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A REDESCRIPTION OF TWO NEMATODE SPECIES FOUND IN HOT SPRINGS

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Summary. Redescription of *Rhabdolaimus terrestris* De Man 1880 and *Udonchus tenuicaudatus* Cobb, 1913 found in hot springs in the Province of Granada, Spain are provided.

Rhabdolaimus terrestris De Man, 1880 and *Udonchus tenuicaudatus* Cobb, 1913 are two rare species, occurring in continental aquatic habitats (male specimens are particularly rare, especially in the case of *R. terrestris*). According to bibliographical data, both species are consistently related to hot springs with a high salt content (De Coninck, 1935; Meyl 1953, 1954 and Paetzold, 1958 for *R. terrestris* and Schneider 1937 and Schiemer 1978 for *U. tenuicaudatus*). A large number of specimens of both species was found in several hot springs in the province of Granada (Spain) with temperature values ranging between 16-42.8°C and conductivity values varying between 750-8210 $\mu\text{S}/\text{cm}$, and since these species are poorly known, detailed descriptions of both are presented here.

Material and methods

Nematodes were extracted using a modification of the Baermann method (Hooper, 1986), fixed in 4% acetic formaldehyde and mounted in anhydrous glycerine using a modification of the Seinhorst method (1962). The material was examined under a Zeiss III light microscope equipped with Nomarski's interference system.

Descriptions

Rhabdolaimus terrestris De Man, 1880 (Fig. 1A-D).
Measurements.

Females (n = 11): L = 0.47 (0.42-0.56)mm, SD = ± 0.059 ; a = 25.8 (15-33.7), SD = ± 5.3 ; b = 5 (4.4-6.2), SD = ± 0.6 ; c = 3.5 (3.2-4.1), SD = 0.3; c' = 9 (6.8-10.9), SD = ± 1.2 ; V = 41.2 (38.3-43), SD = ± 2.4 .

Males (n = 4): L = 0.48 (0.43-0.51) mm, SD = ± 0.04 ; a = 24.9 (24.1-26.3), SD = ± 1 ; b = 5.4 (5-5.9), SD = ± 0.4 ; c = 3.4 (3.2-3.6), SD = ± 0.2 ; c' = 7.6 (6.9-8.5), SD = ± 0.7 ; Spicules = 20.4 (19.7-21.8) μm , SD = ± 1 .

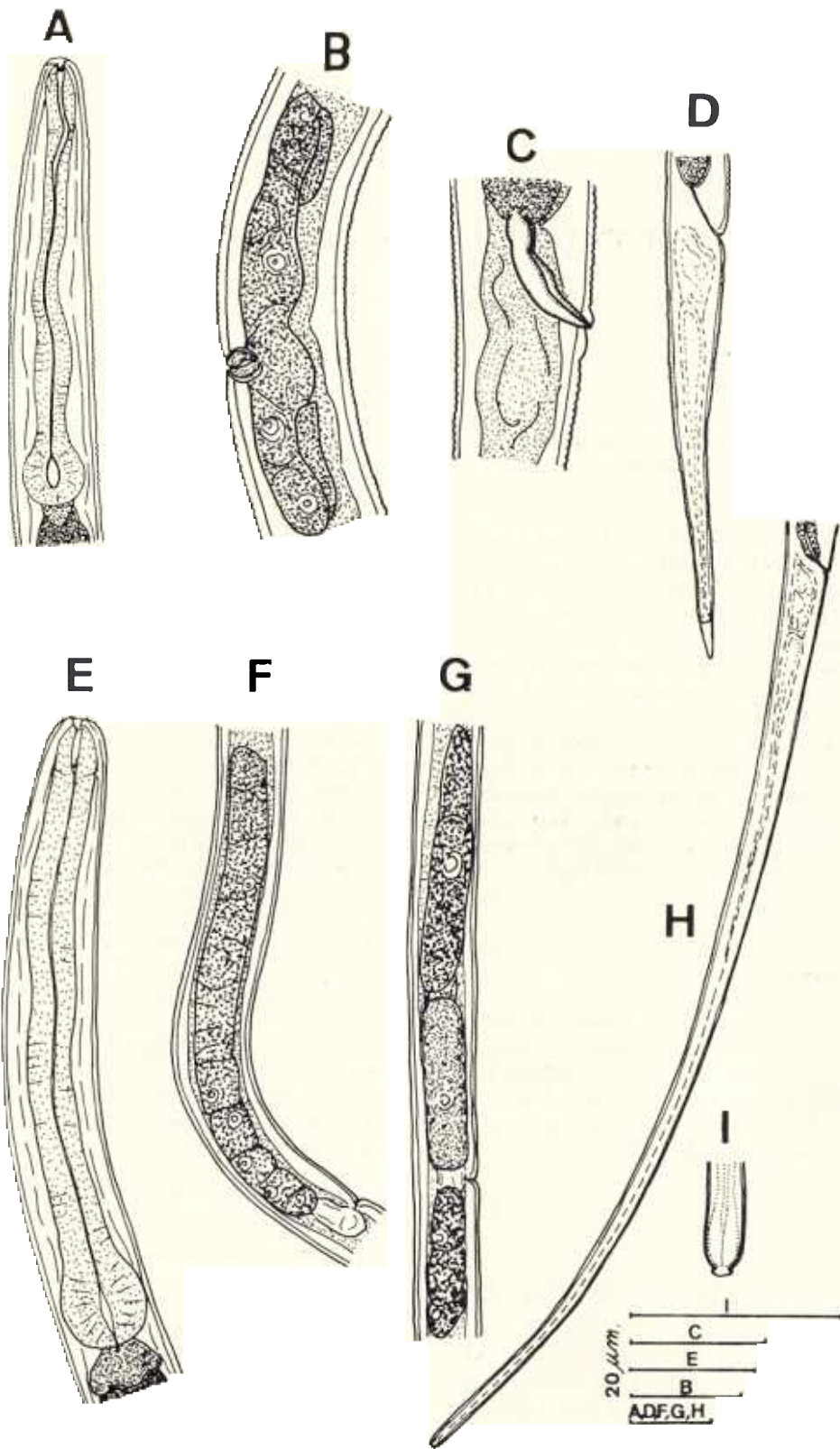
Body generally straight or slightly curved ventrally. Cuticle 1.6 μm thick, finely but distinctly annulated; annules 0.9-1.2 μm wide at mid-body. Head 9.2- 10.1 μm wide, continuous with the rest of the body, rounded at the end. Tubular stoma 19.8-25.9 μm long, about 1/4 oesophagus length, showing 3 minute denticles at the anterior end. Small, rounded almost pore-shaped amphid, located at about 1/2 the head width from the anterior end. Oesophagus 96-105 μm long. Small cardia, more or less hemispherical in shape. Double, reflected gonads, 47-66.5 μm long. Characteristic small, transverse vulva; the vagina muscles giving a globular appearance. Vulva-anus distance 1.2-1.4 times the tail length. Tail 120-170 μm long; well-developed triangular spinneret, 7.3- 11.9 μm long. Rectum length equal to body width at anus.

Male with morphological-anatomical characteristics similar to the female. Testes 76-98 μm long. Simple spicular apparatus (with no supplements and gubernaculum). Spicules with rounded proximal end, tapering off towards terminal end.

Udonchus tenuicaudatus Cobb, 1913 (Fig. 1 E-I)

Measurements of this species, based only on the description of the female, are given in Ocaña *et al.* (1990).

Body ventrally curved. Cuticle smooth, 0.6-0.8 μm thick at mid-body. Head 8.5-11.2 μm wide, continuous with the rest of the body, rounded at the extremity, where they have six small labial papillas. Mouth cavity 7.6-9 μm long, cylindrical, showing one small dorsal and 2 subventral denticles. Pocket-shaped amphid (distinct in some specimens only), located at base of stoma. Oesophagus



showing characteristic transversal incision at stoma base. Oesophagus cylindrical except at the terminal end which fans out in a muscular bulb with a clearly visible lumen. Oesophagus bulb showing 2 pronounced transverse incisions. Oesophagus 98.5-110 μm long. Cardia comprised of 4 equally-developed glandular cells. Nerve ring located at approximately mid-oesophagus. Gonads 75-130 μm long; paired, asymmetrical and short in some specimens, unpaired and differently developed in others. Slightly prominent vulva, located at mid-body; sometimes located beyond mid-body. Tail 179-169 μm long; 1.3-2 times vulva-anus distance; elongate-conoide, gradually tapering towards the more or less cylindroid distal one third, with rounded terminus, showing short spinneret. Rectum 1.1-1.3 times body width at anus. Rectangular egg, about 5 times longer than wide.

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Fig. 1 (Front page) - *Rhabdolaimus terrestris*: A, anterior body end; B, female gonad; C, spicules; D, tail.
Udonchus tenuicaudatus: E, anterior body end; F, unpaired female gonad; G, paired female gonad (with egg); H, tail; I, spinneret.