

Six new species of the suborder Rhabditina (Nematoda)

István ANDRÁSSY

Zoosystematical and Ecological Institute, Eötvös Loránd University, Puskin-u. 3, Budapest, Hungary.

SUMMARY

In the present article six new nematode species are described all representing the suborder Rhabditina. Five of them belong to the family Rhabditidae and one, the last species, to the family Pterygorhabditidae. *Mesorhabditis africana* n. sp. (Mesorhabditinae, from the Congo Republic) is characterized by the comparatively long tail being equal in length with the vulva-anus distance and by the number of male genital papillae; it is related to *M. longespiculosa* and *M. ultima*. *Mesorhabditis sudhausi* n. sp. (Mesorhabditinae, from Hungary) is characterized by the vulva-anus distance showing double tail length and resembles *M. irregularis* and *M. megachilis*. *Bursilla vernalis* n. sp. (Mesorhabditinae, from Vietnam) differs from *B. microbursaris* by the greater number of bursal papillae. *Rhitis luci* n. sp. (Rhabditinae, from India) is related to *R. inermis* but differs from that in the tail length and arrangement of genital papillae. *Ablechroiulus maculosus* n. sp. (Ablechroiulinae, from the Congo Republic) resembles *A. crenatus*, has, however, a much smaller body and otherwise arranged bursal papillae. Finally, *Pterygorhabditis hungarica* n. sp. (Pterygorhabditinae, from Hungary) can be easily recognized by the three shield-like cuticular thickenings on the anterior body region.

RÉSUMÉ

Six nouvelles espèces du sous-ordre des Rhabditina (Nematoda)

Six nouvelles espèces de nématodes sont décrites, appartenant toutes au sous-ordre des Rhabditina. Cinq d'entre elles appartiennent à la famille des Rhabditidae et la dernière à celle des Pterygorhabditidae. *Mesorhabditis africana* n. sp. (Mesorhabditinae, originaire de la République du Congo) est caractérisé par sa queue d'une longueur égale à la distance vulve-anus et par le nombre des papilles génitales du mâle; il est voisin de *M. longespiculosa* et *M. ultima*. *Mesorhabditis sudhausi* n. sp. (Mesorhabditinae, originaire de Hongrie) est caractérisé par une distance vulve-anus double de la longueur de la queue et ressemble à *M. irregularis* et *M. megachilis*. *Bursilla vernalis* n. sp. (Mesorhabditinae, originaire du Vietnam) diffère de *B. microbursaris* par un plus grand nombre de papilles bursales. *Rhitis luci* n. sp. (Rhabditinae, originaire de l'Inde) est voisin de *R. inermis* mais en diffère par la longueur de la queue et la disposition des papilles génitales. *Ablechroiulus maculosus* n. sp. (Ablechroiulinae, originaire de la République du Congo) ressemble à *A. crenatus* dont il diffère par un corps moins long et une disposition différente des papilles bursales. Enfin, *Pterygorhabditis hungarica* n. sp. (Pterygorhabditinae, originaire de Hongrie) est aisément reconnu par les trois épaissements cuticulaires en forme de boucliers dans la région antérieure du corps.

In the course of a revising work on the suborder Rhabditina I found six species in my nematode collection that proved to be undescribed for science. Two of them hailed from Hungary, two other from the Congo Republic and each a species from India and Vietnam, respectively. They represent two families, Rhabditidae and Pterygorhabditidae, and belong to five genera, viz. *Mesorhabditis*, *Bursilla*, *Rhitis*, *Ablechroiulus* and *Pterygorhabditis*.

All specimens were fixed in FAA and mounted in dehydrated glycerine. The descriptions of these new species are given below.

Mesorhabditis africana n. sp.

(Fig. 1, A-F)

MEASUREMENTS

Holotype, female : L = 0.69 mm ; a = 20 ; b = 4.6 ; c = 9.6 ; V = 80%.

Allotype, male : L = 0.49 mm ; a = 17 ; b = 3.5 ; c = 20.

Female paratypes : L = 0.68-0.71 mm ; a = 17-21 ; b = 4.3-4.6 ; c = 9.0-9.7 ; V = 78-80%.

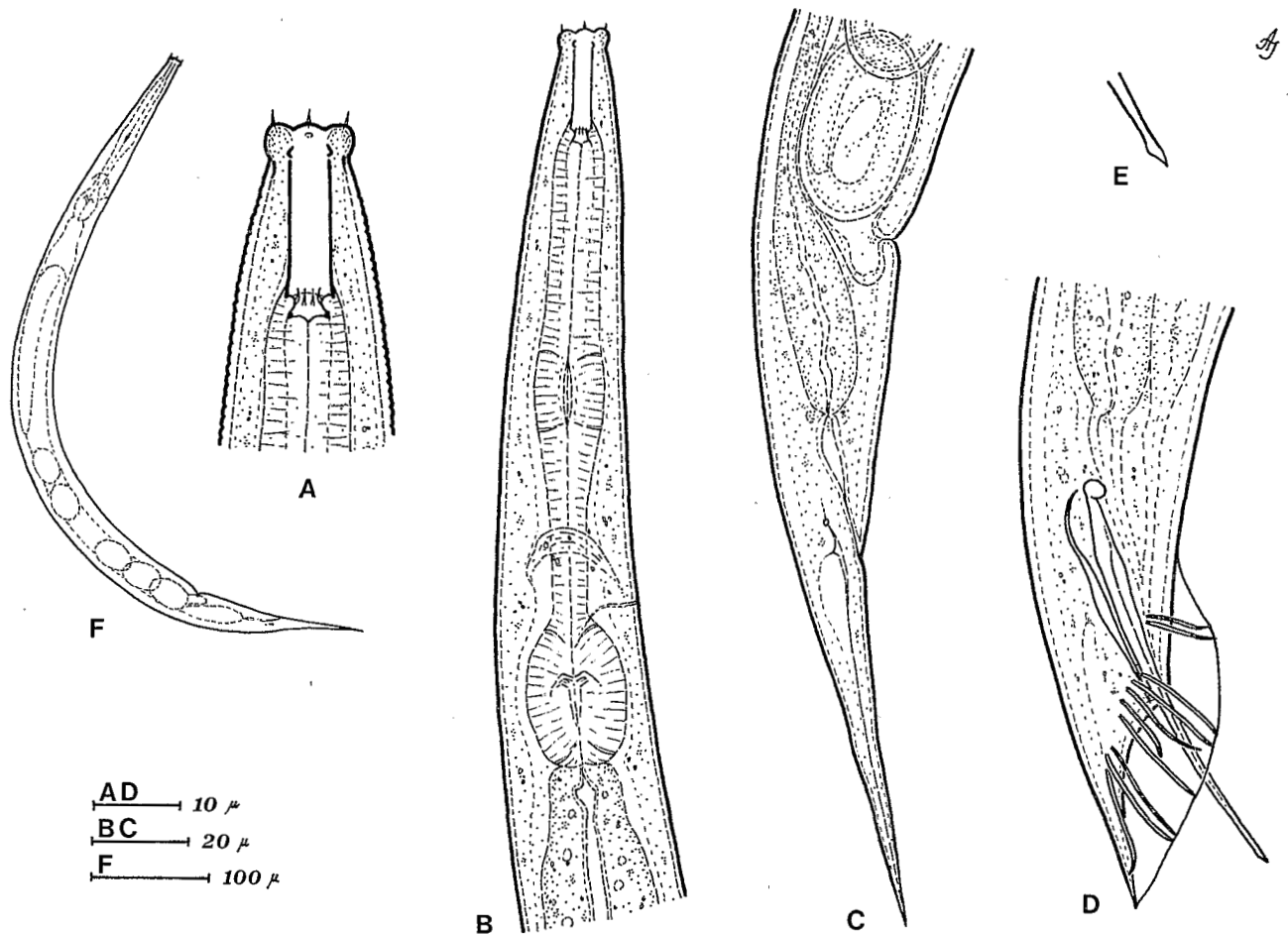


Fig. 1. *Mesorhabditis africana* n. sp. A : Anterior end of female ; B : Oesophageal region ; C : Posterior region of female ; D : Posterior region of male ; E : Tip of spiculum ; F : Entire view of female.

Male paratypes : L = 0.49-0.55 mm ; a = 16-18 ; b = 3.5-3.9 ; c = 20-22.

DESCRIPTION

Body comparatively large. Cuticle about 1 μ m on mid-body, finely or distinctly striated. Lateral field marked with three incisures. Head 8-9 μ m wide, lips six, rounded, well separate from one another, each provided with a setose, often slightly inward directed papilla. Amphid minute, inconspicuous, on the lateral lip. Body at proximal end of oesophagus 3.3-3.5 times wider than head.

Stoma in total (measured from the head

margin) 24 μ m (♀) or 17-21 μ m (♂), 2.5-3 times head diameter long. Cheilostom cuticularized but small, cheilorhabdions hooked. Promesostom (buccal tube) tubular, 4-4.5 μ m wide, without oesophageal collar. Metastom isoglottoid, with three distinct swellings each armed with two strong, setose denticles.

Anterior part (corpus) 52-54% of total length of the oesophagus. Metacarpus slightly swollen, terminal bulb oblong, 26-30 μ m long. Excretory pore level with isthmus. Beginning of intestine narrow. Rectum 2-2.5 anal diameters.

Female

Distance between posterior end of oesophagus

and vulva 2.2-2.4 times as long as the oesophagus. Vulval lips small, simple. Gonad prodelphic, 9-9.5 body diameters long, ovary reflexed far back. A spermatheca and a short postvulval uterine branch present. Ovovivipar; uterus containing two to five eggs. Egg $37-45 \times 21-23 \mu\text{m}$.

Distance between vulva and anus a little shorter than tail. This latter 71-79 μm long, 5.5-6 anal diameters, conical with pointed tip. Phasmids conspicuous, before anal opening.

Male

Spermatozoa minute, globular. Spicules well cuticularized, slender, almost straight, 45-50 μm long, 1.8-1.9 times tail length, distally fused to 1/3 of their length. Gubernaculum 22-24 μm , simple.

Tail 23-26 μm long, 1.7-2.1 anal body diameters. Bursa well developed, peloderan, anteriorly open. Genital papillae 10 pairs in number, arranged in three groups: 2+5+3. Most of them are very long and slender; the longest papillae measure 12-13 μm . The 5th and the 6th papillae are shorter than other, do not reach to the margin of the bursa. Last papilla directed subdorsal.

TYPE HABITAT AND LOCALITY

Soil around roots of oil palms (*Elaeis guineensis* Jacq.) in a plantation, Sibiti, Congo Republic, collected in Mai 1963 by A. Zicsi.

TYPE MATERIAL

Holotype, female, on the slide No. A-6494; allotype, male, on the same slide. Paratypes: one female, nine males and two juveniles. All type specimens are preserved in the collection of the author.

RELATIONSHIP

Mesorhabditis africana n. sp. is related to those species of the genus in which the tail is nearly as long as the vulva-anus distance and the bursa is provided with ten pairs of free papillae; they are *M. longespiculosa* (Schuur-

mans Stekhoven, 1951) Dougherty, 1955 and *M. ultima* (Körner in Osche, 1952) Dougherty, 1955. (By the way, both these species are very similar to each other and maybe they will be synonymized in the future). The new species differs from them in having slightly inward-pointed labial papillae, elongate median bulb, straight tipped spicules and longer and more slender bursal papillae, of them not only the sixth but also the fifth pair is shorter than the other.

The *Mesorhabditis* species recorded from Africa hitherto are: *M. africana* (Congo Republic), *M. graciliformis* (Cameroon), *M. longespiculosa* (Kenya, Zaire, Congo Republic), *M. spiculigera* (Egypt, Canary Islands, Republic of South Africa) and *M. szunyoghyi* (Nigeria, Angola, Tanzania).

Mesorhabditis sudhausi n. sp.

(Fig. 2, A-E)

MEASUREMENTS

Holotype, female: L = 0.50 mm; a = 19; b = 3.7; c = 19; V = 83%.

Allotype, male: L = 0.47 mm; a = 20; b = 3.8; c = 26.

Female paratypes: L = 0.49-0.56 mm; a = 18-20; b = 3.7-3.9; c = 19-21; V = 83-85%.

Male paratypes: L = 0.45-0.53 mm; a = 19-22; b = 3.7-3.8; c = 25-30.

DESCRIPTION

Body small, about 1/2 mm. Cuticle very thin, 0.5-0.6 μm , finely annulated. Lateral field hardly discernible. Head 9-10 μm wide, expanded, body at posterior end of oesophagus 2.4-2.6 times wider than head. Lips six, rounded, well separate, each with three bristle-like papillae (a longer medial papilla and two shorter lateral papillae), all directed slightly outward.

Stoma 20-22 μm (♀) or 17-21 μm (♂) in its total length; 2.2-2.3 head diameters long, or 1/7 of entire length of the oesophagus. Cheilostom not cuticularized, insignificant. Promesos-

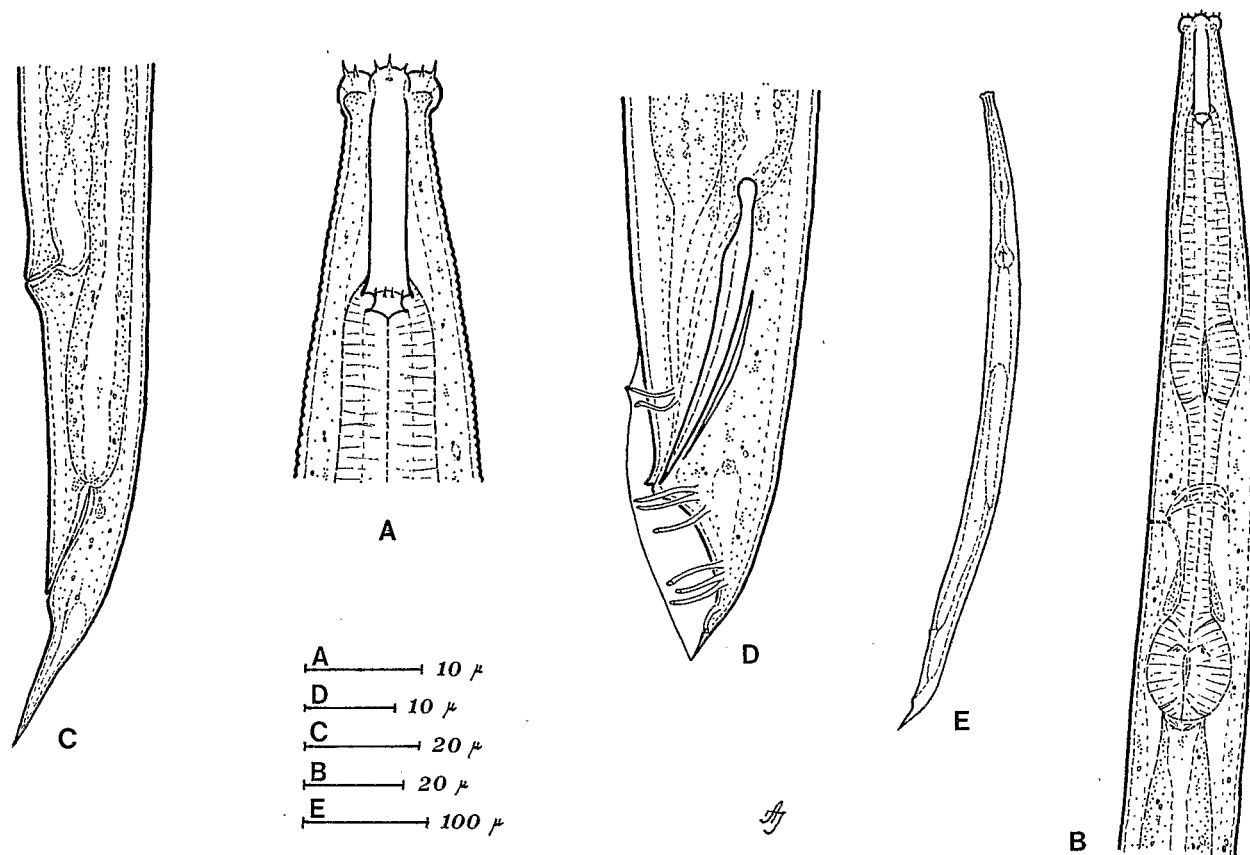


Fig. 2. *Mesorhabditis sudhausi* n. sp. A : Anterior end of female ; B : Oesophageal region ; C : Posterior end of female ; D : Posterior end of male ; E : Entire female.

tom tubuliform. Metastom isoglottoid, each swelling bearing two small pointed denticles. Oesophageal collar absent.

Anterior portion (corpus) 54-57% of the entire oesophagus. Metacarpus swollen, isthmus relatively long, terminal bulb strong. Excretory opening near middle of isthmus. Beginning of intestine very narrow. Rectum nearly two anal diameters long.

Female : Vulval lips projected, vagina occupying 1/3 to almost 1/2 of the corresponding body width. Body markedly narrowing behind vulva. Genital organ unpaired, prodelphic, reaching to about 2/3 of the distance between oesophagus and vulva. This same distance 2-2.4 times as long as the oesophagus, and 5.2-5.7 times as long as the vulva-anus distance, respectively. Postvulval uterine sac hardly expressed. The studied females did not contain eggs in the uterus.

Male : Spermatozoa small, globular. Spicules slender, almost straight, proximally expanded, 36-41 μm long, 1.9-2.3 times longer than tail, distally fused to 1/4 of their length. Gubernaculum about half as long as spicules.

Tail conical, 15-16 μm long. Bursa peloderan, well developed, anteriorly open. Genital papillae nine pairs, arranged in four groups : 2 + 3 + 3 + 1. Two pairs lying preanal ; papillae 3 and 4 as well as 7 and 8 fused at their base. Papilla 9 subdorsal.

TYPE HABITAT AND LOCALITY

Fairly dry soil around the roots of an elder (*Sambucus nigra* Linn.) in a garden, Budapest, Hungary, collected in Mai.

TYPE MATERIAL

Holotype, female, on the slide No. H-4560; allotype, male on the same slide. Paratypes: 15 females, 6 males and 6 juveniles. Of the paratypes, 3 females and 2 males are deposited in the Muséum national d'Histoire naturelle, Laboratoire des Vers, Paris, the other paratypes as well as the holo- and allotype are preserved in the author's collection.

RELATIONSHIP

Under the representatives of the genus *Mesorhabditis* known hitherto there can be found two species which show a vulva-anus distance of two tail lengths. These are *M. irregularis* (Körner in Osche, 1952) Dougherty, 1955 and *M. megachilis* (Sudhaus, 1978) Andrassy, 1981. The new species, *M. sudhausi* n. sp., can be distinguished i) from *M. irregularis* by its shorter body, longer tail, longer rectum, straight spicules, well developed bursa, and genital papillae otherwise arranged; ii) from *M. megachilis* by its shorter body, structure of labial papillae, longer rectum, conical and much longer female tail, and genital papillae grouped in a different manner.

The following five species of the genus *Mesorhabditis* can be recounted now from Hungary: *M. irregularis* (Körner in Osche, 1952) Dougherty, 1955, *M. inarimensis* (Meyl, 1953) Dougherty, 1955, *M. spiculigera* (Steiner, 1936) Dougherty, 1953, *M. sudhausi* n. sp. and *M. ultima* (Körner in Osche, 1952) Dougherty, 1955.

Mesorhabditis sudhausi n. sp. is dedicated to Dr. Walter Sudhaus, Freiburg, the outstanding expert of the Rhabditidae.

***Bursilla vernalis* n. sp.**
(Fig. 3, A-F)

MEASUREMENTS

Holotype, female: L = 0.56 mm; a = 20; b = 4.2; c = 8.7; V = 73%.

Allotype, male: L = 0.30 mm; a = 14; b = 3.4; c = 7.1.

Female paratypes: L = 0.41-0.56 mm; a = 16-21; b = 3.6-4.4; c = 7.8-8.7; V = 72-74%.

DESCRIPTION

Body small and plump. Cuticle very thin, 0.5-0.8 μm on the mid-body, annulation hardly discernible. Head somewhat expanded, 7-7.5 μm wide; body at proximal end of oesophagus 3.2-3.4 times head diameter. Lips six, rounded, distinctly separate, each with a setose apical papilla. Amphids minute, on the lateral lips.

Stoma 15-17 μm (♀) or 13 μm (♂) in its entire length, and 2-2.3 times as long as head width, respectively. Cheilostom not cuticularized. Promesostom (buccal tube) tubular with parallel walls. Metastom isoglottoid with rounded swellings each bearing two pointed toothlets. Oesophageal collar absent.

Anterior part 54-56% of total oesophageal length. Medial swelling (metacarpus) comparatively weak, terminal bulb strong, oblong. Excretory pore before posterior bulb. Intestine beginning narrow. Rectum almost two anal body diameters long.

Female: Vulval lips projected, vagina short, only 1/4 of corresponding body diameter. Genital organ unpaired, prevulval, without posterior uterine sac, 7-8 times body diameter. Ovary often reflexed to vulva. Distance between oesophagus end and vulva 1.7-2.2 times longer than the oesophagus. Oviparous species, uterus with a single egg (56 \times 24 μm).

Distance between vulva and anus 1.3-1.4 times longer than tail. This latter 53-64 μm long, 4.5-5.2 anal diameters, conical, uniformly narrowing. Phasmids near the anal opening.

Male: Spermatozoa small, spherical. Spicules 22-23 μm long, about as long as half a tail length, slightly bent ventrally, fused in their distal end. Gubernaculum thin, 2/5 of spicules in length. Tail 42 μm long, 3.3 times anal diameter. Bursa strongly reduced, observable only in medial view. Of the six pairs of genital papillae three pairs lying preanal, one pair adanal and two pairs postanal.

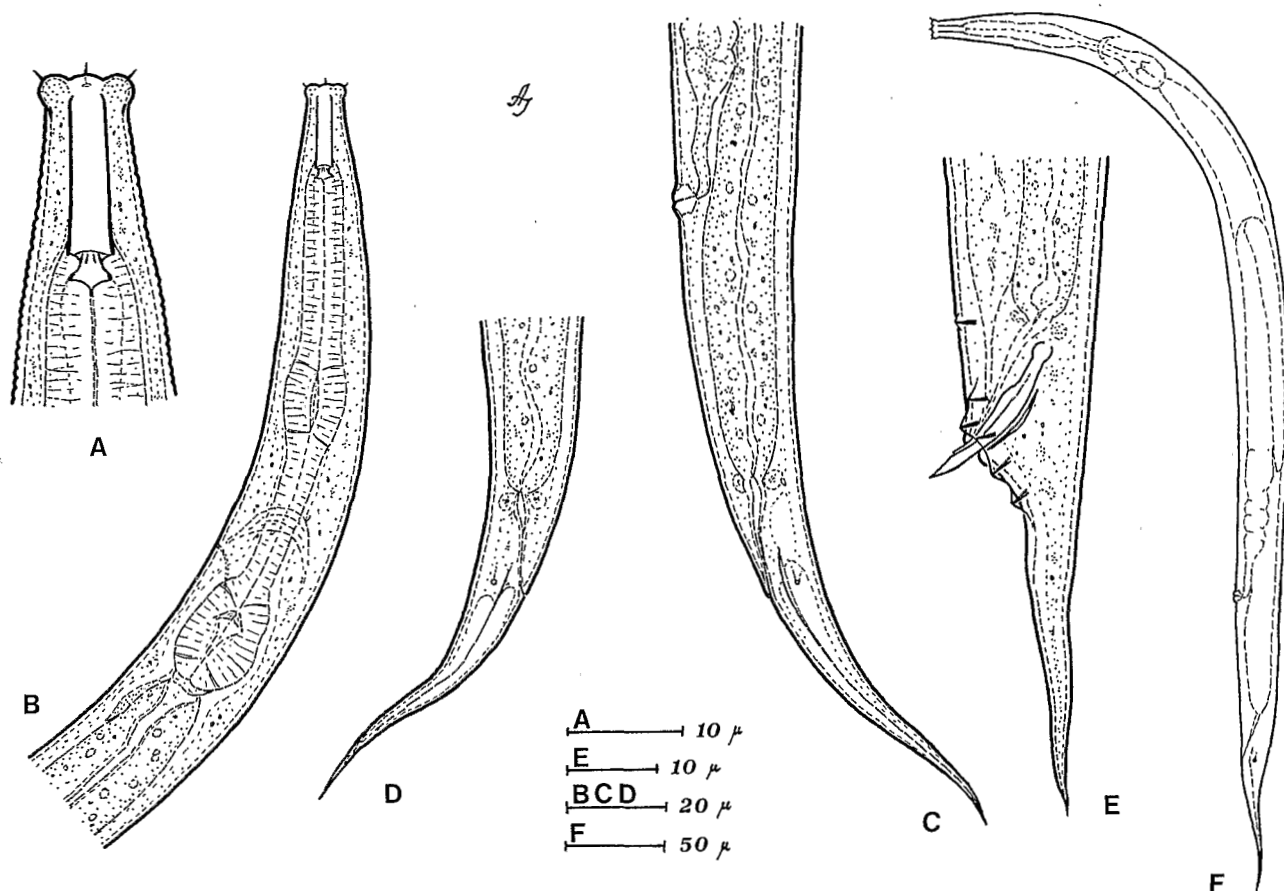


Fig. 3. *Bursilla vernalis* n. sp. A : Female anterior end ; B : Oesophageal region ; C : Posterior end of female ; D : Female tail ; E : Posterior end of male ; F : Entire body of female.

TYPE HABITAT AND LOCALITY

Soil with litter from the garden of the Hungarian Embassy in Hanoi, Vietnam, collected in April by Gy. Topál.

TYPE MATERIAL

Holotype, female, on the slide No. V-6074 ; allotype, male on the slide No. V-6073 ; both types and paratypes (5 females and 1 juvenile) in the author's nematode collection.

RELATIONSHIP

The genus *Bursilla* was established (Andrassy, 1976) for those species related to *Mesorhabditis* whose bursa is rudimentary and does not reach to the tail tip. *Bursilla vernalis* n. sp. resembles *B. microbursaris* (Steiner, 1926) Andrassy, 1981. In my opinion, this latter species is identical with *Rhabditis franseni* Fuchs, 1933. The brief difference between the new species and the other can be found in the number of the bursal papillae : both Steiner and Fuchs mentioned only three pairs of papillae on the male tail.

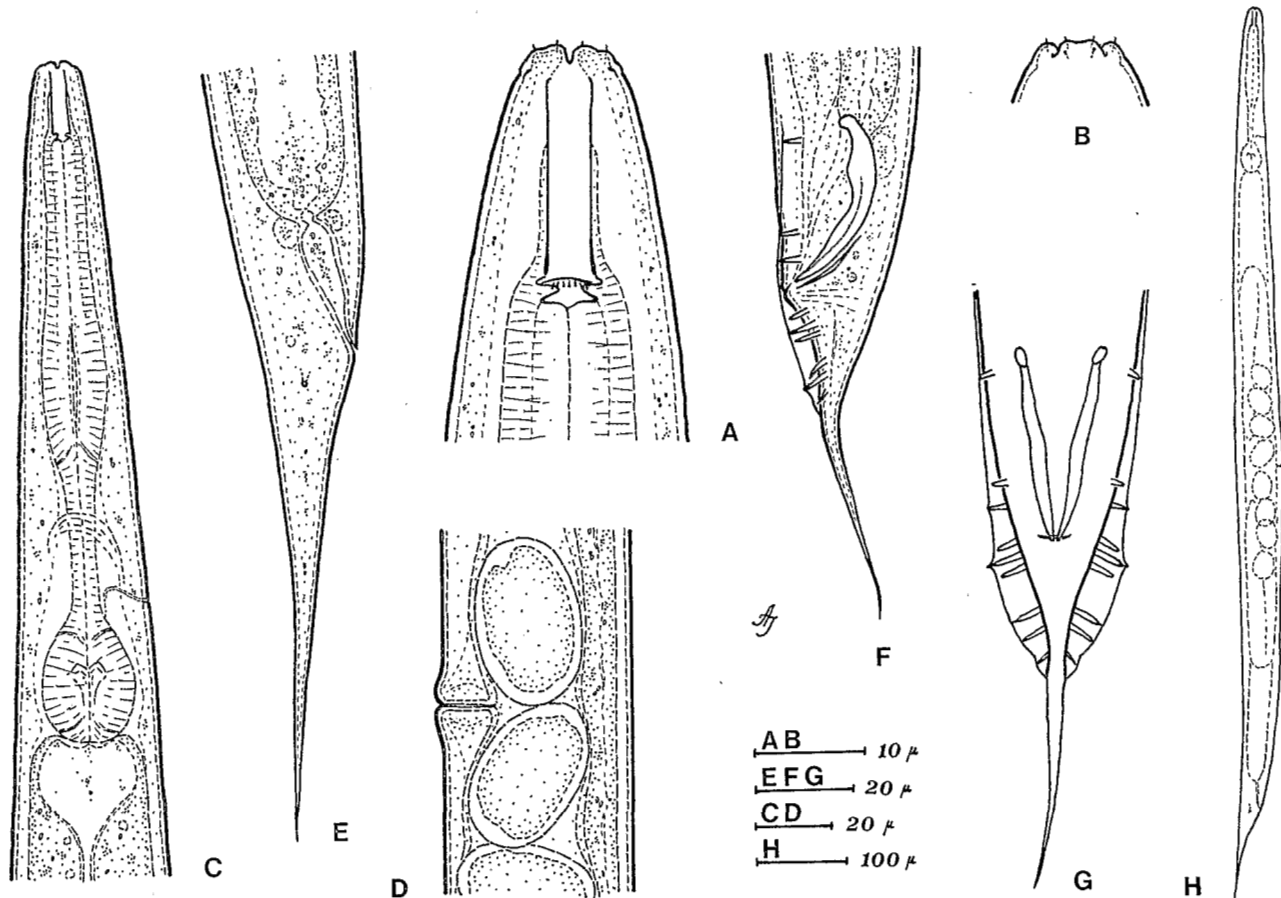


Fig. 4. *Rhitis luci* n. sp. A : Head end of female ; B : Head showing three lips ; C : Oesophageal region ; D : Vulval region ; E : Female tail ; F : Male tail, lateral ; G : Male tail, ventral ; H : Total view of female.

Being these organs fairly large and well observable, it can hardly be believed that either Steiner or Fuchs overlooked the exact number of them.

Female paratypes : L = 0.88-1.0 mm ; a = 17-21 ; b = 5.2-5.9 ; c = 9.5-10.2 ; V = 50-53%.

Male paratypes : L = 0.79-0.95 mm ; a = 17-20 ; b = 4.7-5.5 ; c = 10-15.

***Rhitis luci* n. sp.**
(Fig. 4, A-H)

MEASUREMENTS

Holotype, female : L = 1.0 mm ; a = 20 ; b = 5.9 ; c = 9.9 ; V = 51%.

Allotype, male : L = 0.88 mm ; a = 18 ; b = 4.9 ; c = 13.

DESCRIPTION

Body of middle length, stout. Cuticle thin, 0.8-1.2 μ m, without annulation. Lateral field inconspicuous. Head not offset, 9-12 μ m wide, lips three, low. Labial papillae minute. Amphids very small.

Stoma 18-22 μ m long (measured from head margin) and 1.7-1.9 times head diameter. Chei-

lostom insignificant, not cuticularized. Pro-mesostom tubular, encircled to $2/3$ of its length by a thin oesophageal collar. Metastom isoglot-toid, showing three small denticles on each swelling.

Corpus 54-57% of the entire oesophagus. Medial swelling weak, elongate. Excretory pore before terminal bulb; this latter strong, spher-ical. Intestine beginning with a broad, stomach-like lumen. Rectum a little longer than the anal body width.

Female : Genital organ paired, each branch measuring 4.5 to 5 body diameters. Vulva transversal, fairly wide with protruded lips. Vagina $1/4$ to $1/3$ of the corresponding body diameter. Ovaries reflexed almost to vulva. Oviparous species, uterus with eight to fourteen eggs at the same time. Egg $44-52 \times 23-28 \mu\text{m}$. Distance between posterior oesophagus end and vulva 1.7-2 times longer than the oesophagus.

Distance between vulva and anus 3.6-3.8 times longer than tail. Tail 93-105 μm long, 4.5-5.5 anal diameters, conical, finely pointed. Phasmids distinct, somewhat behind anal opening.

Male : Spicules 37-45 μm long, shorter than tail, slightly bent ventrally, free, not fused distally. Gubernaculum 14-17 μm long, curved. Tail 63-74 μm long, terminus filiform. Bursa rather weak, narrow, leptoderan. Genital papil-lae nine pairs : 1 + 2 + 3 + 3. Three pairs lying preanal, the first pair just at the beginning of the bursa. The 7th pair is subdorsal. All papillae are free.

TYPE HABITAT AND LOCALITY

Compost, New Delhi, India, June 1970, col-lected by S.H. Khan.

TYPE MATERIAL

Holotype, female, and allotype, male, both on the slide No. I-5552. Four females and two males are deposited in the Muséum national d'Histoire naturelle, Laboratoire des Vers, Paris. Types and other paratypes (21 females and 17 males) in the collection of the author.

RELATIONSHIP

Quite recently, I proposed the genus *Rhitis* Andrassy, 1981 for those species of the sub-family Rhabditinae that show a combination of characteristics as follows : denticles of metastom setose, bursa reduced and narrow, bursal papil-lae nine pairs, amphids minute, lying on the lateral lips. The type species of this genus is *Rhitis inermis* (Schneider, 1866) Andrassy, 1981. *Rhitis luci* n. sp. is now the fifth species of the genus, and resembles the type species; it can be distinguished however by the following marks : the median swelling of the oesophagus is much weaker and oblong, the tail is longer in both sexes, and the genital papillae show an other arrangement (in *R. inermis* the first pair of them lies far in front of the spicules).

This new species is named after Dr. Michel Luc, Paris.

***Ablechroiulus maculosus* n. sp.**

(Fig. 5, A-F)

MEASUREMENTS

Holotype, female : L = 0.62 mm ; a = 19 ; b = 5.0 ; c = 5.5 ; V = 43%.

Allotype, male : L = 0.49 mm ; a = 17 ; b = 4.6 ; c = 8.3.

Female paratypes : L = 0.54-0.62 mm ; a = 17-19 ; b = 4.5-5.1 ; c = 5.4-5.7 ; V = 43-45%.

DESCRIPTION

A small nematode. Cuticle thin, 0.7-1.0 μm wide, marked with transverse striae and longi-tudinal incisures which provide it, as a result, with small quadrate dots or marks. This structure is especially conspicuous on the anterior body region. Head well offset, 8 μm wide; body at proximal end of oesophagus 3.5-3.7 times wider than head. Lips distinctly separate, rounded, armed with long, setose appendages numbering three on each lateral lips and four on each other lips. Amphids very small, on the lateral lips.

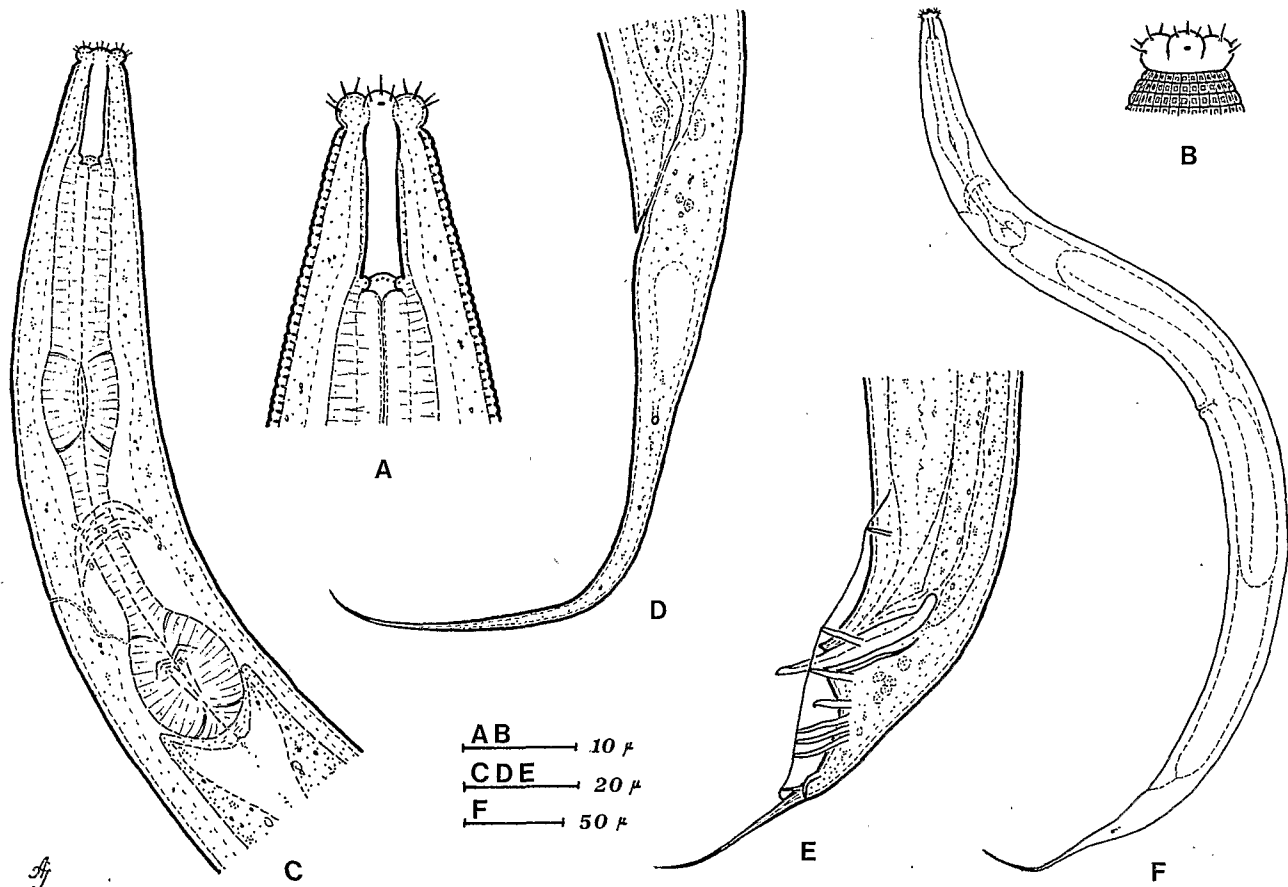


Fig. 5. *Ablechroiulus maculosus* n. sp. A : Anterior end of female ; B : Head region showing characteristic cuticula structure (hence the specific name "maculosus") ; C : Oesophageal body region ; D : Female tail ; E : Posterior end of male ; F : Entire view of female.

Stoma 19-20 μm in its entire length, 2.4-2.5 times as long as head diameter and nearly 1/6 of the oesophagus length, respectively. Cheilostom not cuticularized. Promesostom with parallel walls, encircled by a thin oesophageal collar. Metastom isoglottoid, bearing three small warts on each swelling.

Corpus 57-58% of the oesophagus. Metacarpus moderately widened, terminal bulb spherical. Excretory opening level with isthmus. Beginning of intestine with broad lumen. Rectum about one anal diameter long.

Female : Distance between posterior end of oesophagus and vulva as long as, or a little longer than the oesophagus. Vulval lips protruding, vagina short, 1/4 of corresponding body

diameter. Genital organ amphidelphic, each branch 3.3-3.8 times body diameter. Ovaries reflexed to the vulva. There were no eggs in the uterus of the studied females.

Distance vulva-anus 2.0-2.2 times longer than tail. This latter 99-113 μm long, 6-7 times anal diameter, conoid, with pointed tip. Phasmids well discernible, before the tail filament.

Male : Tail 58 μm long, 3.5 anal diameters, similar to that of female. Spicules 29-30 μm long, about 1/2 of tail length, hardly curved, distally sharply pointed. Gubernaculum 18 μm long. Bursa well developed, leptoderan, anteriorly open, provided with nine pairs of papillae : 1 + 1 + 1 + 4 + 2. The 1st pair lies at the anterior end of spicules, the 4th pair is sub-

laterally, the 8th pair subdorsally directed. The 1st to 7th papillae are large, the last two ones shorter than the other.

TYPE HABITAT AND LOCALITY

Rain forest soil with litter in Sibiti, Congo Republic, collected in Mai by A. Zicsi.

TYPE MATERIAL

All type specimens (three females and one male) on the slide No. A-9207 in the author's collection.

RELATIONSHIP

Ablechroiulus maculosus n. sp. resembles very much *A. crenatus* (Paesler, 1946) Andrásy, 1966 but differs from it by the much smaller body and the position of the bursal papillae. In the new species only two pairs of papillae lie preanal (in *A. crenatus* three pairs), the distance between papillae 2 and 3 is longer than between papillae 3 and 4 (in *A. crenatus* this distance is shorter), and the shape and arrangement of the papillae 8 and 9 is other than those of *A. crenatus*.

The other species of this genus known in Africa is *Ablechroiulus anchisporus* Andrásy, 1966 (Ghana).

Pterygorhabditis hungarica n. sp.

(Fig. 6, A-E)

MEASUREMENTS

Holotype, female : L = 0.52 mm ; a = 16 ; b = 4.2 ; c = 9.3 ; V = 54%.

Allotype, male : L = 0.49 mm ; a = 16 ; b = 4.2 ; c = 21.

Female paratypes : L = 0.50-0.52 mm ; a = 13-16 ; b = 4.2-4.3 ; c = 8.2-9.5 ; V = 53-54%.

DESCRIPTION

A short and stout nematode species, with very constant dimensions. Mid-body region 37-40 (♀) or 30 (♂) μm wide. Body brownish yellow, anteriorly darker than posteriorly, distinctly asymmetrical in its external structure. Right side heavily annulated, annules 2.2-2.4 μm (♀) or 2.8 μm (♂) wide. They are interrupted by rhomboidal fields arranged in nine longitudinal rows. On the anterior region, level with the oesophagus, the annules build three large shield-like thickenings. The first of them is 14-15 μm , the second 27-29 μm , the third 35-37 μm long. They are oblong and the middle one is the strongest. Cuticular annulation extending to about middle of tail. The left body side is annulated as well but this annulation is much weaker than that of the right side. Besides, the left side is provided with six weak longitudinal ridges.

Head narrow, 7-9 μm wide, well separate ; body at posterior end of oesophagus 3.7-4.7 times wider than head. Lips unequally developed and armed with two longer (7-8 μm) and seven shorter pointed or rounded appendages.

Stoma 25-26 μm in its entire length, 2.9-3.6 times head diameter and 1/5 of oesophagus length, respectively ; *Rhabditis*-like in its structure. Cheilostom hardly cuticularized, promesostom tubular, a little bent posteriorly. Metastom without a true glottoid apparatus but bearing minute denticles.

Corpus 57-59% of entire length of oesophagus. Metacarpus moderately swollen, terminal bulb strong, spherical. Excretory opening at level of the bulb. Intestine in its beginning narrow, rectum very long, three anal body diameters.

Female : Distance between oesophagus terminus and vulva 1.2-1.3 times longer than the oesophagus. Genital organ amphidelphic, anterior branch 2.5-2.7 times, posterior branch 2.2-2.4 times as long as mid-body diameter. Vulva transversal. There were no eggs in the observed females.

Tail 54-63 μm long, 3.4-4.5 anal diameters, conical, finely pointed. Vulva-anus distance 2.8-3.2 times tail length. Anterior lip of the anus continuing in a 23-26 μm long anal tube and on the tip of this in a 14-16 μm long very thin sheath.

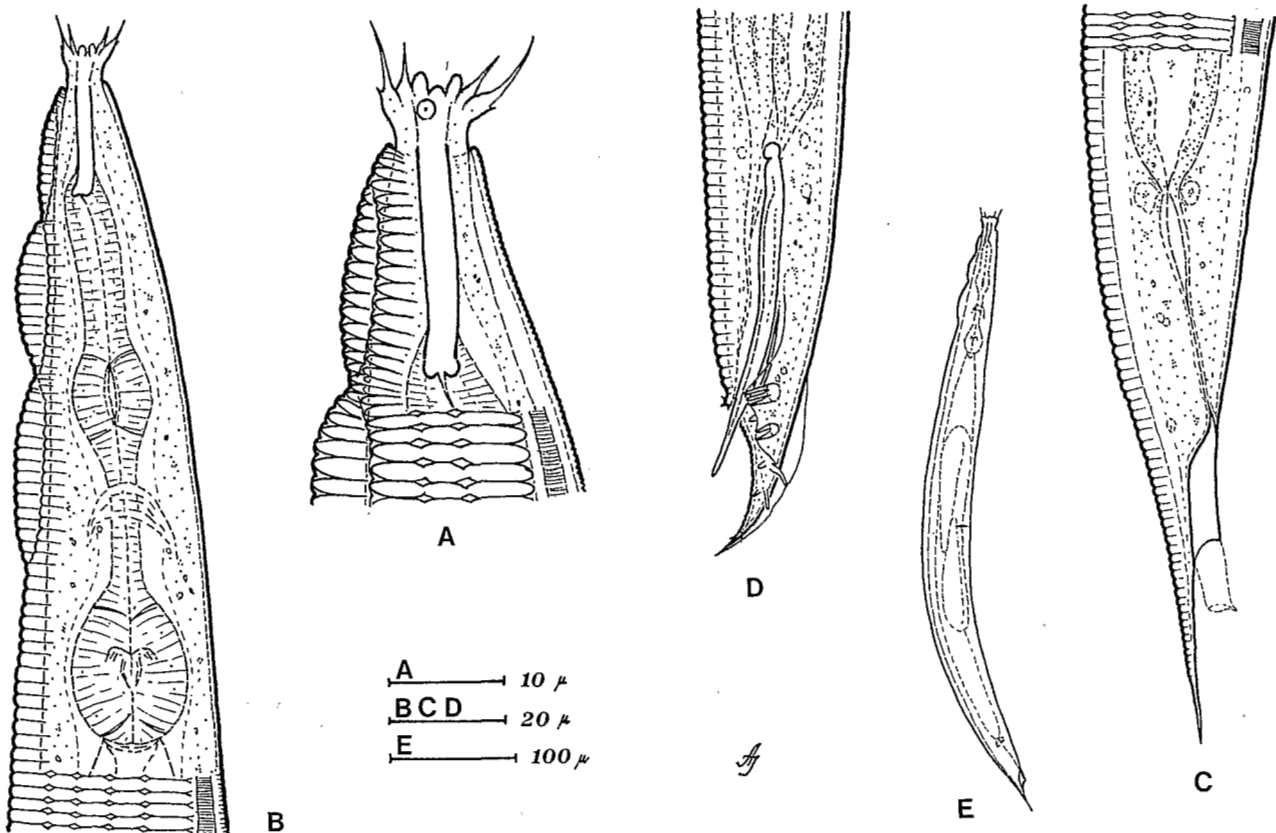


Fig. 6. *Pterygorhabditis hungarica* n. sp. A : Anterior end of female ; B : Oesophageal region with three cuticular shields ; C : Posterior end of female ; D : Posterior end of male ; E : Total body view of female.

Male : Tail 23 μm long, 2.2 times anal diameter. Spicules 60 μm long, slender, slightly bent, distally pointed, free. Gubernaculum almost 1/3 as long as spicules. Bursa pseudopeloderan, leaving a very short tail filament free, on the left side stronger developed than on the right side. The same asymmetry is shown in the papillae : they are stronger on the left side. Seven pairs of longer papillae lying lateral and four pairs of shorter papillae submedian.

Juveniles : The fourth-stage juveniles are similar to the adult form and bearing the same three cuticular shields on the oesophageal region. The third-stage juveniles are more simple in their structure, and show only the first shield behind the head.

TYPE HABITAT AND LOCALITY

Detritus under the bark of a hornbeam tree, Imókő, Bükk Mountains, Hungary ; collected in October 1974.

TYPE MATERIAL

Holotype, female, on the slide No. H-8529 ; allotype, male, on the slide No. 8528. Paratypes : five females and three juveniles. All preserved in the nematode collection of the author.

RELATIONSHIP

Pterygorhabditis Timm, 1957, this peculiar genus of the bunonematid nematodes, was represented by two species hitherto, *P. pakistansis* Timm, 1957 described from Bangladesh and *P. panopla* Bernard, 1979 described from the United States. The present species, *P. hungarica* n. sp. can be distinguished at once from them by the presence of three large shields on the anterior body region. In details, it differs *i*) from *P. pakistansis* : body smaller (*P. pakistansis* 0.70-0.85 mm), vulva near middle of body (*P. pakistansis* : V = 64-65%), cuticular shields present, oesophagus with median swelling, genital papillae different both in number and in arrangement ; *ii*) from *P. panopla* : three distinct cuticular shields present (one in *P. panopla*), right body side without longitudinal ridges, bursal papillae in other appearance (four pairs preanal, whilst all postanal in *P. panopla*), structure of the last larval stage strongly resembling that of the adult.

Accepté pour publication le 15 juin 1981.

REFERENCES

- BERNARD, E. C. (1979). New species of Bunonematoidea (Rhabditida) from Georgia and Tennessee. *J. Nematol.*, 11 : 344-358.
- FUCHS, G. (1933). Einige Nematoden bei *Scolytus scolytus* F. *Capita zool.*, 4 : 1-44.
- KÖRNER, H. (1954). Die Nematodenfauna des vergehenden Holzes und ihre Beziehungen zu den Insekten. *Zool. Jb., Syst.*, 82 : 245-353.
- PAESLER, F. (1946). Beitrag zur Kenntnis der im Dünger lebenden Nematoden. *Osterr. zool. Z.*, 1 : 87-128.
- SCHNEIDER, A. (1866). *Monographie der Nematoden*. Berlin, 357 p.
- SCHUURMANS STEKHOVEN, J. H. (1951). Nématodes saprozoaires et libres du Congo Belge. *Mém. Inst. r. Sci. nat. Belg.*, 2 : 3-79.
- STEINER, G. (1926). Parasitic nemas on peanuts in South Africa. *Centralbl. Bakteriol.*, 67 : 16-24.
- SUDHAUS, W. (1978). Systematik, Phylogenie und Ökologie der holzbewohnenden Nematoden-Gruppe *Rhabditis* (*Mesorhabditis*) und das Problem "geschlechtsbezogener" Artdifferenzierung. *Zool. Jb., Syst.*, 105 : 399-461.
- TIMM, R. W. (1957). *Pterygorhabditis*, a remarkable new genus of soil nematodes. *Nematologica*, 2 : 68-71.