

NEMEDINA ACUTIFORMIS SP.N.: A NEW ATELESTID SPECIES FROM SPAIN, WITH A KEY OF KNOWN EXTANT SPECIES (DIPTERA: ATELESTIDAE)

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Abstract: A new species of Atelestidae (*Nemedina acutiformis* sp. n.) is described from Spain. Also, a key to extant species is given and the family is recorded from Spain for the first time.

Key words: Diptera, Atelestidae, *Nemedina*, new species, key, Spain.

***Nemedina acutiformis* sp. n.: un nuevo ateléstido de España, con una clave de las especies existentes (Diptera: Atelestidae)**

Resumen: Se describe una especie nueva de Atelestidae (*Nemedina acutiformis* sp. n.) de España. Además, se da una clave de las especies existentes y se cita a esta familia por primera vez de España.

Palabras clave: Diptera, Atelestidae, *Nemedina*, especie nueva, clave, España.

Taxonomy/Taxonomía: *Nemedina acutiformis* sp.n.

Introduction

For many years *Nemedina* Chandler, 1981 has been a genus of uncertain affinity, until it has been recently included in the family Atelestidae, in an own subfamily: Nemedininae (Bradley & Cumming, 2006). This subfamily is represented by a single extant genus (*Nemedina*) and several extinct genera. The venation of this subfamily is unique in the Empidoidea, characterized by the apex of cell br modified through the inclusion of a short vertical Rs and recurrent r-m, with radial and medial veins closely approximated (Bradley & Cumming, 2006).

Nemedina currently includes two extant species (*N. almirabilis* Chandler, 1981 from Hungary and *N. zaitsevi* Sinclair & Shamshev, 2003 from Kazakhstan) and one extinct species (*N. eocenica* Sinclair & Arnaud, 2001 from Baltic amber). Unfortunately, nothing is known about the biology of these flies.

In 2004 the author received a lot of dipterological material for study, that had been collected in southern Spain. Among that material a male specimen of Atelestidae was found and was identified as *Nemedina* thanks to the paper by Chandler (1981). The comparison with the descriptions of known species of this genus (Chandler, 1981; Sinclair & Arnaud, 2001; Sinclair & Papp, 2004; Sinclair and Shamshev, 2003) has allowed to check that it belongs to a new species, which is described below and represents the third European known species.

Recently, Carles-Tolrá Hjorth-Andersen (2002) published the catalogue of Spanish Diptera with 115 recorded families, among these, this family is not included. Consequently, the family Atelestidae, the subfamily Nemedininae and the genus *Nemedina* are recorded for the first time from the Iberian Peninsula in Spain. So, the number of known Diptera families increases from 115 to 116.

Description of *Nemedina acutiformis* sp.n. (Fig. 1-8)

Head dark brown. Eyes holoptic, with a row of minute postocular hairs. Upper ommatidia enlarged, border between upper and lower ommatidia indistinct. Ocellar triangle brown, raised above ommatidia, lacking setae. Frons reduced to a small area just above antennae. Antenna brown (Fig. 2), scape and pedicel short, postpedicel conical, pubescent, slightly longer than scape and pedicel together, stylus arista like, two-segmented, lacking apical seta-like segment. Gena very narrow, postgena very broad and occiput dark brown. Taster brown, short, with a very minute apical hair. Proboscis short, brown, longer than taster.

Thorax completely dark brown and shiny. Mesonotum very convex, covered with minute brown hairs. Scutellum with 3 pairs of long posteromarginal hairs. Metanotum well visible, dark brown. Two notopleural setae.

Legs brown, with minute pubescence. Fore and mid tibiae narrower than respective femora; hind tibia wider than hind femur, laterally compressed. Left hind leg lacking.

Wing as Fig. 3. Vein A1 fold like, concave, not reaching wing margin. Haltere dark, brown.

Abdomen brown, with minute hairs, lacking longer posteromarginal hairs. Tergite 1 short, tergites 2-7 longer, progressively narrowed. Tergite 8 very reduced, very short.

Genitalia (Figs 4-8) brown, symmetrical, unrotated, held obliquely upright from abdomen, concolorous with abdomen. Epandrium pubescent: dorsally with a distinct inner, pointed, backwards, blackish, haired protuberance; ventrally with an inner, blunt protuberance with apical hairs. Epandrial lobes with long hairs, extending beyond surstylus. Right epandrial lobe obliquely strongly tapered, pointed. Left epandrial lobe with a dorsal preapical step, apex very narrow, pointed. Surstylus shorter, haired, dorsally with a row of strong thorn-like hairs. Surstyli convergent, epan-

drial lobes almost parallel. Hypandrium handcuff-shaped. Phallus long, narrow, distally membranous with two sclerotized zones, seemingly bifid.

Cercus small, suboval, long haired.

Total body length: 2.25 mm. Wing: 1.4 mm.

FEMALE unknown.

MATERIAL EXAMINED: Holotype male: Spain: Córdoba: Hornachuelos, Ruta del Guadalora, 27.5.2002, on flower, M.Baena leg. Holotype preserved in alcohol (70°) and deposited in the author's private collection.

DISCUSSION: *Nemedina acutiformis* sp.n. has a genitalia similar, but distinctly different, to those of *alamirabilis* and *zaitsevi*. All three species can be easily separated by morphological features of the antenna, legs, haltere and specially genitalia (see key below).

KEY TO EXTANT SPECIES OF *NEMEDINA*

- 1a.** Haltere pale, legs yellowish-brown. Postpedicel elongate and strongly tapered (Sinclair and Shamshev, 2003: Fig. 1). Epandrial lobe not extending beyond surstylus (Sinclair and Shamshev, 2003: Figs 5) *zaitsevi* Sinclair & Shamshev
- 1b.** Haltere and legs dark. Postpedicel different. Epandrial lobe distinctly extending beyond surstylus (Fig. 4; Sinclair & Papp, 2004: 3) **2**
- 2a.** Postpedicel ovate-conical (Chandler, 1981: Fig. 1). Anal vein reaching wing margin (Chandler, 1981: Fig. 2). Epandrium: inner dorsal protuberance absent (Sinclair & Papp, 2004: 3). Epandrial lobes distinctly convergent, apex rounded in dorsal view (Sinclair & Papp, 2004: 3). Hypandrium subtriangular (Sinclair & Papp, 2004: 2) *alamirabilis* Chandler
- 2b.** Postpedicel triangular, conical (Fig. 2). Anal vein not reaching wing margin (Fig. 3). Epandrium: inner dorsal margin with a pointed, backwards, blackish protuberance (Fig. 4). Epandrial lobes slightly divergent, almost parallel, apex pointed in dorsal view (Fig. 4). Hypandrium handcuff-shaped *acutiformis* sp.n.

BIOLOGY: unknown. The specimen was collected on a flower.

DISTRIBUTION: hitherto only known from southern Spain.

ETYMOLOGY: the specific name "*acutiformis*" comes from the Latin words "*acutus*" (= pointed, sharp) and "*forma*" (= shape, form) and refers to the pointed dorsal protuberance of the epandrium and also to the pointed epandrial lobe.

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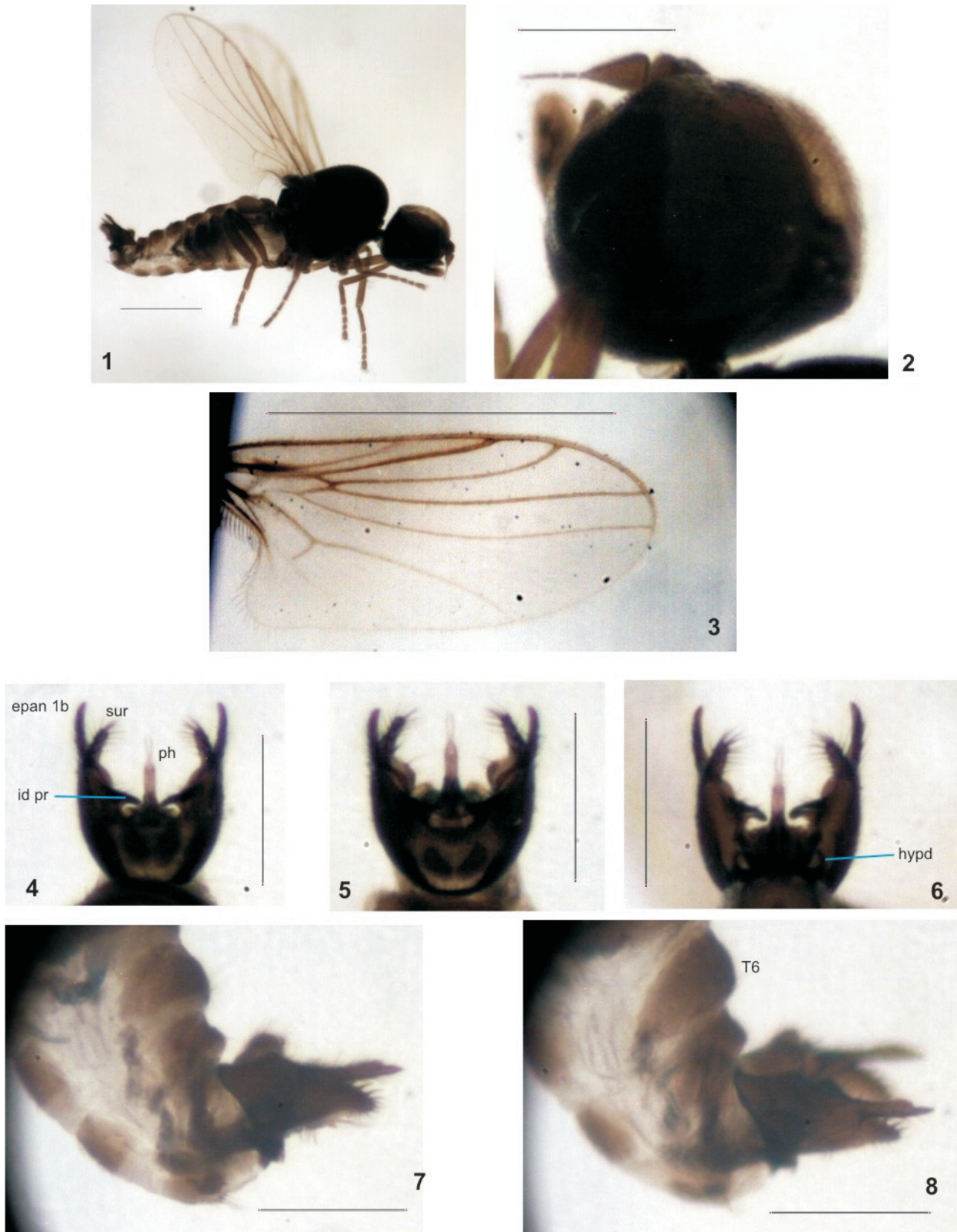


Fig. 1-9. *Nemedina acutiformis* sp.n.: **1.** habitus; **2.** head; **3.** wing; **4-8.** genitalia: **4.** dorsal view; **5.** posterodorsal view; **6.** ventral view; **7.** lateral view; **8.** dorsolateral view. Abbreviations: epan lb = epandrial lobe; hypd = hypandrium; id pr = inner dorsal protuberance; ph = phallus; sur = surstylus; T = tergite. Scale bars: Fig. 1 = 0.5 mm; Fig. 3 = 1 mm; Figs 2,4-8 = 0.2 mm.