NEMATODES OF THE ORDER DORYLAIMIDA
FROM ANDALUCIA ORIENTAL, SPAIN:
TYLENCHOLAIMELLUS HISPANICUS SP. N.
AND TWO NEW SPECIES OF AXONCHIUM COBB, 1920

BY
R. PEÑA SANTIAGO*) and A. COOMANS
Instituut voor Dierkunde, Ledeganckstraat 35, B-9000 Gent, Belgium

Three new species of Dorylaimida, one belonging to the genus Tylencholaimellus and two to the genus Axonchium, are described from natural areas in southeastern Spain. Tylencholaimellus hispanicus sp. n. is easily distinguished from other species of the genus by the truncated lip region with amalgamated lips and especially by the strongly developed cephalic framework. Axonchium giennense sp. n. can be distinguished by a lip region with separated lips, spindle-shaped region lacking valves in the slender part of the pharynx, vagina weakly sclerotized distally, uterus with Z-differentiation and at least three ventromedian supplements within the length of the spicula. A. paravalvulatum sp. n. is characterized by a lip region with separate lips, cuticle clearly striated, spindle-shaped region with valves in the slender part of the pharynx, vagina sclerotized distally, uterus with Z-differentiation and one ventromedian supplement within the length of the spicula. Both species of Axonchium are very similar and close to the species of the subgenera Metaxonchium and Epaxonchium. Both subgenera are synonymized with Metaxonchium the senior and Epaxonchium the junior synonym. As a consequence the new species are considered to belong to the subgenus Metaxonchium.

Keywords: soil nematodes, Spain, taxonomy, description.

This paper is part of a series on the taxonomy of dorylaimid nematodes from southeastern Spain, dealing with three new species collected during a survey in natural areas from several localities in the province of Jaén (Andalucía Oriental) in 1982-1983.

MATERIALS AND METHODS
Nematodes were extracted by a modified Baermann funnel technique, fixed in F.A.A. and processed to anhydrous glycerin according to Seinhorst (1959, 1962) for light microscopy. Preparation for S.E.M. was done according to the method described in Luc et al. (1987).

*) On study leave from Escuela Universitaria de Formación del Profesorado de E.G.B., Calle Virgen de la Cabeza n° 2, 23008-Jaén, Spain.
DESCRIPTIONS

*Tylencholaimellus hispanicus* sp. n.
(Figs 1 & 2; Table I)

**Female:** Moderately slender nematodes of medium size. Body cylindrical, tapering slightly towards anterior end. Habitus slightly ventrally arcuate (Fig. 1A), sometimes more curved in the posterior half. Cuticle with very fine transverse striations rather inconspicuous at the surface, more pronounced below (Fig. 2C); lateral chord one sixth of the midbody width. Lateral pores obscure.

Lip region truncate, tapering suddenly toward the anterior end (Figs 1B, C; 2A, B) and about one third as wide as base of neck. Lips amalgamated. Well developed cephalic framework present, with labial and postlabial sclerotizations. Anterior sensilla obscure but perceptible under the light microscope (Fig. 1C) by the existence of holes in the cephalic framework, consisting of a circket of six outer labial papillae and four cephalic papillae just below these. S.E.M. photographs suggest the presence of six minute inner labial papillae at the edges of the hexagonal circumoral plate (Fig. 2A, B). Amphids cup-shaped, opening at level of cephalic depression and occupying half of the corresponding head width. Cheilostoma a truncate cone, with somewhat sclerotized walls. Odontostyle typical of the genus, i.e. with dorsal accessory stiffening piece, robust; aperture about one sixth to one eighth of its total length, dorsal accessory piece occupying about three fourths of odontostyle length. Odontophore shorter than odontostyle, with basal knobs. Guiding ring situated at level of amphid aperture.

Anterior portion of the pharynx slender and weakly muscular. Basal bulb cylindroid, set off by distinct constriction (Fig. 1H), about 15-18% of total neck length, and twice as long as wide. Pharyngeal gland nuclei often clear: one dorsal and two pairs of ventrosublateral ones. Cardia hemispherical. Nerve ring located at 46-49% of the neck length. At the level of the nerve ring there is a ventral pore with a short duct (? excretory pore, Fig. 1E).

Genital system monodelphic-opisthodelphic. Posterior genital branch with reflexed ovary; oocytes first in two rows, then in a single row. Oviduct with a slender part, sometimes widened distally by stored sperm, and a moderately developed "pars dilatata" (Fig. 1F). Oviduct and uterus are joined by a well developed sphincter. Uterus shorter and wider than oviduct, without specializations. Anterior branch a simple sac, variable in length from one to two body widths, containing sperm in fertilized females. Vagina extending inward about 50% of the corresponding body width. Vaginal wall adjacent to the vulva not offset from the body cuticle; circular musculature weakly developed. Vulva transverse (Fig. 2D).

Prerectum 2.8-3.9 anal body widths long; intestine-prerectum junction guarded by three prominent cells (Fig. 11). Rectum about one anal body width