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## A new species of *Ectrepesthoneura* from Baltic amber (Diptera: Mycetophilidae)

## Nowy gatunek z rodzaju *Ectrepesthoneura* z bursztynu bałtyckiego (Diptera: Mycetophilidae)

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**ABSTRACT.** A new species of fungus gnats of the genus *Ectrepesthoneura* from Baltic amber is described based on one male. The species is characterized by large cerci and deeply divided tergite IX.

**KEY WORDS:** *Ectrepesthoneura*, Mycetophilidae, new species, Baltic amber, fossil Diptera

[zoobank.org/References/0DFC7149-150B-474D-B37D-17DF5091C239](http://zoobank.org/References/0DFC7149-150B-474D-B37D-17DF5091C239)

### INTRODUCTION

The family Mycetophilidae (NEWMAN, 1834) comprises recently 256 genera and 4652 species (according to a website: [www.sciaroidea.info](http://www.sciaroidea.info)). The division into subfamilies and tribes is still disputable. Several systems of classification are in current use (EDWARDS, 1925; TUOMIKOSKI, 1966; HENNIG, 1973; MCALPINE, 1981; VÄISÄNEN, 1984; MATILE, 1997; SÖLI 1997; POLEVOI, 2000; GAMMELMO, 2004; RINDAL et AL. 2009).

According to VOCKEROTH (1981) the genus *Ectrepesthoneura* ENDERLEIN, 1911 belongs to Sciophilinae (WINNERTZ, 1863): tribe Gnoristini (EDWARDS, 1925). In the opinion of EDWARDS (1925) and SÖLI (1997), among others, the genus takes an intermediate position between the Gnoristini and Leiini. The genus comprises 15 recent species (with *E. chandleri* being transferred to *Lusitanoneura* by RIBEIRO & CHANDLER (2007), *E. bucera* PLASSMANN,

1980 synonymized with *E. ovata* OSTROVERKHOVA, 1977 by KJAERANDSEN et AL. (2007), and two species from Japan described by SASAKAWA (1961), *E. japonica* and *E. yasamatsui*, excluded from *Ectrepesthoneura* by CHANDLER (1980)).

The oldest two species of the genus, *Ectrepesthoneura succinimontana* and *Ectrepesthoneura swolenskyi*, were described from the lower Cretaceous amber (120 Ma) from Spain by BLAGODEROV and GRIMALDI (2004).

From Baltic amber (upper Eocene, c. 40-50 Ma; WEITSCHAT, 2002) one species is known, *Ectrepesthoneura magnifica* (MEUNIER, 1904), originally described in the genus *Willistoniella*; its classification to the genus *Tetragoneura* or *Ectrepesthoneura* was proposed by EDWARDS (1940), and the species is formally included in the latter genus by EVENHUIS (1994). From Rott (Oligocene of Germany) one species, *Ectrepesthoneura rottensis*, was described by STATZ (1944) from an imprint of a single wing.

Herewith, a new species from Baltic amber is described. The classification to the genus was based on the diagnosis of the genus given below.

Genus: *Ectrepesthoneura* ENDERLEIN, 1911

*Ectrepesthoneura* ENDERLEIN, 1911: 115

**Type species:** *Tetragoneura hirta* WINNERTZ, 1846: 19.

The diagnosis of the genus was given by CHANDLER (1980), PLASSMANN (1980), VÄISÄNEN (1986) and BLAGODEROV & GRIMALDI (2004) and is based mainly on the following pattern of wing venation [terminology after VOCKEROTH (1981) and SÖLI (1997)]. Sc short, usually less than  $\frac{1}{4}$  of wing length, ending in R; C ending between R<sub>5</sub> and M<sub>1</sub>; R<sub>1</sub> very short; small radial cell usually 3x as long as wide; fork of M into M<sub>1</sub> and M<sub>2</sub> close to wing middle; fork of CuA into CuA<sub>1</sub> and CuA<sub>2</sub> very close to wing base. Lateral ocelli are positioned far from the eyes; laterotergite is hairless. Mid tibia in male has a sensory field on diffuse swelling.

Genus: *Ectrepesthoneura*

*Ectrepesthoneura mikolajczyki*, n. sp.

(FIG. 1)

<http://zoobank.org/NomenclaturalActs/BACDCBBE-AA96-4CD5-B085-04089368B913>

**Diagnosis.** Male genitalia oval in ventral/dorsal view. Gonocoxites large, broadly divided and excised ventrally. Gonostyles branched, inner part narrow, directed to inside; outer part S-shaped, ending with few small processes arranged into a bowl-like shape. Cerci large, rectangular. Tergite IX divided lengthwise.

**Etymology.** A new species name is dedicated to WALDEMAR MIKOŁAJCZYK (Museum and Institute of Zoology, Polish Academy of Sciences, Warszawa), a specialist of Mycetophilidae.

**MATERIAL EXAMINED.** Holotype male ISEA PAN MP/3173 (Baltic amber; age: Upper Eocene) (FIG. 1A). Housed in the Museum of the Institute of Systematics and Evolution of Animals, Polish Academy of Sciences (ISEA PAN).

**DESCRIPTION.** Body length 2.3 mm, wing length 2.8 mm. Head: three ocelli discernible. Antennae (FIG. 1C): scape and pedicel rounded; the scape is 2x wider than long, the pedicel is somewhat longer. Flagellomeres short, barrel-like, narrowing towards the end of antenna. First 13 flagellomeres are 2x as long as wide, the terminal segment is longer and slender, conical. Of the palpi only two terminal segments are visible, bent under the head; p5 somewhat longer and more slender than p4.

Praescutum without visible bristles; scutum with a row of thick, long bristles parallel to the scutal suture. An oblique suture between the praepisternum and anepisternum obliquely directed to head; epimeron contacting the praepisternum below the suture to anepisternum (generic characters).

Wing (FIG. 1B): venation pattern characteristic to the genus. Small cell is rather long, 4x as long as wide; its distal vein is oblique.

Legs: coxae distally with few long bristles. Femora with very short bristles arranged in rows perpendicular to legs' long axes. Fore tibia without visible hairs, mid and hind tibiae with two rows of long and thick bristles on inner side; the rows are apart from each other at the distance equal 1.5x length of bristles. A mid tibia with a wide swelling at 1/3 of its length; in mid of the swelling a sensory field is visible.

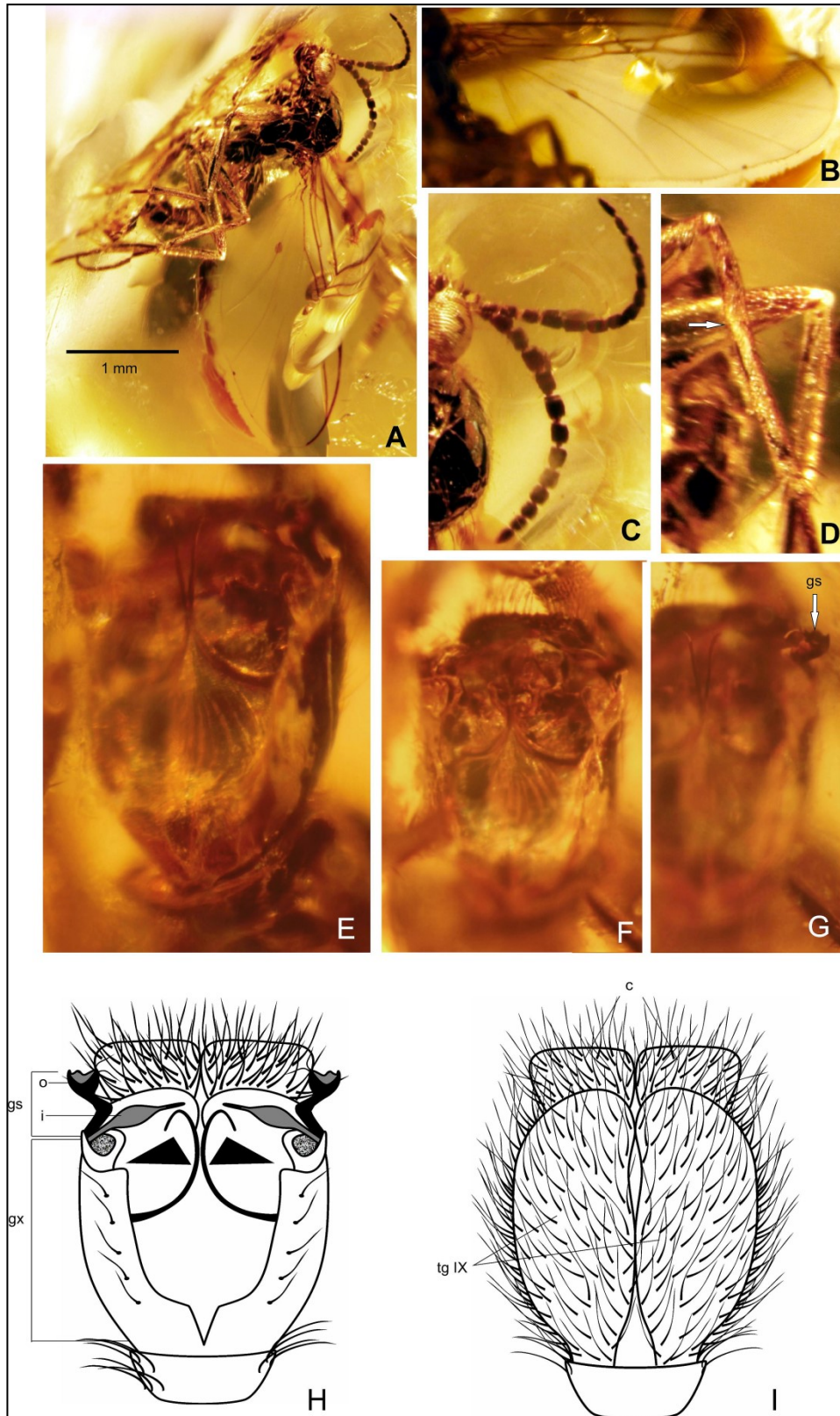
Male genitalia (FIG. 1E-I) oval in ventral and dorsal views; ventral view well visible, the dorsal view obscured by an oblique position and by a thick layer of amber. Ventral side (FIG. 1E-H): gonocoxites large, ending apically almost at same level as the tergite IX, broadly diverging apart in V-shape, and provided with a row of bristles arising from large pores along the inner margin. In the space between gonocoxites two very long processes re-curved to inside are visible, probably belonging to gonocoxites. Gonostyles two-branched, strongly sclerotized, of a „dry” appearance; the inner branch in shape of a long, straight, narrow process directed to inside, somewhat swelled in midlength. Outer branch S-shaped, ending a collection of small processes provided with single bristles and arranged in a bowl-like structure. Of the inner apparatus only a part of an aedeagal sheath is visible in shape of two dark triangles.

Dorsal side (FIG. 1I): tergite IX completely divided in two longitudinal halves contacting each other in midlength and terminally. Entire tergite is covered with dense setation. Two large, rectangular cerci are present, covered with long setae.

## REMARKS

The identity of a new species with the only species known from Baltic amber, *Ectrepesthoneura magnifica*, cannot be checked, since the type specimen (or any other specimen of this name) is missing in the MEUNIER'S collection in Goettingen.

Among the recent species large cerci are present in *Ectrepesthoneura montana* ZAITSEV 1984 known from Azerbaijan. A deeply divided tergite IX is characteristic to only one recent species, *E. lafooni* CHANDLER 1980, from North America.



**FIG. 1.** *Ectrepesthoneura mikolajczyki*, n. sp., holotype ISEZ MP/3173, male (Baltic amber). A, habitus; B, wing; C, antennae; D, swelling on mid tibia (arrow); E-G, genitalia in ventral view; H-I, interpretation of ventral (H) and dorsal side (I). Abbreviations: c, cerci; gs, gonostyle; gx, gonocoxite; i, inner branch of gonostyle; o, outer branch of gonostyle; st IX, sternite IX; tg IX, tergite IX

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