricondylinae were included by M. SKUHRAVÁ (1995) in the check list of Italian fauna of Cecidomyiidae. Freedeveloping gall midges, previously known in Italy, belong also to genus *Brachineura* Rond.

MATERIALS AND METHODS

In course of the visit of B. Mamaev as guest of Department of Evolutionary Biology, University of Siena in summer 1994 a number of freedeveloping gall midges were collected by him in Siena, Pontignano and Monte Amiata. The gall midges were mostly collected by netting over the vegetation. The specimens were mounted in Canada balsam for identification.
Among the species 22 were identified as follows.

[1]All-Russian Institute of Continuous Education in Forestry, Institutskaya str., 17; 141200, Pushkino, Moscow Region, Russia.

[2] A.N. Severtzov Institute of Ecology and Evolution of Russian Academy of Sciences, Leninsky prospekt, 33, Moscow, 117071, Russia.

LIST OF SPECIES

Subfamily **Lestremiinae**

* - species new In Italy.

**Lestremia cinerea* Macquart, 1826. Siena: 3 males, 8.06.1994.

L. leucophaea (Meigen, 1818), Monte Amiata: 1 male, 27.06. 1994; Pontignano: 1 male, 27.06.1994.

**Polyardis bispinosa* (Mamaev, 1963). Monte Amiata: 1 male, 19.06.1994,

Micromya lucorum Rondani, 1840. Pontignano: 3 males, 9.06.1994; 5 males, 30.06.1994; 2 females, 8.07.1994.

**Peromyia almensis* (Berest, 1989). Pontignano: 1 male, 23.06.1994; 1 male, 30.06.1994,

**P. carpathica* Mamaev et Berest, 1990. Siena: 7 males, 8.06.1994; Pontignano: 1 male, 30.06.1994; 10 males, 8.07.1994.

**P. cornuta* (Edwards,1938). Pontignano: 2 males, 8.07.1994.

**P. photophila* (Felt, 1907). Pontignano: 2 males, 8.07.1994.

**Xylopriona nigricans* (Edwards, 1938). Siena: 2 males, 8.06.1994; Pontignano: 1 male, 26.06,1994.

**X. toxocodendri* (Felt, 1907). Siena: 1 male, 8.06.1994.

Subfamily **Porricondylinae**

**Cassidoides raptor* (Mamaev, 1966). Pontignano: 1 male, 11.07.1994.

**Claspettomyia niveitarsis* (Zetterstedt, 1850). Pontignano: 1 male, 8.07.1994.

**Colomyia caudata* SPUNGIS, 1991. Pontignano: 1 male, 30.06.1994,

**Parepidosis arcuata* Mamaev, 1964. Pontignano: 1 male, 8.07.1994.

Porricondyla nigripennis (Meigen, 1830), Monte Amiata: 1 male. 19.06.1994.

**P. rufescens* Panelius, 1965. Pontignano: 2 males, 16.06.1994.

Subfamily **Cecidomyiinae**

**Didactylomyia longimana* Felt, 1908. Pontignano: 1 male, 1 female, 17.07.1994.

**Lauthia spinigerella* Mamaev, 1967. Pontignano: 3 males, 16.06.1994; 1 male, 8.07.1994; 1 male, 10.07.1994.

**Ledomyia obscuripennis* (Kieffer, 1904). Pontignano: 1 male, 23.06.1994; 1 male, 27.06.1994.

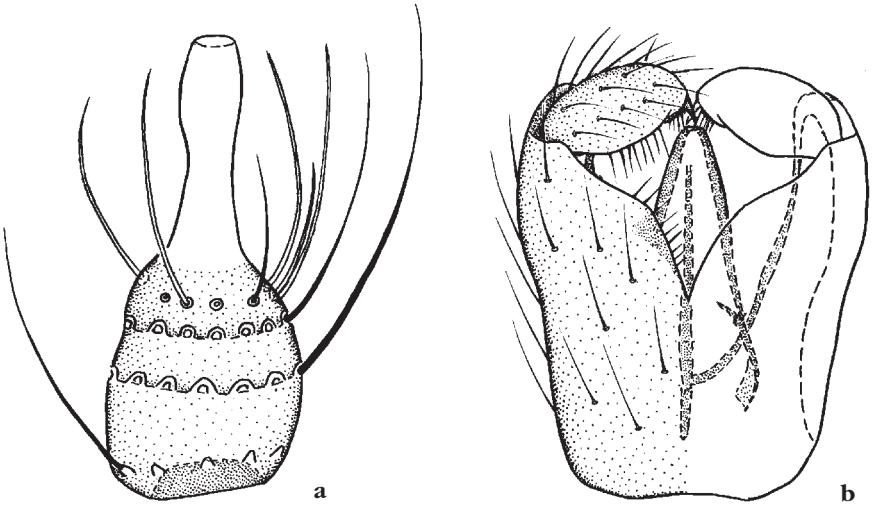

Fig. 1 - *Polyardis pontignanorum*, sp. n., male, external morphology: a) 6th flagellar segment of antennae, b) male genitalia, dorsal aspect, 9th tergite removed.

**Rhizomyia perplexa* Kieffer, 1898. Pontignano: 3 males, 16.06.1994; 1 male, 23.06.1994.

**Karschomyia abnormis* Mamaev, 1961. Pontignano: 1 male, 16,06.1994.

**Coquillettomyia caricis* (Moehn, 1955), Pontignano: 1 male, 8.07.1994.

DESCRIPTION OF NEW SPECIES

Polyardis pontignanorum Mamaev et Zaitzev, sp. n. (figs 1 a, b)

Holotype: male in slide, Italy, Pontignano, 23.06.1994; paratypes: 2 males, Pontignano, 30.06.1994 (B. Mamaev leg.); deposited in B. Mamaev collection.

MALE

Small dark species, length of wing 1.0 mm; antennae short, 2/3 as long as wing. Eye bridge 3 facets wide medially and 2 facets wide laterally. Palpi with 3 short segments, first segment subglobular. Basal enlargement of flagellar segments round, slightly longer than broad, with 1 complete and 2 incomplete whorls of bristles in distal half of enlargement and 1 basal whorl; long bri-

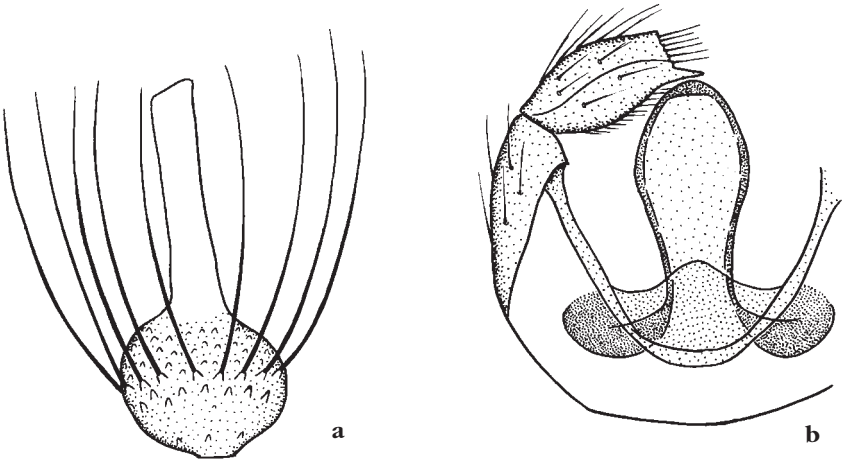

Fig. 2 - *Peromyia mica*, sp. n., male, external morphology: a) 6th flagellar segment of antennae, b) male genitalia, dorsal aspect, 9th tergite removed.

stle-shaped sensoriae at the base of stem. Stem of middle flagellar segment as long as basal enlargement. Wing about 2.0 times as long as wide; C runs well beyond the tip of R5; Rl as long as Rs with 3 pores. Cu sharply bent at distal third nearly at the right angle. Claws sharply bent in the middle. Empodium very narrow and slightly shorter than claw.

Male genitalia 1.7-2.0 times as long as broad; gonocoxites with acute incision and round apical lobe; gonostyles round, 2.0 times as long as broad, with acute subapical dent; tegmen long and thin, 3.0 times as long as broad in the middle. Apodeme of gonocoxites round. Genital rod nearly as long as tegmen.

FEMALE UNKNOWN

New species may be distinguished: antennae much shorter than wing, male genitalia elongated, tegmen long and thin, empodium shorter than claw.

Peromyia mica Mamaev et Zaitzev, sp. n. (figs 2 a, b)

Holotype: male in slide, Italy, Pontignano, 27.06.1994; paratypes: 13 males in 3 slides, the same series and data (B. Mamaev leg.); deposited in B. Mamaev and A. Zaitzev collections.

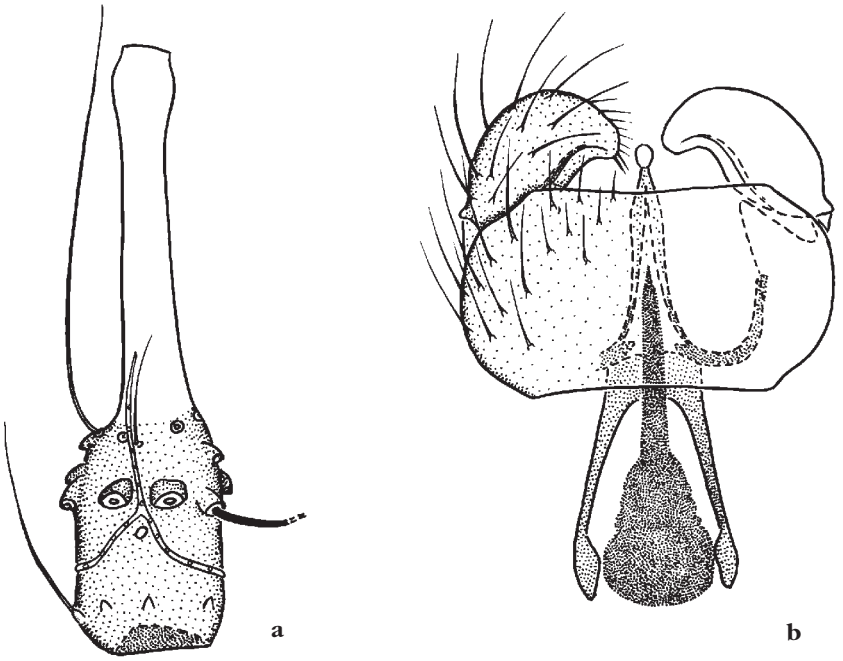

Fig. 3 - *Neurepidosis solinasi*, sp. n., male, external morphology: a) 5th flagellar segment of antennae, b) male genitalia, dorsal aspect, 9th tergite removed.

MALE

Very small species, length of wing 0.7 mm. Eye bridge 3 facets wide medially, 2-3 facets wide laterally. Palpi with 4 segments, first and second segments subglobular, Basal enlargement of flagellar segments round, slightly depressed, darkened on basal half, densely covered with scales, with one whorl of long bristles in the middle; distal part of basal enlargement with small light knobs; stem of middle flagellar segments very thin, 1.8 times as long as basal enlargement, Wing about 2.2 times as long as wide; C ending at tip of R5; Rl 2.0 times as long as Re, evanescent distally; claws very thin and slender; empodium as Iona as claw. Gonocoxites of male postabdomen thick, without lobe, with triangular excavation ventrally; gonostyles elongated, 2.5 times as long as broad, with acute subapical projection; 9th tergite round, with 8 long setae; tegmen strongly dilated in the middle with round apex and very thick apodeme., apodeme of gonocoxites round.

FEMALE UNKNOWN

New species belongs to type 1, group 2 with dilated obovate tegmen (BEREST, 1994), it is easily distinguished from other species of this group by the shape of gonostyle and broad apodeme of tegmen.

Neurepidosis solinasi Mamaev et Zaitzev, sp. n. (figs 3 a, b)

Holotype: male in slide, Italy, Pontignano, 10,07.1994 (B. Mamaev leg.); deposited in B. Mamaev collection.

MALE

Small yellow species; length of body 1.0 mm, length of wing 1.5 mm. Eye bridge devoid in facets dorsally. Stem of middle flagellar segments 1.5 times as long as basal enlargement; horseshoe-shaped sockets in single whorl; sensoriae with very long longitudinal branch.
Wings long and very narrow, R5 Joints wing margin slightly beyond the tip of wing. Rs under the acute angle to R5; M3+4 reduced. Palpi long, with 4 segments. Legs very long 3.0 times as long as body, 2.0 times as long as wing. Second tarsal segment of hind legs longer than tibia. First tarsal segment with short acute projection. Male genitalia with fused gonocoxites, thick gonostyles without apical dent; tegmen long and thin; apodeme as long as tegmen, dilated apically; genital rod strongly sclerotized with very broad basal thickening.

FEMALE UNKNOWN

New species similar to *Neurepidosis minuta* SPUNGIS (1987), but morphology of male genitalia of new species (very long apodeme, large basal thickening of genital rod etc.) is quite different. Claws of new species unidentate, of *N. minut*a - multidentate.

Stomatosema spinellosa Mamaev et Zaitzev, sp. n. (figs 4 a, b)

Holotype: male in slide, Italy, Siena, 16.06.1994 (B. Mamaev leg.), deposited in B. Mamaev collection.

MALE

Dark species, length of body 1.5 mm, length of wing 1.7 mm. Eye bridge well developed, 10 facets wide. Mouth parts elongated; palpi with 4 segments; frons membranous. Basal enlargement of 4th flagellar segment cylindric, 2.5 times as long as broad, with numerous horseshoe-sliaped sockets

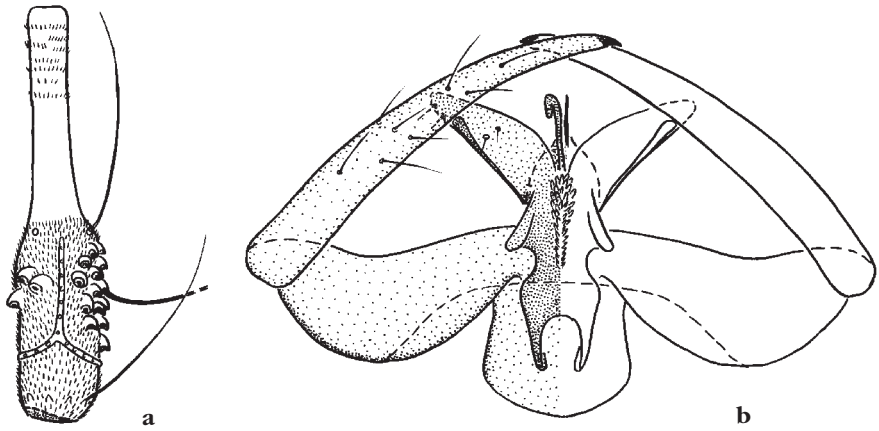

Fig. 4 - *Stomatosema spinellosa*, sp. n., male, external morphology: a) 6th flagellar segment of antennae, b) male genitalia, dorsal aspect, 9th tergite removed.

and peculiar sensoria; stem slightly longer than basal enlargement with fine spinulae in apical third. R5 of wing curved and joined C well behind wing apex. M3+4 joined with Cu; Rs at the right angle to R5. Tarsal claws toothed; empodium well developed. Male genitalia broad with slightly curved gonocoxites and long gonostyles; lobes of 9th tergite divergent; aedeagus with apical hook; apodeme bifurcated.

FEMALE UNKNOWN

New species may be distinguished because stem of flagellar segments with spinulae in apical part, apodeme of male genitalia bifurcated.

ACKNOWLEDGMENTS

The authors are very grateful to Prof. R. Dallai and Prof. M. Solinas. One of new species *Neurepidosis solinasi* is named in honour of Prof. M. Solinas, investigator of gall midges in Italy.

RIASSUNTO

SEGNALAZIONI PER L'ITALIA DI CECIDOMIIDI (DIPTERA: CECIDOMYIIDAE) A REGIME DI VITA LIBERA, CON DESCRIZIONE DI QUATTRO SPECIE NUOVE

Sono riportate 26 specie viventi in Italia, appartenenti alle sottofamiglie Lestremiinae, Porricondylinae e Cecidomyiinae. Diciannove di esse risultano nuove per la fauna italiana.

Quattro specie (*Polyardis pontignaniiorum*, *Peromyia mica*, *Neurepidosis solinasi*, *Stomatosema spinellosa*) sono nuove per la Scienza.

Parole chiave: Italia, Cecidomiidi non galligeni, fauna, nuove specie.

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