

EUMONHYSTERA MEDIA N. SP. AND DESCRIPTION OF THE MALE OF *E. VULGARIS* (DE MAN, 1880) ANDRÁSSY, 1981 (NEMATODA, MONHYSTERIDAE)

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Eumonhystera media n. sp. and description of the male of *E. vulgaris* (De Man, 1880) Andrassy, 1981 (Nematoda, Monhysteridae).—*Eumonhystera media* n. sp. is closely related to *E. pseudobulbosa* (Daday, 1896) Andrassy, 1981, *E. vulgaris* (De Man, 1880) Andrassy 1981 and *E. barbata* Andrassy, 1981. *E. media* differs from all of them in that it has a shorter body and it differs from the first one in having a smaller distance between the amphids and the anterior end; from the second one, in having shorter cephalic setae, smaller amphids, and beak-like spinneret; and from the third one in having the amphids farther from the anterior body end and the vulva situated more anteriorly. The male of *Eumonhystera vulgaris* (De Man, 1880) Andrassy, 1981 has a spicule 1.5-1.7 times as long as the anal body width.

Key words: *Eumonhystera media*, *E. vulgaris*, *Quercus robur*, *Q. pubescens*, Spain.

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INTRODUCTION

The genus *Eumonhystera* Andrassy, 1981, belongs to the family Monhysteridae. The characters have been studied and evaluated phylogenetically in 1978 by LORENZEN, who revised the system of the superfamily Monhysteroidea. The Monhysteridae live in marine, brackish, limnic and terrestrial biotopes. The continental species have been ordered in six genera by ANDRÁSSY (1981). In the revision of the order Monhysterida, this author gives the description of the genus *Eumonhystera* and a key to the species. This genus has been newly studied by ANDRÁSSY in 1984.

A survey was conducted in 1982 to determine the species of nematodes present in *Quercus* forests in the Navarra region, Northern Spain. Among the free-living nematodes there were seven species of *Eumonhyste-*

ra: *E. dispar* (Bastian, 1865) Andrassy, 1981; *E. hungarica* Andrassy, 1981; *E. longicaudata* (Gerlach & Rieman, 1973) Andrassy, 1981; *E. pseudobulbosa* (Daday, 1896) Andrassy, 1981; *E. simplex* (De Man, 1896) Andrassy, 1981 and *E. vulgaris* (De Man, 1880) Andrassy, 1981 (the male found for the first time) and *E. media* n. sp. In this work *E. media* n. sp. and the male of *E. vulgaris* are described.

MATERIAL AND METHODS

The samplings were performed once per season in each site. After homogenization of a larger sample, a 20 g subsample was taken. Specimens were extracted by means of Baermann's method. They were fixed in 4% formalin and mounted in lactophenol.

RESULTS

Eumonhystera media n. sp.

Dimensions

Female (n=9): L=0.34–0.50 mm (0.35 ± 0.04), a=24.0–28.3 (28.72 ± 4.15), b=3.8–4.4 (4.66 ± 0.27), c=3.2–4.1 (3.6 ± 0.26), V=52.6–54.0% (52.69 ± 0.97). Holotype (Female): L=0.40 mm, a=28.3, b=4.4, c=4.0, V=53.5%.

Description (fig. 1)

Body straight after fixation, slightly tapering in the anterior end and considerably behind to the slender tail.

Cuticle smooth and thin, setae as long as 1/4–1/5 of the corresponding body diameter, irregularly distributed throughout the body. Lip region almost continuous with the body contour, 6–7 μm wide. Body at the proximal end of oesophagus 1.4–1.5 times as wide as the head. Cephalic setae 10 in number, well developed; the longer of them being nearly 1/2 of the head diameter long. Amphids circular, 1/3 as head width located about 1/4 of the head width from the anterior end. Stoma funnel-shaped.

Oesophagus cylindrical, slightly broadening at the rear end and with a group of three gland cells in the cardiac region. Rectum about one anal diameter long.

Vagina oblique, shorter than the body diameter. Gonad prodelphic and outstretched, short, 17–21% of the total body length. Vulva slightly posterior of mid-body.

Tail uniformly tapering, 1.5–1.6 times as long as the distance between vulva and anus, and 11–12 times as long as anal body diameter. Slender caudal process.

Male unknown

Remarks

Eumonhystera media is characterized by: L under 0.50 mm; longer cephalic setae almost half corresponding body width; distance of amphids from head end 1.4 head diameter; tail 1.5–1.6 times vulva-anus distance, 11–12 times as long as anal body diameter, slender caudal process.

E. media n. sp. is close related to *E. pseudobulbosa* (Daday, 1896) Andr ssy, 1981, but in that species the amphids are situated about twice the head width from the anterior end, and cephalic setae 1/3 of the head diameter long. It is like *E. vulgaris* (De Man, 1880) Andr ssy, 1981 too, but the cephalic setae in *E. vulgaris* are shorter (1/4 of the head diameter), the amphids are smaller (1/5 head width), the tail is slightly longer than the distance vulva-anus, the spinneret is beak-like and the body is longer than 500 μm .

It is close to *E. barbata* Andr ssy, 1981, but in that species the amphids are nearer the anterior body end (one head diameter); the vulva is situated at 62–65%; and the body is 0.57–0.62 mm long.

Habitat and locality

Collected from the soil of a forest of *Quercus pubescens* and *Q. robur* in Beunza, in August 1982 and of a forest of *Q. coccifera* in Unzue, in October 1982 (Navarra, Northern Spain).

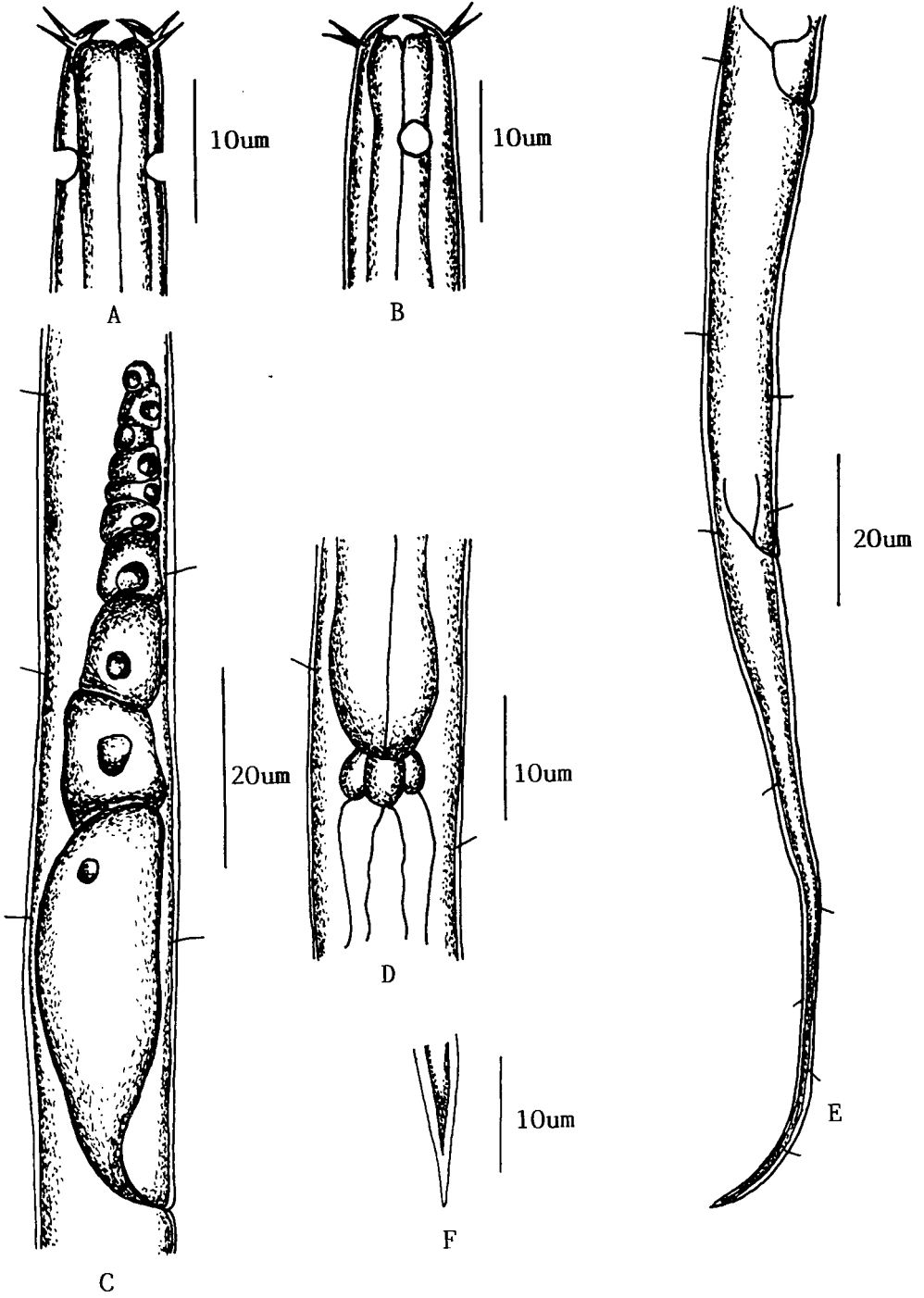
Voucher specimens

Holotype (♀) on slide CA0216/15

Paratypes on slides CA0216 (8 ♀♀ and 5 juv.) CA0313 (1 female) deposited in the Museum of Zoology, Navarra University, Pamplona 31080, Navarra, Spain.

Fig. 1. *Eumonhystera media* n. sp.: A, B. Head of the female; C. Gonad of the female; D. Gland cells at the cardiac regions; E. Vulva and tail of the female; F. Tail terminus.

Eumonhystera media sp. n.: A, B. Cabeza de la hembra; C. G nada de la hembra; D. C lulas glandulares de la regi n del card as; E. Vulva y regi n caudal de la hembra; F.  pice de la cola.



Eumonhystera vulgaris (De Man, 1880) Andrásy, 1981

Dimensions

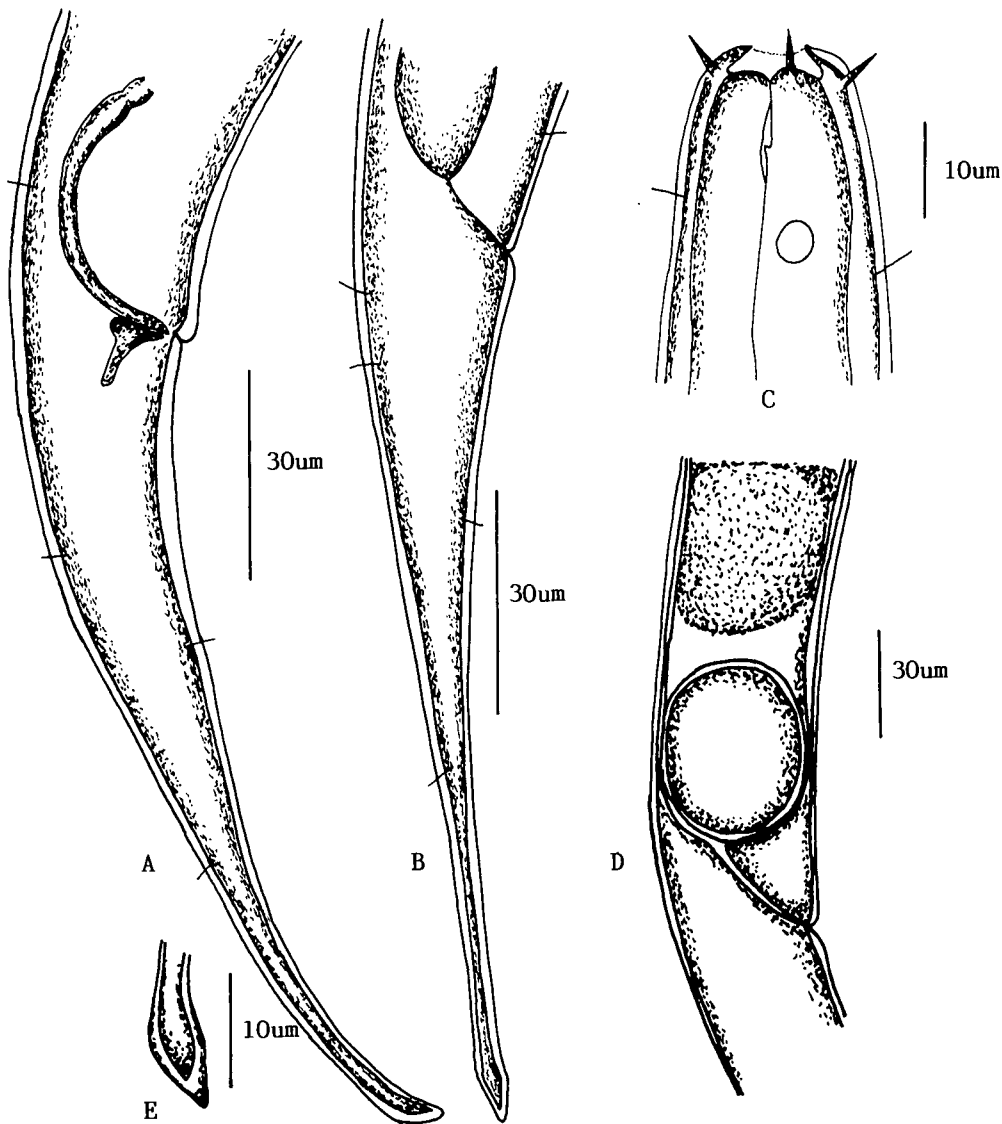
Males (n=7): L=0.60–0.72 mm (0.70 ± 0.06), a=19.7–24.0 (21.30 ± 3.02), b=5.2–5.9 (5.60 ± 0.26), c=5.9–6.0 (5.27 ± 0.45).

Females (n=7): L=0.59–0.77 mm ($0.68 \pm$

0.06), a=15.3–21.6 (18.01 ± 2.61), b=5.0–5.6 (5.15 ± 0.47), c=4.8–5.6 (5.19 ± 0.28), V= 61.2–64.6% (63.21 ± 1.35).

Description of the male (fig. 2)

Body slightly curved ventral after fixation. Body tapering little in front and considerably at the start of the slender tail.



Cuticle smooth and thin with short setae irregularly distributed throughout the body. Lip region almost continuous with the body contour, 15-16 μm wide with six short and thin setae (1/4 as long as head width). Amphids circular, situated about 1-1.3 of the head width from the anterior end, 1/5 as head width. Stoma funnel-shaped. Oesophagus cylindrical, slightly widened posteriorly, with a group of three gland cells at the cardiac region shaping a conical structure. Rectum short, 3/5 to 5/4 as long as the anal body width.

Spicules 43-45 μm along axis or 1.5-1.7 of the anal body diameter. They are strongly curved, almost to a semicircle. Capitulum offset by constriction. Gubernaculum short, 8 μm long with an anterior caudal apophysis as long as the gubernaculum itself.

Tail tapering gradually, 113-140 μm long, and 4.6-6.5 times as long as anal body diameter with enlarged tail terminus.

Description of the female (fig. 2)

Gonad prodelphic and outstretched without uterine sac. Eggs slightly elongated (50 x 38 μm). Vagina anteriorly directed.

Tail tapering gradually, 120-150 long and 5.3-6.2 times as long as anal body diameter, slightly longer than the distance vulva-anus, 110-130 long. The tail spinneret as in the male.

Remarks

GOODEY (1963) reported that sperms were seen in the uterus of females of this species.

Habitat and locality

The specimens were collected from soil of an oak forest (*Quercus pubescens* and *Q. robur*) at the organic level from Beunza, Navarra, Spain (November 1982).

Voucher specimens

Slides CA0363 (7 ♀♀, 7 ♂♂ and 6 juv.) deposited in Museum of Zoology, Navarra University, Pamplona 31080, Navarra, Spain.

RESUMEN

Eumonhystera media sp. n. y descripción del macho de *E. vulgaris* (De Man, 1880) Andrásy, 1981 (Nematoda Monhysteridae).

Eumonhystera media sp. n. ha sido encontrada en el suelo de un bosque de *Quercus* en la región de Navarra (norte de España). Esta especie se caracteriza por tener una longitud inferior a los 0,50 mm, la longitud de las sedas cefálicas de aproximadamente 1/2 del diámetro de la cabeza a este nivel, los anfidios situados desde el extremo anterior a 1,4 veces el diámetro de la cabeza, la longitud de la cola de 1,5 a 1,6 veces la distancia de vulva-ano y de 11 a 12 veces el diámetro del cuerpo a nivel del ano. Vulva ligeramente posterior a la mitad del cuerpo. *E. media* sp. n. se parece a *E. pseudobulbosa* (Daday, 1896) Andrásy, 1981, aunque ésta tiene los anfidios más alejados del extremo anterior del cuerpo; se parece también a *E. vulgaris* (De Man, 1880) Andrásy, 1981 la cual es de mayor tamaño y tiene las sedas cefálicas más cortas, y se asemeja asimismo a *E. barbata* Andrásy, 1981 de mayor tamaño, con anfidios más próximos al extremo anterior y vulva situada más posterior, por debajo del 62%. El macho de *E. vulgaris* (De Man, 1880) Andrásy, 1981 ha sido recogido en un bosque de *Quercus robur* y *Q. pubescens*. La espícula es 1,5-1,7 veces tan larga como el diámetro anal del cuerpo, el gubernáculo presenta una expansión caudal.

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Fig. 2. *Eumonhystera vulgaris*: A. Spicule and tail of the male; B. Tail of the female; C. Head of the male; D. Gonad of the female; E. Tail terminus.

Eumonhystera vulgaris: A. Espícula y cola del macho; B. Región caudal de la hembra; C. Cabeza del macho; D. Gónada de la hembra; E. Ápice de la cola.