

The superfamily Dorylaimoidea (Nematoda) – a review Family Dorylaimidae

By

I. ANDRÁSSY*

Contents

Dorylaimidae	5	<i>Paradorylaimus</i>	25
Amphidorylaiminae	5	<i>Fuscheila</i>	26
<i>Amphidorylaimus</i>	5	<i>Crocodylaimus</i>	27
<i>Apodorylaimus</i>	6	<i>Mesodorylaimus</i>	29
Prodorylaiminae	7	<i>Miodorylaimus</i>	41
<i>Prodorylaimus</i>	7	<i>Calcaridorylaimus</i>	42
<i>Prodorylaiminum</i>	10	<i>Calodorylaimus</i>	43
<i>Protodorylaimus</i>	11	<i>Halodorylaimus</i>	45
Dorylaiminae	12	<i>Chrysodorus</i>	45
<i>Dorylaimus</i>	13	<i>Aporcedorus</i>	47
<i>Ischiodorylaimus</i>	16	Afrodorylaiminae	47
Laimydorinae	18	Species inquirendae	48
<i>Idiodorylaimus</i>	19	Descriptions of new species	49
<i>Laimydorus</i>	21	References	62

Abstract. This paper gives a survey on the family Dorylaimidae within the superfamily Dorylaimoidea (Nematoda). Both the family and four of the subfamilies – Amphidorylaiminae, Prodorylaiminae, Dorylaiminae, Laimydorinae – are characterized, while the subfamily Afrodorylaiminae will be discussed elsewhere. Nineteen genera are defined and 224 valid species enumerated and presented in form of keys. Four new genera – *Apodorylaimus* (Amphidorylaiminae), *Protodorylaimus* (Prodorylaiminae), *Crocodylaimus* and *Halodorylaimus* (Laimydorinae) – are proposed and seven new species – *Apodorylaimus bini*, *Dorylaimus numidicus*, *Dorylaimus fodori*, *Crocodylaimus aequatorialis*, *Crocodylaimus dimorphus*, *Miodorylaimus küttenbergeri* and *Calodorylaimus densus* – are described. Several new combinations are introduced.

In a series of papers I should like to give a picture on the present taxonomic status of the families, subfamilies, genera and species of the nematode superfamily Dorylaimoidea DE MAN, 1876. The first paper has treated of the families

* Dr. István Andrásy, MTA Talajzoológiai Kutatócsoport, ELTE Állattrendszertani és Ökológiai Tanszék (Section of Soil Zoology of the Hungarian Academy of Sciences, in the Department of Systematic Zoology and Ecology of the Eötvös Loránd University), 1088 Budapest, Puskin u. 3.

Thorniidae DE CONINCK, 1965 and **Thornenematidae SIDDIQI, 1969** and enumerated eleven genera and 59 species. The present article deals with the family **Dorylaimidae DE MAN, 1876** and defines nineteen genera belonging to four subfamilies. The subfamily **Afrodorylaiminae ANDRÁSSY, 1969** will be discussed separately in a subsequent article. The number of species listed and presented here is 224.

The family **Dorylaimidae** has been established by **DE MAN (1876)** for the one genus *Dorylaimus*. The main steps of its history can be summarized as follows.

MICOLETZKY (1922) regarded the group as a subfamily (**Dorylaiminae**) of the family **Tylenchidae** and ordered five genera into it (*Dorylaimus*, *Actinolaimus*, *Trichodorus*, *Campydora* and *Ictonchus*). **BAYLIS and DAUBNEY (1926)** discussed the subfamily **Dorylaiminae** within the family **Anguilluliniidae** and enumerated twelve genera in it. **THORNE (1939)** re-established the **Dorylaimidae** as a family and divided it into five subfamilies: **Dorylaiminae**, **Tylencholaiminae**, **Actinolaiminae**, **Nygolaiminae** and **Longidorinae**. He mentioned seven genera in the subfamily **Dorylaiminae** and fifteen in the other subfamilies. In accepting **THORNE's** system **CHITWOOD (1950)** gave the same division of the family.

BAKER (1962) left only two subfamilies (**Dorylaiminae** and **Tylencholaiminae**) and listed 23 genera (and two uncertain ones). **GOODEY (1963)** divided the **Dorylaimidae** into three subfamilies (**Dorylaiminae**, **Actinolaiminae**, **Tylencholaiminae**) and counted 35 genera. **PARAMONOV (1964)** added **Nygolaiminae** to the above three subfamilies, and listed 16 genera within the **Dorylaiminae**. **DE CONINCK (1965)** distinguished two subfamilies only (**Dorylaiminae** and **Thorniinae**), and counted 21 genera in the **Dorylaiminae**. **SIDDIQI (1969)** returned to the old conception of **DE MAN**, and regarded the genus *Dorylaimus* as the only representative of the whole family.

In 1969 I outlined a new system of the **Dorylaimidae**, and proposed four subfamilies: **Dorylaiminae** (*Dorylaimus*, *Paradorylaimus*, *Ischiodylaimus*), **Laimydorinae** (*Laimydorus*, *Idiodorylaimus*), **Mesodorylaiminae** (*Mesodorylaimus*, *Calodorylaimus*, *Drepanodorylaimus*) and **Afrodorylaiminae** (*Afrodorylaimus*). Not yet knowing this paper, **FERRIS (1971)** published a quite different system: she divided the family into six subfamilies: **Dorylaiminae** (with 23 genera), **Discolaiminae** (with 4 genera), **Nordiinae** (with 3 genera), **Cephalodorylaiminae** (with 1 genus), **Pungentinae** (with 5 genera) and **Vanderliidinae** (with 1 genus).

In a book (1976) I further developed my previous system (1969). I grouped the genera into four subfamilies as in the above-mentioned paper and added a further genus, *Minidorylaimus*. **ELLIAVA (1984)** accepted the outline of this system in general but added two subfamilies, **Prodorylaiminae** (with 2 genera) and **Thornenematinae** (with 3 genera) to the family.

Besides the above scientists a number of other authors has contributed to the knowledge of the **Dorylaimidae**. At least one of them should not be left unmentioned; it is **LOOF**, who has given, especially in his papers of 1983 and 1985, many valuable comments to the taxonomic problems of our group, the so-called "long-tailed dorylaims".

Family **DORYLAIMIDAE** DE MAN, 1876

Dorylaimoidea. Small to large nematodes, body varying between 0.8 and 8.5 mm. Cuticle smooth or finely annulated, occasionally provided with longitudinal ridges. Head offset or continuous with neck, labial framework not sclerotized. Spear straight or slightly sinuate, moderately long, aperture generally occupying 1/3 of its length. Guiding ring simple or double. Oesophagus expanded in posterior half or so. Prerectum distinct, occasionally very long. Female genital organ didelphic, both ovaries lying in general on the same side of intestine. Vulva mostly equatorial, with sclerotized lips. Testes two, spicula dorylaimoid with small lateral pieces. A pair of adloacal papillae and a ventro-medial row of numerous supplements present. Tail predominantly with sexual dimorphism: in females attenuated to filiform, in males short and rounded; in some cases long and filiform in both sexes.

The family may be characterized within the superfamily Dorylaimoidea by the simple vestibule, the shape of spear, the always amphidelphic gonads and the tail which is either long in both sexes or shows a sexual dimorphism.

The two dozen genera may be grouped into five subfamilies:

Amphidorylaiminae ANDRÁSSY, 1976

Prodorylaiminae ANDRÁSSY, 1969

Dorylaiminae DE MAN, 1876

Laimydorinae ANDRÁSSY, 1969

Afrodorylaiminae ANDRÁSSY, 1969

Subfamily AMPHIDORYLAIMINAE ANDRÁSSY, 1976

Dorylaimidae. Small to medium-sized animals. Cuticle smooth, without longitudinal ridges. Spear straight, moderately long, guiding ring thin. Spermatozoa fusiform. Spicula simple, not truly dorylaimoid, without central thickening and lateral pieces. Supplements few, spaced. Tail in both sexes similar, filiform.

Two genera (with 4 species):

Amphidorylaimus ANDRÁSSY, 1960

Minidorylaimus ANDRÁSSY, 1972 (syn. n.)

Apodorylaimus gen. n.

Key to genera of Amphidorylaiminae

- 1 Supplements 5–8, arranged in pairs **Apodorylaimus** gen. n.
– Supplements 1 or 2 **Amphidorylaimus** ANDRÁSSY

Genus *Amphidorylaimus* ANDRÁSSY, 1960

Syn. *Minidorylaimus* ANDRÁSSY, 1972 (syn. n.)

Dorylaimidae, Amphidorylaiminae. Body 0.8–1 mm long, fairly slender. Cuticle smooth or very finely annulated. Lips well separate, angular, head offset. Amphids broad, funnel-shaped. Spear straight, 8–11 μm , about as long

as labial width; aperture 1/3 of its length. Guiding ring double but narrow, located less than one-head diameter from anterior body end. Oesophagus expanded posterior to its middle. Prerectum in both sexes two or three anal diameters long, in males beginning anterior to the supplements. Vulva longitudinal, far pre-equatorial (in 34–41%). Female gonads amphidelphic. Eggs elongate, 5–6 times as long as wide. Testes two, spermatozoa spindle-shaped. Spicula simple, alaimoid, without central thickening and lateral pieces. Supplements one or two, preloacal space as long as or shorter than spicula. Tail in both sexes similar, filiform, about 20 times as long as anal body diameter.

Type-species: *Dorylaimus infecundus* COBB in THORNE & SWANGER, 1936 = *Amphidorylaimus infecundus* (COBB in THORNE & SWANGER, 1936) ANDRÁSSY, 1960.

This genus is unique within the family in having quite simple, not dorylaimoid spicula and a very limited number of copulatory supplements.

The representatives of *Amphidorylaimus* live in the soil around roots and occur in Asia, Africa and South America.

Two species:

A. flagellicauda MONTEIRO, 1970

A. infecundus (COBB in THORNE & SWANGER, 1936) ANDRÁSSY, 1960

Dorylaimus infecundus COBB in THORNE & SWANGER, 1936

Minidorylaimus decembris ANDRÁSSY, 1972 (syn. n.)

Key to species of Amphidorylaimus

- 1 One supplement, lying before the spicula. — ♀: L = 0.79–1.0 mm; a = 36–48; b = 4.4–5.3; c = 3.2–4.0; V = 34–40%. ♂: L = 0.87 mm; a = 42; b = 4.4; c = 4; PO: 1. (India, Brazil) **flagellicauda** MONTEIRO
— Two supplements, the posterior one lying level with the spicula. — ♀: L = 0.80–0.95 mm; a = 33–46; b = 4.5–4.8; c = 3.4–4.2; V = 39–41%. ♂: L = 0.74 mm; a = 43; b = 3.9; c = 4.7; PO: 2. (Japan, Congo Republic, Venezuela) **infecundus** (COBB in THORNE & SWANGER)

Remarks

Amphidorylaimus infecundus. — 1 described from the Congo Republic a new genus and species, *Minidorylaimus decembris* ANDRÁSSY, 1972. Although the male is not known, I suppose that this genus is identical with *Amphidorylaimus*; their main characters correspond well (body small, lips angular, spear short with comparatively large aperture, vulva longitudinal, without sclerotized lips, eggs unusually large, tail very long). On the basis of the measurements, shape of head, length of spear and tail, I regard *M. decembris* as a junior synonym of *A. infecundus*.

Genus *Apodorylaimus* gen. n.

Dorylaimidae, Amphidorylaiminae. Body 0.8 to 1.7 mm long, fairly slender. Cuticle smooth. Lips not or slightly separate, head offset or continuous with neck. Amphids broad, funnel-shaped. Spear straight, gradually widened to its proximal end, 10–26 μ m, as long or almost twice as long as labial diameter; aperture 1/3 of its length. Guiding ring thin, simple, located far back. Oesophagus enlarged gradually. Prerectum short, in females hardly longer than body width, in males beginning in the range of supplements. Vulva pre-equatorial, without

sclerotization. Female genital organ amphidelphic. Testes two, spermatozoa spindle-shaped. Spicula semi-dorylaimoid, simple, without inner sclerotization and lateral pieces. Supplements 5–8, arranged by twos. Preloacal space longer than spicula. Tail in both sexes filiform, 10 to 22 anal diameters long.

Type-species: *Apodorylaimus bini* sp. n.

The genus is unique within the Dorylaimidae in having supplements arranged by twos. It is similar to *Amphidorylaimus* ANDRÁSSY, 1960 but the prerectum is short, the spicula are somewhat more developed and the supplements more numerous and differently arranged.

Aquatic or semi-aquatic nematodes known from Asia and Africa.

Two species:

A. bini sp. n.

A. congonensis (ANDRÁSSY, 1960) comb. n.

Dorylaimus infecundus apud SCHUURMANS STEKHOVEN & TEUNISSEN, 1938
Amphidorylaimus congonensis ANDRÁSSY, 1960

Key to species of Apodorylaimus

- 1 Spear 24–26 μm , twice as long as labial width; supplements 8 (4 pairs); body to 1.7 mm. – ♀:
L = 1.2–1.7 mm; a = 37–42; b = 3.8–4.7; c = 3.1–3.9; V = 38–43%; c' = 18–22.
♂: L = 1.6 mm; a = 45; b = 4.5; c = 3.6; c' = 16; PO: 8. (India) **bini** sp. n.
– Spear 10 μm , as long as labial width; supplements 5 (6?, 3 pairs); body hardly 1 mm. – ♀ unknown. ♂: L = 0.8 mm; a = 45; b = 4; c = 4.3; c' = 10; PO: 5. (Zaire)
congonensis (ANDRÁSSY)

Subfamily PRODORYLAIMINAE ANDRÁSSY, 1969

Dorylaimidae. Bigger animals, predominantly well over 1 mm (to 5.5 mm). Cuticle without longitudinal ridges. Spear straight, guiding ring simple, thin. Spermatozoa oval to fusiform. Spicula dorylaimoid. Supplements numerous, contiguous or spaced. Tail in both sexes similar, elongate to filiform.

Three genera (with 19 species):

Prodorylaimium ANDRÁSSY, 1969

Prodorylaimus ANDRÁSSY, 1959

Protodorylaimus gen. n.

Key to genera of Prodorylaiminae

- 1 Prerectum in both sexes excessively long (15–25 anal diameters); body very slender (a to 80) ..
Protodorylaimus gen. n.
– Prerectum much shorter (in females to 4, in males to 8 anal diameters); body not so slender ... 2
2 Supplements spaced and limited in number (6–10) **Prodorylaimium** ANDRÁSSY
– Supplements contiguous and numerous (13–31) **Prodorylaimus** ANDRÁSSY

Genus *Prodorylaimus* ANDRÁSSY, 1959

Dorylaimidae, Prodorylaiminae. Body varying in length between 1 and 5 mm, generally slender. Cuticle moderately thick, smooth or very finely

annulated. Lips hardly separate, head mostly slightly offset. Amphids broad, funnel-shaped. Spear straight, 1.5–2.5 times as long as labial diameter, 18 to 50 μm . Aperture occupying 1/4 or 1/3 of spear length. Guiding ring thin, located maximum at a distance of one-head diameter from anterior end. Oesophagus widened near its middle. Prerectum in females shorter (1–4 anal diameters) than in males (4–8 anal diameters, beginning nearly level with the anteriormost supplement). Female genital organ amphidelphic. Vulva mostly longitudinal, in 35 to 56% of body length, with sclerotized lips. Testes two, spermatozoa oval to fusiform. Spicula dorylaimoid. Supplements contiguous, 13 to 31 in number; preloacal space longer than spicula. Tail in both sexes similar, elongate to filiform, 2 to 25 times as long as anal body diameter (in males somewhat shorter than in females). Males in general nearly as common as females.

Type-species: *Dorylaimus longicaudatus* in sense of DE MAN, 1876 and subsequent authors = *Prodorylaimus longicaudatoides* ALTHERR, 1968*

Within the subfamily the genus *Prodorylaimus* ANDRÁSSY, 1959 is well characterized by the comparatively short prerectum and the great number of contiguous supplements.

In his 1985 paper LOOF discussed the genus *Prodorylaimus* and published several clear descriptions. He made some taxonomic-nomenclatorial proposals as well, a part of which, however, I cannot agree with. He explained the outlines of the genus too widely. For instance, he transferred a number of *Laimydorus* species, in which males were not known, to *Prodorylaimus*. Why would it be better to see these species here and not there? (At this moment we don't know whether their males are long- or short-tailed). A number of new combinations have been superfluously proposed so. Afterwards, LOOF synonymized the genus *Drepanodorylaimus* JAIRAJPURI, 1966 with *Prodorylaimus*. This proposal is quite wrong. *Drepanodorylaimus* is a distinct genus having good and constant characteristics by which it may be distinguished from *Prodorylaimus* not only at generic but also at subfamily level.**

The representatives of *Prodorylaimus* inhabit wet biotopes. They are distributed in Europe (5 species), Asia (5 species), Africa (5 species), South America (3 species) and Australia (1 species). The most common of them, the type-species, has been recorded from 26 countries or states hitherto.

Thirteen species:

- P. brasiliensis** (MEYL, 1956) ANDRÁSSY, 1959
Dorylaimus brasiliensis MEYL, 1956
- P. dahli** (ALTHERR, 1960) ANDRÁSSY, 1964
Dorylaimus dahli ALTHERR, 1960
- P. dolichurus** (LOOS, 1946) SIDDIQI, 1969
Enchodelus dolichurus LOOS, 1946
- P. eliavai** THALOLIKHIN, 1977
- P. ensis** KLEYNHANS, 1970
- P. filiarum** ANDRÁSSY, 1964
Prodorylaimus gurvitschi ELIAVA, 1975 (syn. n.)

* As proposed by LOOF (1980), since the original species, *Dorylaimus longicaudatus* BÜTSCHLI 1874 is a species inquirenda.

** The genus *Drepanodorylaimus* and related forms will be discussed in a separate paper.

- P. kukuy** THALOLIKHIN, 1977
P. longicaudatoides ALTHERR 1968
Dorylaimus longicaudatus apud DE MAN, 1876, 1880, 1884; LOOF, 1961;
 ANDRÁSSY, 1959, 1964, 1969
Prodorylaimus kralli THALOLIKHIN, 1975 (syn. n.)
P. mas LOOF, 1985
Prodorylaimus longicaudatus apud LOOF & COOMANS, 1970
P. obesus AHMAD & JAIRAJPURI, 1982
P. paralongicaudatus (MICOLETZKY, 1925) ANDRÁSSY, 1959
Dorylaimus paralongicaudatus MICOLETZKY, 1925
Dorylaimus filiformis apud SCHUURMANS STEKHOVEN & TEUNISSEN, 1938
P. rionensis (GERLACH, 1954) ANDRÁSSY, 1959
Dorylaimus rionensis GERLACH, 1954
P. rotundiceps LOOF, 1985

Key to species of Prodorylaimus

- 1 Tail short, in females 2–4 anal diameters 2
 – Tail longer, in females 7–25 anal diameters 5
 2 Spear 30–50 μm long; body longer than 2 mm 3
 – Spear 20–25 μm long; body distinctly shorter than 2 mm 4
 3 Spear length above 40 μm ; supplements 25 or more. – ♀: L = 2.1–2.8 mm; a = 17–25; b = 3.4–4.0; c = 15–18; V = 49–53%; c' = 3–3.5. ♂: L = 2.2–2.5 mm; a = 17–23; b = 3.7–4.1; c = 15–19; PO: 25–28. (Soviet Union: Baical Lake) **kukuy** THALOLIKHIN
 – Spear length under 40 μm ; supplements 22 or less. – ♀: L = 2.5–3.3 mm; a = 37–53; b = 4.5–5.9; c = 21–27; V = 44–47%; c' = 3–4. ♂: L = 2.0–2.6 mm; a = 51–60; b = 5.3–5.6; c = 20–30; PO: 17–22. (Kenya, South Africa, Brazil) **rionensis** (GERLACH)
 4 Tail, especially in females, dorsally bent; body relatively plump. – ♀: L = 1.6–1.8 mm; a = 26–30; b = 4.6–5.2; c = 26–30; V = 50–56%; c' = 2. ♂: L = 1.6–1.7 mm; a = 26–30; b = 4.7–5.2; c = 6.4–6.9; PO: 15–18. (India) **obesus** AHMAD & JAIRAJPURI
 – Tail straight or ventrally bent; body slender. – ♀: L = 1.1–1.3 mm; a = 40–53; b = 4.2–4.8; c = 27–31; V = 41–48%; c' = 2–2.5. ♂: L = 1.0–1.2 mm; a = 48–52; b = 4.3–4.8; c = 25–37; PO: 13–14. (Brazil) **brasiliensis** (MEYER)
 5 Spear long, 45–50 μm ; female tail 6–8 times anal diameter. – ♀: L = 2.9–4.2 mm; a = 22–28; b = 3.5–4.2; c = 15–16; V = 48–55%; c' = 6–8. ♂: L = 4.8–4.9 mm; a = 31–35; b = 4.4–4.8; c = 16–35; PO: 28–30. (Soviet Union: Baical Lake) ... **eliavai** THALOLIKHIN
 – Spear shorter, 18 to 40 μm ; female tail at least 10 times anal diameter 6
 6 Spear longer than 30 μm 7
 – Spear 25 μm or shorter 10
 7 Number of supplements 21–31. – ♀: L = 2.5–3.5 mm; a = 30–45; b = 4–7; c = 4.4–8.0; V = 35–45%; c' = 15–18. ♂: L = 2.0–3.0 mm; a = 30–45; b = 4.0–5.8; c = 9–15; PO: 21–31. (Holland, Federal and Democratic Germany, Denmark, Finland, Poland, Switzerland, Austria, Hungary, Czechoslovakia, Yugoslavia, Spain, Italy, Soviet Union [Russia, Lithuania, Latvia, Uzbekistan, Tadzhikistan, Azerbajzhan], Cameroon, Zaire, Uganda, Kenya, Tanzania, Chile, Campbell Islands) **longicaudatoides** ALTHERR
 – Number of supplements 14–20 8
 8 Tip of tail finely rounded; body very slender. – ♀: L = 2.2–3.6 mm; a = 43–64; b = 4.6–6.0; c = 7–10; V = 35–41%; c' = 12. ♂: L = 2.2–3.4 mm; a = 41–54; b = 4.4–5.4; c = 12–18; PO: 15–18. (Cameroon) **dahli** (ALTHERR)
 – Tip of tail pointed; body less slender 9
 9 Supplements 14–15. – ♀: L = 2.7–2.9 mm; a = 37–44; b = 5.3–5.8; c = 2.8–3.2; V = 38–39%; c' = 20. ♂: L = 2.4–2.5 mm; a = 38–42; b = 4.9; c = 3.3–3.6; PO: 14–15. (South Africa) **ensis** KLEYNHANS

- Supplements 15–20. – ♀: L = 2.4–3.0 mm; a = 30–40; b = 4.5–6.0; c = 3.1–5.0; V = 37–43%; c' = 12–16. ♂: L = 2.0–2.9 mm; a = 35–40; b = 4.0–5.3; c = 6.2–8.0; PO: 15–20. (Hungary, Soviet Union [Lithuania], Angola, Zaire, Kenya, Tanzania)
paralongicaudatus (MICOLETZKY)
- 10 Lip region narrow, rounded, continuous with neck; supplements 13–14. – ♀: L = 2.3–2.8 mm; a = 48–63; b = 5.6–6.7; c = 4.5–6.5; V = 35–42%; c' = 15–23. ♂: L = 2.0–2.6 mm; a = 51–60; b = 5.3–5.6; c = 6.3; PO: 13–14. (Holland, Switzerland, Hungary)
rotundiceps LOOF
- Lip region broad, not rounded, more or less offset; supplements 15–25 11
- 11 Tail extremely long, 25 anal diameters, 1/3 of body length; male prerectum originating at level of the anterior supplement. – ♀: L = 2.1 mm; a = 48; b = 5.5; c = 3.1; V = 39; c' = 251. ♂: L = 2.1 mm; a = 48; b = 5.3; c = 3.4; PO: 15–18. (Sri Lanka)
dolichurus (LOOS)
- Tail shorter, 10–16 anal diameters, 1/6–1/8 of body length; male prerectum originating well before the supplements 12
- 12 Vulva transverse; spear 22–26 μ m long. – ♀: L = 1.8–2.4 mm; a = 42–51; b = 5.4–5.8; c = 5.8–7.7; V = 43–48%; c' = 12–15. ♂: 2.2–2.3 mm; a = 52–58; b = 5.5–6.0; c = 6.4–6.9; PO: 19–25. (Holland, Switzerland, Federal Germany, Austria, Italy)
mas LOOF
- Vulva longitudinal; spear 18–20 μ m long. – ♀: L = 1.6–2.2 mm; a = 40–52; b = 5.4–6.5; c = 5.5–7.9; V = 40–48%; c' = 10–16. ♂: L = 1.6–2.3 mm; a = 40–55; b = 5.4–6.7; c = 6.1–8.4; PO: 16–21. (Holland, Hungary, Soviet Union [Ukraine]) ..
filiarum ANDRÁSSY

Remarks

Prodorylaimus filiarum. – No differences can be stated between *P. gurvitschi* ELIAVA, 1975 and *P. filiarum* ANDRÁSSY, 1964: the measurements of body, the length of spear and tail, and also the number of supplements are the same in both species. ELIAVA's species is consequently a junior synonym of *filiarum*.

Prodorylaimus longicaudatoides. – There is no doubt about the identity of *P. kralli* THALOLIKHIN, 1975 and *P. longicaudatoides* ALTHER, 1968. I could examine one female and two males from the type material, kindly sent by Dr. THALOLIKHIN, and concluded that the Russian author has overlooked the length of the spear. In the original description (1975) as well as in a later paper (1980) he mentioned 75–80 μ m for the length of spear against my 33–35 μ m. Besides, also the other characters of *kralli* correspond well to *longicaudatoides*.

Genus *Prodorylaimium* ANDRÁSSY, 1969

Dorylaimidae, Prodorylaiminae. Body 1.1 to 2.5 mm long, moderately slender. Cuticle smooth or very finely striated. Lips slightly separate, offset. Amphids broad, funnel-shaped. Spear straight or slightly sinuate, 14 to 26 μ m long, 1.3–1.8 times longer than labial diameter; aperture occupying 1/3 of its length. Guiding ring thin, located less than one-head diameter behind anterior body end. Oesophagus widened in or somewhat behind the middle. Prerectum in females short (2–3 anal diameters), in males originating level with the anterior supplements. Female gonads amphidelphic, vulva pre-equatorial (in 38–45%), with sclerotized lips. Testes two, spermatozoa fusiform. Spicula dorylaimoid. Supplements 6 to 10, spaced; precloacal space shorter or longer than spicula. Tail in both sexes similar, filiform, 5 to 26 times as long as anal body diameter, in males not shorter than in females. Both sexes equally common.

Type-species: *Dorylaimus brigdammensis* DE MAN, 1876 = *Prodorylaimium brigdammense* (DE MAN, 1876) ANDRÁSSY, 1969.

This genus is similar to *Prodorylaimus* ANDRÁSSY, 1959 but its supplements are spaced and less in number.

The *Prodorylaimium* species live in the soil or in limnic habitats, and are known in Europe (2 species) and Asia (3 species). The most common species, *P. brigdammense*, has been recorded from 20 countries or states.

Four species:

- P. alpinum*** ANDRÁSSY, 1978
P. brigdammense (DE MAN, 1876) ANDRÁSSY, 1969
Dorylaimus brigdammensis DE MAN, 1876
Prodorylaimus brigdammensis (DE MAN, 1876) GOODEY, 1963
P. goaense AHMAD & JAIRAJPURI, 1985
P. stenosoma (DE MAN, 1876) ANDRÁSSY, 1973
Dorylaimus stenosoma DE MAN, 1876
Dorylaimus brigdammensis apud DE MAN, 1884 (partim); LOOF, 1961

Key to species of Prodorylaimium

- 1 Supplements 9–10, the posteriormost of them levelling with the spicula. — ♂: L = 1.1–1.3 mm; a = 35–36; b = 4.3–4.6; c = 8.7–10; c' = 5–6; PO: 9–10. ♀ unknown. (Nepal, Korea) **alpinum** ANDRÁSSY
 — Supplements 6–8, the posteriormost of them located before the spicula 2
- 2 Spear 13–14 μm, hardly longer than labial width. — ♀: L = 1.5–1.7 mm; a = 38–45; b = 4.7–5.7; c = 4.5–6.0; V = 38–45%; c' = 8–10. ♂: L = 1.2–1.5 mm; a = 35–45; b = 3.9–5.0; c = 5.0–6.5; PO: 6–8. (Holland, Federal Germany, Denmark, Poland, Switzerland, Hungary, Rumania, Spain, France, Italy, Soviet Union [Russia, Lithuania, Georgia, Uzbekistan, Azerbaijan, Tadzhikistan], India, Taiwan, Japan, Sumatra, Suriname) **brigdammense** (DE MAN)
 — Spear 20–26 μm, nearly twice as long as labial width 3
- 3 Tail 18–26 times as long as anal diameter; spear 25–26 μm. — ♀: L = 1.6–2.0 mm; a = 44–55; b = 4.2–4.9; c = 3.1–3.8; V = 41–43%; c' = 18–26. ♂: L = 1.7 mm; a = 39; b = 4.4; c = 3.2; PO: 8. (India) **goaense** AHMAD & JAIRAJPURI
 — Tail 8–10 times as long as anal diameter; spear 20 μm. — ♀: L = 1.8–2.5 mm; a = 38–50; b = 5.2–6.3; c = 4.7–6.5; V = 39–42%; c' = 8–10. ♂: L = 1.9–2.5 mm; a = 43–48; b = 5.8–6.7; c = 6–7; PO: 6–7. (Holland) **stenosoma** (DE MAN)

Remarks

Prodorylaimium alpinum. — I found this species recently in Korea, Nampo Vando, near Pongyan, in soil around grass roots, June 1984, one male and two juveniles. ♂: L = 1.3 mm; a = 36; b = 4.6; c = 10; c' = 5; supplements 9, the last of them at level of the spicula; spear 16 μm long; spicula 38 μm long.

Genus *Protodorylaimus* gen. n.

Dorylaimidae, Prodorylaiminae. Body 2.5 to 4.8 mm long, excessively slender (a = 64 to 81). Cuticle moderately thick, smooth or very finely annulated. Head not offset, lips hardly separate. Amphids funnel-shaped. Spear straight, 10–12 μm, equal with labial diameter. Guiding ring simple, thin, lying closer than one-head diameter to the anterior end. Oesophagus expanded near its middle. Prerectum of both sexes unusually long, 15–25 times as long as anal body width, in males beginning very far before the supplements. Female genital organ amphidelphic, vulva longitudinal and pre-equatorial (in 38–41%). Testes paired. Spicula dorylaimoid. Supplements contiguous, 15 to 22 in number;

preloacal space longer than spicula. Tail in both sexes similar, filiform, 10–14 times as long as anal body diameter.

Type-species: *Prodorylaimus dalmassoi* LOOF, 1985 = *Protodorylaimus dalmassoi* (LOOF, 1985) comb. n.

This genus is similar to *Prodorylaimus* ANDRÁSSY, 1959 in general habit but differs from that by the very slender body, the short and weak spear and the extremely long prerectum in both sexes.

As far as known the *Protodorylaimus* species live in the soil and occur in Europe and Asia.

Two species:

P. dalmassoi (LOOF, 1985) comb. n.

Prodorylaimus dalmassoi LOOF, 1985

P. kazakhstanicus (SAGITOV, 1973) comb. n.

Prodorylaimus kazakhstanicus SAGITOV, 1973

Key to species of Protodorylaimus

- 1 Body 4–5 mm long; supplements 21–22. — ♀: L = 4.0–4.8 mm; a = 73–81; b = 6.8–7.9; c = 9.4–14; V = 38–41%; c' = 12–14. ♂: L = 4.5–4.8 mm; a = 65–80; b = 7.8–8.1; c = 11–14; PO: 21–22. (France) *dalmassoi* (LOOF)
— Body 2.5–3 mm long; supplements 15. — ♀: L = 2.5–2.6 mm; a = 64–65; b = 5.2–5.8; c = 6.5–7.5; V = 38–40%; c' = 10–14. ♂: L = 2.7 mm; a = 66; b = 5.9; c = 8.6; PO: 15. (Soviet Union: Kazakhstan) *kazakhstanicus* (SAGITOV)

Remarks

Protodorylaimus dalmassoi. — I could examine a female paratype specimen kindly sent by Dr. LOOF. The prerectum was more than 800 μ m long, about 25-fold of anal body diameter. Such an enormous length of the prerectum is so unusual within the family Dorylaimidae that this phenomenon alone may be enough to separate *dalmassoi* from the members of *Prodorylaimus* at generic level.

Subfamily DORYLAIMINAE DE MAN, 1876

Dorylaimidae. Large nematodes, to 8.5 mm. Cuticle provided with conspicuous longitudinal ridges, 28 to 60 in number on mid-body region. Spear strong, straight, guiding ring double, tall. Spermatozoa fusiform, spicula dorylaimoid. Supplements small and numerous, arranged in a continuous row or in two groups. Tail of sexes dissimilar: in females elongate to filiform, in males very short and broadly rounded.

Two genera (with 32 species):

Dorylaimus DUJARDIN, 1845

Ischiodorylaimus ANDRÁSSY, 1969

Key to genera of Dorylaiminae

- 1 Supplements arranged in two groups connected by some free supplementary papillae **Ischiodorylaimus** ANDRÁSSY
— Supplements contiguous, arranged in an unbroken row **Dorylaimus** DUJARDIN

Genus *Dorylaimus* DUJARDIN, 1845

Dorylaimidae, Dorylaiminae. Body large, between 2.2 and 7.5 mm. Cuticle generally thick, provided with prominent longitudinal ridges, 28 to 60 in number. Lips hardly — rarely well — separate, labial region more or less offset. Amphids broad, funnel-shaped. Spear straight, strong, 35 to 63 (in one case 24) μm long, 2–3 times as long as cephalic diameter; aperture occupying 1/3 to almost 1/2 spear length. Guiding ring always double, located 1–1.5 head diameters from anterior body end. Oesophagus widened near the middle. Prerectum in females moderately long, in males longer, beginning well before the supplements. Female genital organ amphidelphic, strongly developed. Vulva predominantly pre-equatorial (in 34–51%), with sclerotized lips. Testes double, spermatozoa oval to fusiform. Spicula dorylaimoid, fairly slender and large (to 140 μm). Supplements small, very dense and numerous (22 to 62). Preloacal space mostly twice as long as spicula. Tail of sexes different: in females elongate-conoid to filiform (4–10 anal diameters, only in one species shorter), in males short and broadly rounded. Males almost as common as females.

Type-species: *Dorylaimus stagnalis* DUJARDIN, 1845 (sensu THORNE & SWANGER, 1936 and subsequent authors).

The members of this genus inhabit limnic biotopes, but they may occur also in moist soil and moss. They are distributed all over the world, only Australia and the Antarctica seem to be free of them. According to our present-day knowledge Europe is represented by 8, Asia by 11, Africa by 10, North America by 5 and South America by 2 species. The most common form is *Dorylaimus stagnalis* having been recorded from 49 countries or states.

Twenty-four species:

D. afghanicus ANDRÁSSY, 1960

D. alaeus THORNE, 1939

D. asymphydorus ANDRÁSSY, 1969

D. carinatus THORNE & SWANGER, 1936

D. conicus ANDRÁSSY, 1981

Dorylaimus conurus ANDRÁSSY, 1978 nec THORNE, 1939

D. crassus DE MAN, 1884

Dorylaimus stagnalis crassus DE MAN, 1884 (MICOLETZKY, 1922)

Dorylaimus stagnalis fecundus crassus DE MAN, 1884 (MICOLETZKY, 1922)

Dorylaimus stagnalis fecundus pseudocrassus MICOLETZKY, 1925

Mesodorylaimus crassus (DE MAN, 1884) GOODEY, 1963

D. fodori sp. n.

D. geraerti BAQRI & JANA, 1986

D. gigas KLEYNHANS, 1970

D. helveticus STEINER, 1919

Dorylaimus fecundus helveticus STEINER, 1919

D. lineatus ALTHERR & DELAMARE DEBOUTTEVILLE, 1972

D. macroproctus ALTHERR, 1963

D. montanus STEFANSKI, 1923

Dorylaimus stagnalis montanus STEFANSKI, 1923

Dorylaimus paradoxus ELIAVA, 1967 (syn. n.)

D. numidicus sp. n.

- D. pachys** ANDRÁSSY, 1970
D. popus GAGARIN, 1981
D. siddiqii AHMAD & JAIRAJPURI, 1982
D. stagnalis DUJARDIN, 1845
Dorylaimus stagnalis fecundus multipapillatus MICOLETZKY, 1922
Dorylaimus stagnalis bonensis RAHM, 1925
Enoplus liratus SCHNEIDER, 1866
Dorylaimus liratus (SCHNEIDER, 1866) ÖRLEY, 1880
Dorylaimus robustus DE MAN, 1876
Dorylaimus striatus DADAY, 1894
Dorylaimus saprophilus PETERS, 1930
Mesodorylaimus saprophilus (PETERS, 1930) GOODEY, 1963
Laimydorus saprophilus (PETERS, 1930) SIDDIQI, 1969
Dorylaimus innovatus JANA & BAQRI, 1982 (syn. n.)
D. stekhoveni BAQRI & COOMANS, 1973
Dorylaimus stagnalis apud SCHUURMANS STEKHOVEN, 1944
D. stenus ANDRÁSSY, 1970
D. stephani ANDRÁSSY, 1969
D. tepidus ANDRÁSSY, 1959
Dorylaimus stagnalis filiformis KREIS, 1924 nec BASTIAN, 1865
D. thornei ANDRÁSSY, 1969
D. unicus ANDRÁSSY, 1970

Key to species of Dorylaimus

- 1 Number of longitudinal ridges between 50 and 60 2
 - Number of longitudinal ridges less than 45 4
- 2 Cuticle unusually thick, 14–18 μm on mid-body; spear 60–63 μm long. - ♀: L = 3.9–4.9 mm; a = 26–30; b = 4.0–4.3; c = 11–14; V = 39–44%; c' = 5–6. ♂: L = 4.4 mm; a = 32; b = 3.7; c = 80; PO: 33. (South Africa) **pachys** ANDRÁSSY
 - Cuticle much thinner, at most 5 μm on mid-body; spear 50 μm or shorter 3
- 3 Female tail conoid, 4 anal diameters long. - ♀: L = 4.4 mm; a = 33; b = 5.0; c = 31; V = 48%; c' = 4. ♂: L = 4.2 mm; a = 36; b = 5.0; c = 71; PO: 50–54. (United States: Montana) **alaeus** THORNE
 - Female tail attenuated, 6–7 anal diameters long. - ♀: L = 4.1–5.1 mm; a = 40–46; b = 4.2–5.0; c = 16–18; V = 42–45%. ♂ unknown. (South Africa) **stenus** ANDRÁSSY
- 4 Female tail conoid and very short, 2–3 anal diameters. - ♀: L = 4.5–5.2 mm; a = 44–50; b = 4.6–4.8; c = 37–44; V = 47–51%; c' = 2.3–3. ♂: L = 3.6–4.6 mm; a = 44–48; b = 3.8–4.2; c = 85–94; PO: 26–36. (Nepal) **conicus** ANDRÁSSY
 - Female tail attenuated to filiform, at least 5 anal diameters 5
- 5 Body exceptionally slender (a = 60 or more) 6
 - Body not so slender 7
- 6 The biggest species in the genus, 6.5–7.5 mm; spicula 130 μm long. - ♀: L = 6.5–7.5 mm; a = 58–62; b = 6.1–6.9; c = 13–16; V = 36–40%; c' = 10. ♂: L = 5.2 mm; a = 52; b = 4.4; c = 122; PO: 33. (South Africa) **gigas** KLEYNHANS
 - Body about 5 mm; spicula 100 μm long. - ♀: L = 5.0–5.6 mm; a = 66–76; b = 5.1–6.0; c = 17–20; V = 36–43%; c' = 5–6. ♂: L = 4.3–4.5 mm; a = 55–60; b = 4.2–4.6; c = 97–108; PO: 35–39. (Switzerland, Hungary, Italy, Soviet Union [Moldavia, Uzbekistan], Kenya) **tepidus** ANDRÁSSY

- 20 Longitudinal ridges 28–29, unequally spaced (on both sides of body more densely arranged); vulva in 37–38%. – ♀: L = 3.5–4.2 mm; a = 33–40; b = 4.0–5.1; c = 14–15; V = 37–38%; c' = 6–7. ♂: L = 3.9 mm; a = 33; b = 4.5; c = 85; PO: 46. (South Africa) **unicus** ANDRÁSSY
- Longitudinal ridges 32–35, equally spaced; vulva in 46%. – ♀: L = 4.2 mm; a = 28; b = 4.1; c = 24; V = 46%. ♂: L = 3.6 mm; a = 28; b = 4.3; c = 67; PO: 36–55. (Switzerland, Poland, Austria, Czechoslovakia, Hungary, Yugoslavia, Spain, Soviet Union [Russia, Uzbekistan], Canada, United States [Montana]) **helveticus** STEINER
- 21 Spear 57–60 μ m long; on each side of vulva a small papilla present. – ♀: L = 4.4–5.1 mm; a = 48; b = 4.8–5.0; c = 14–17; V = 39–41%. ♂ unknown. (Switzerland) **macroproctus** ALTHERR
- Spear shorter, 46–53 μ m; no papillae by the vulva 22
- 22 Aperture occupying half the length of spear; spear with a dorsal fissure; supplements 28. – ♀: L = 4.7–5.7 mm; a = 41–45; b = 5.0–5.7; c = 15–18; V = 34–40%; c' = 5–6. ♂: L = 5.1 mm; a = 44; b = 5.0; c = 55; PO: 28. (Hungary, Italy, Spanish Sahara, South Africa) **asymphydorus** ANDRÁSSY
- Aperture occupying one-third of spear length; spear without dorsal fissure; supplements between 36 and 52 23
- 23 Spear conspicuously thicker than cuticle at the same level; vulva in 37–39%; supplements 52. – ♀: L = 3.4–4.0 mm; a = 38–42; b = 4.3–5.1; c = 12–15; V = 37–39%. ♂: L = 3.6 mm; a = 37; b = 4.1; c = 74; PO: 52. (Hungary, Afghanistan, Nepal, South Africa) **afghanicus** ANDRÁSSY
- Spear as thick as or thinner than cuticle at the same level; vulva in 42–47%; supplements 36–45. – ♀: L = 4.3–5.2 mm; a = 30–38; b = 4.8–5.7; c = 14–20; V = 42–47%; c' = 5–6. ♂: L = 3.9–5.0 mm; a = 30–35; b = 4.5–5.4; c = 70–110; PO: 36–45. (Holland, Federal and Democratic Germany, Denmark, Iceland, Greenland, Sweden, Poland, Switzerland, Czechoslovakia, Hungary, Yugoslavia, Portugal, Spain, Italy, Turkey, Soviet Union [Russia, Ukraine, Moldavia, Estland, Lithuania, Georgia, Uzbekistan, Kazakhstan, Kirgizia, Tadzhikistan], Israel, Iran, India, Mongolia, Japan, Sudan, Cameroon, Mauritania, Upper Volta, Ivory Coast, Ethiopia, Uganda, Kenya, Tanzania, Zaire, Simbabwe, South Africa, Canada, United States [Washington, Utah, Colorado], Suriname, Brazil) **stagnalis** DUJARDIN

Remarks

Dorylaimus montanus. – As I supposed in my paper (1969, p. 197, Footnote), *Dorylaimus paradoxus* ELIAVA, 1967 is most probably identical with *Dorylaimus montanus* STEFANSKI, 1923. The only difference between them can be found in the structure of amphids: in *paradoxus* they are provided with some flap-like extensions. As such a phenomenon is quite strange for the family Dorylaimidae, we may suppose that those “flaps” were only secretion-outflows.

Dorylaimus stagnalis. – I add *Dorylaimus innovatus* JANA & BAQRI, 1982 as a new synonym to *Dorylaimus stagnalis* DUJARDIN, 1845. The measurements, habit, length of spear, shape of head, number of supplements etc. all are identical in both species.

Genus *Ischiodorylaimus* ANDRÁSSY, 1969

Dorylaimidae, Dorylaiminae. The largest nematodes within the family: 6 to 8.5 mm (only rarely smaller: 4 mm). Cuticle usually very thick (to 20 μ m on mid-body), provided with longitudinal ridges, 28–56 in number. Lips hardly separate, head slightly offset. Amphids funnel-shaped. Spear straight, strong, 46 to 106 μ m long, 2–3 times as long as labial diameter; aperture occupying 1/3 to 2/5 of its length. Guiding ring wide, double, located more than one-head diameter from anterior body end. Oesophagus generally expanded before the middle. Prerectum in females 4–10 times, in males 15–25 times as long as anal body width; in males beginning far before the supplements. Female genital organ amphidelphic, vulva longitudinal, pre-equatorial (in 27 to 44%), with sclerotized lips and some ventral papillae on both sides. Testes

two, spermatozoa fusiform. Spicula dorylaimoid, large and slender, 90 to 172 (!) μm . Supplements arranged in two dense groups or fascicles connected by a row of separate supplementary papillae (8–13 in number). Preloacal space 1.5–2 times as long as spicula. Tail with sexual dimorphism: in females elongate conoid to attenuate, 2.5–8 anal diameters long, in males short and broadly rounded. Males in general as common as females.

Type-species: *Dorylaimus gulliver* ANDRÁSSY, 1964 = *Ischiodyrilyaimus gulliver* (ANDRÁSSY, 1964) ANDRÁSSY, 1969.

Ischiodyrilyaimus much resembles *Dorylaimus* DUJARDIN, 1845 but the genital supplements of males are differently arranged. Besides, the body is in general bigger, the spear and prerectum longer, and the longitudinal vulva is accompanied by small papillae.

Limnic nematodes. Of the eight species two occur in Europe, one in Asia and five in Africa.

Eight species:

- I. bathypyla** ANDRÁSSY, 1970
- I. cognatus** ANDRÁSSY, 1983
- I. gulliver** (ANDRÁSSY, 1964) ANDRÁSSY, 1969
Dorylaimus gulliver ANDRÁSSY, 1964
- I. loeffleri** (ANDRÁSSY, 1964) ANDRÁSSY, 1969
Dorylaimus loeffleri ANDRÁSSY, 1964
- I. novus** BAQRI & JANA, 1986
- I. robustus** ZULLINI, 1974
- I. tessares** KLEYNHANS, 1970
- I. ugandanus** ANDRÁSSY & BANAGE in ANDRÁSSY, 1969

Key to species of Ischiodyrilyaimus

- 1 Cuticle with 54–56 longitudinal ridges; spear 96–106 μm long. – ♀: L = 6.0–7.6 mm; a = 39–47; b = 3.7–4.5; c = 11–13; V = 39–44%; c' = 7–8. ♂: L = 6.7–7.6 mm; a = 35–39; b = 3.8–4.1; c = 100–115; PO: 10–13+10–12+11–13. (Kenya) **loeffleri** (ANDRÁSSY)
- Cuticle with 28–34 longitudinal ridges; spear shorter than 80 μm 2
- 2 Cuticle very thick, 13–19 μm on mid-body, at level of spear as thick as or thicker than the latter 3
- Cuticle thinner, 4–12 μm on mid-body, at level of spear conspicuously thinner than the latter. 6
- 3 Vulva deeply sunk in body contour. – ♀: L = 6.3–7.8 mm; a = 46–52; b = 5.5–7.0; c = 22–28; V = 27–35%; c' = 5. ♂ unknown. (South Africa) **bathypyla** ANDRÁSSY
- Vulva not sunk in body contour 4
- 4 Body slender; copulatory hump before the supplements strongly developed. – ♀: L = 5.8–7.4 mm; a = 40–46; b = 4.7–5.2; c = 16–24; V = 37–39%; c' = 4–5. ♂: L = 4.6–6.0 mm; a = 36–44; b = 3.6–4.6; c = 90–110; PO: 6–9+8–12+8–10. (Uganda) **ugandanus** ANDRÁSSY & BANAGE
- Body plump; copulatory hump before the supplements weak 5
- 5 Supplements 20+5+14; female tail 3–4 anal diameters long. – ♀: L = 4.5 mm; a = 35; b = 4.7; c = 19; V = 42%; c' = 3.6. ♂: L = 4.1 mm; a = 31; b = 4.3; c = 88; PO: 20+5+14. (India) **novus** BAQRI & JANA
- Supplements 9+13+18; female tail 5–6 anal diameters long. – ♀: L = 6.1–6.7 mm; a = 26–34; b = 5.1–5.8; c = 15–19; V = 35–39%; c' = 5–6. ♂: L = 5.4 mm; a = 28; b = 5.2; c = 107; PO: 9+13+18. (Italy) **robustus** ZULLINI

- 6 Male preectum very long, originating well before the supplements 7
 - Male preectum shorter, originating within the row of supplements (or only a little before that) 10
- 7 Supplements arranged in two groups with some intermediate elements
 Calodorylaimus ANDRÁSSY 8
 - Supplements arranged in an unbroken row 8
- 8 Supplements spaced; guiding ring single; body small, near 1 mm .. **Miodorylaimus** ANDRÁSSY
 - Supplements contiguous; guiding ring double; body mostly longer than 2 mm 9
- 9 Conspicuous yellowish spots present around the basis of spear; male tail comparatively narrow, conoid-rounded, ventrally bent **Crocodylaimus** gen. n.
 - No yellowish spots around the basis of spear; male tail plump, more or less straight
 Laimydorus SIDDIQI
- 10 Spear as long as or longer than two head diameters; guiding ring double
 Paradorylaimus ANDRÁSSY
 - Spear much shorter than two head diameters; guiding ring single 11
- 11 Spicula with small spurs near the distal tip **Calcaridorylaimus** ANDRÁSSY
 - Spicula without spurs near the distal tip **Mesodorylaimus** ANDRÁSSY

Genus *Idiodorylaimus* ANDRÁSSY, 1969

Dorylaimidae, Laimydorinae. Large animals, between 2 and 6.7 mm. Cuticle smooth on its surface* but prominently annulated in its inner layer; thick (to 10 μ m). Lips hardly separate, labial region continuous with neck or slightly offset. Amphids not too large, funnel-shaped. Spear straight, strong, 29 to 70 μ m long, 1.5–2 times as long as cephalic diameter; aperature occupying 1/3 or 2/5 of its length. Guiding ring double, tall, located somewhat farther from anterior body end than one head diameter. Oesophagus expanded somewhat before the middle. Prerectum in females 4–10 times as long as anal body width, in males longer, beginning far before the supplements. Female genital organ amphidelphic, vulva pre-equatorial (in 40–49%), longitudinal, with sclerotized lips. Testes two, spermatozoa fusiform. Spicula dorylaimoid, large and slender, 47 to 150 μ m long. Supplements contiguous, 19 to 37 in number. Preloacal space longer than spicula. Tail different in sexes: elongate-conoid to filiform in females (5–10 anal diameters), short and bluntly rounded in males. Males approximately as common as females.

Type-species: *Dorylaimus annulatus* DADAY, 1905 = *Idiodorylaimus annulatus* (DADAY, 1905) ANDRÁSSY, 1969.

Idiodorylaimus resembles *Laimydorus* SIDDIQI, 1969 (double guiding ring, very long male prerectum, contiguous supplements, large body) but differs from that in the conspicuous transverse striation of the cuticle – a unique phenomenon within the whole family.

Aquatic nematodes. As far as known, the genus predominantly occurs in the Neogæan region; two species are palæarctic.

Six species:

I. *annulatiformis* LOOF, 1973

Dorylaimus annulatus apud LOOF, 1964; LOOF & COOMANS, 1970

* In one species provided with longitudinal ridges.

- I. annulatus** (DADAY, 1905), ANDRÁSSY, 1969
Dorylaimus annulatus DADAY, 1905
Mesodorylaimus annulatus (DADAY, 1905) GOODEY, 1963
- I. homalopapillatus** (KREIS, 1932) ANDRÁSSY, 1969
Dorylaimus homalopapillatus KREIS, 1932
Actinolaimoides homalopapillatus (KREIS, 1932) ANDRÁSSY, 1960
- I. kreisi** LOOF, 1973
Dorylaimus annulatus apud KREIS, 1932
- I. novaezealandiae** (COBB, 1904) ANDRÁSSY, 1969
Dorylaimus novaezealandiae COBB, 1904
Mesodorylaimus novaezealandiae (COBB, 1904) GOODEY, 1963
- I. robustus** GAGARIN, 1985

Key to species of Idiodorylaimus

- 1 Cuticle with 35–40 longitudinal ridges. — ♀: L = 3.7 mm; a = 44; b = 4.8; c = 13; V = 42 %; ♂: L = 3.3–3.8 mm; a = 44–51; b = 4.8–5.4; c = 109–132; PO: 32–34. (Venezuela, Suriname) **annulatiformis** LOOF
- Cuticle without longitudinal ridges 2
- 2 Large species, between 4.5 and 7 mm; spear robust, much thicker than cuticle at the same level 3
- Smaller species, to 3.3 mm; spear slenderer, about as thick as cuticle at the same level 5
- 3 Body length about 7 mm; supplements 29. — ♀: L = 6.7 mm; a = 36; b = 5.0; c = 20; V = 45%; c' = 5. ♂: L = 6.4 mm; a = 43; b = 4.5; c = 125; PO: 29. (United States [Washington D. C.], New Zealand) **novaezealandiae** (COBB)
- Body length about 5 mm; supplements over 30 4
- 4 Spear 70 μm long; male tail blunt. — ♀ unknown. ♂: L = 5.1 mm; a = 30; b = 3.6; c = 90; PO: 37. (Paraguay) **annulatus** (DADAY)
- Spear 50 μm long; male tail more conoid. — ♀: L = 4.7–5.1 mm; a = 26–28; b = 4.9–5.4; c = 16; V = 40–43%; c' = 5–6. ♂: L = 4.4 mm; a = 30; b = 4.3; c = 90; PO: 32. (Soviet Union: Russia) **robustus** GAGARIN
- 5 Spear 29–31 μm long; spicula 47–55 μm long. — ♀: L = 2.0–2.7 mm; a = 24–33; b = 4.3–5.1; c = 10–13; V = 43–49%; c' = 7. ♂: L = 1.9–2.3 mm; a = 26–27; b = 4.3–4.5; c = 74–86; PO: ? (Paraguay) **homalopapillatus** (KREIS)
- Spear 34–40 μm long, spicula 65–70 μm long. — ♀: L = 2.8–3.3 mm; a = 35–41; b = 4.6–5.2; c = 9.6–11.5; V = 41–45 %; c' = 8–10. ♂: L = 2.6–2.9 mm; a = 34–37; b = 4.6–4.7; c = 98–105; PO: 19–21. (Paraguay) **kreisi** LOOF

Remarks

Idiodorylaimus annulatiformis. — This species differs from the other representatives of the genus in having conspicuous longitudinal ridges on the cuticle, a phenomenon that occurs in the subfamily Dorylaiminae only. Regarding this character, LOOF's species ought to be separated at generic level from the other *Idiodorylaimus* species, I accept, however, LOOF's proposal (1973) to leave *annulatiformis* in the genus *Idiodorylaimus*. There is no doubt that *annulatiformis* is closely related with the other South American forms of the genus and all they have developed most probably in one and the same evolutionary line.

Idiodorylaimus novaezealandiae. — LOOF (1973) questioned whether this species was a true *Idiodorylaimus*, since COBB (1904) did definitely not mention any annulation of the cuticle. THORNE and SWANGER (1936) described under the same name, *novaezealandiae*, a female specimen from the United States which does belong without doubt to *Idiodorylaimus* (the cuticle shows a distinct and loose inner striation). Until COBB's species will be rediscovered in the type locality, we should consider both the nematode of COBB and that of THORNE and SWANGER to be conspecific.

Genus *Laimydorus* SIDDIQI, 1969

Dorylaimidae, Laimydorinae. Body generally over 2 mm (to 5.6 mm), slender to very slender. Cuticle smooth, moderately thick, occasionally very thick (to 9–10 μm). Lips slightly separate, continuous with neck or more or less offset. Amphids large, caliciform. Spear straight, varying in length from 19 to 70 μm , 1.2–2 times as long as cephalic diameter; aperature occupying 1/3 of its length or so. Guiding ring double, located in general about one-head diameter from anterior body end. Oesophagus enlarged in or behind its middle. Prerectum well developed, in females 4–12 times as long as anal body width, in males always originating before the supplements. Female gonads amphidelphic, vulva predominantly pre-equatorial (in 32–53%). Testes two, spermatozoa fusiform. Spicula dorylaimoid. Supplements contiguous, 20 to 47 in number. Female tail attenuated to filiform, 2–14 times as long as anal diameter, male tail short and rounded. Males nearly as common as females.

Type-species: *Dorylaimus prolificus* THORNE & SWANGER, 1936 = *Laimydorus prolificus* (THORNE & SWANGER, 1936) SIDDIQI, 1969.

In general appearance *Laimydorus* much resembles *Dorylaimus* DUJARDIN, 1845, the cuticle is, however, devoid of longitudinal ridges. Besides, the number of copulatory supplements is generally lower than that of *Dorylaimus* (20–35 versus 22–62). *Laimydorus* comes close also to *Mesodorylaimus* ANDRÁSSY, 1959 in some respects (especially the smaller species) but the members of *Laimydorus* are comparatively bigger (2–5.6 versus 0.8–2.3 mm), they have a longer spear (19–70 versus 7–25 μm), a double guiding ring (in every case!), a male prerectum originating farther ahead, supplements being always contiguous and female gonads lying in an alternative position with the intestine (each gonad on the other side)*. Nevertheless, *Laimydorus* is badly in need of a revision.

The species of the genus *Laimydorus* live predominantly in aquatic or semi-aquatic biotopes. They are distributed almost all over the world: five continents serve as home for them: Europe (7 species), Asia (5 species), Africa (6 species), North America (8 species) and South America (2 species). The most common species is *Laimydorus pseudostagnalis*.

Twenty-three species:

- L. *afer* (ANDRÁSSY, 1964) ANDRÁSSY, 1986
Eudorylaimus afer ANDRÁSSY, 1964
- L. *agilis* (DE MAN, 1880) SIDDIQI, 1969
Dorylaimus agilis DE MAN, 1880
Dorylaimus carteri agilis DE MAN, 1880 (MICOLETZKY, 1922)
Mesodorylaimus agilis (DE MAN, 1880) GOODEY, 1963
- L. *aquatilis* (SKWARRA, 1921) comb. n.
Dorylaimus aquatilis SKWARRA, 1921
- L. *baldus* BAQRI & JANA, 1983
- L. *crassoides* (JÄGERSKIÖLD, 1908) SIDDIQI, 1969
Dorylaimus crassoides JÄGERSKIÖLD, 1908
Dorylaimus stagnalis crassoides JÄGERSKIÖLD, 1908 (MICOLETZKY, 1922)
Mesodorylaimus crassoides (JÄGERSKIÖLD, 1908) GOODEY, 1963

* I don't dare to say that this last character is constant.

- L. doryuris** (DITLEVSEN, 1911) ANDRÁSSY, 1986
Dorylaimus doryuris DITLEVSEN, 1911
Eudorylaimus doryuris (DITLEVSEN, 1911) ANDRÁSSY, 1959
- L. elephas** nom. n.
Dorylaimus callosus apud THORNE & SWANGER, 1936
- L. finalis** THORNE, 1975
Laimydorus crassus apud THORNE, 1974
Prodorylaimus finalis (THORNE, 1975) LOOF, 1985
Dorylaimus stagnalis apud KHERA, 1970, partim
- L. gazella** ANDRÁSSY, 1970
- L. halophilus** (DADAY, 1897) ANDRÁSSY, 1969
Dorylaimus halophilus DADAY, 1897
Tylencholaimus limnophilus DADAY, 1893, nec DE MAN, 1880
- L. keilini** (LEE, 1961) ANDRÁSSY, 1986
Dorylaimus keilini LEE, 1961
Mesodorylaimus keilini (LEE, 1961) ANDRÁSSY, 1969
- L. kherai** Baqri, 1985
Eudorylaimus odhneri apud KHERA, 1970, partim
- L. luettichau** (MEYL, 1957) SIDDIQI, 1969
Chrysonema luettichau MEYL, 1957
- L. multialaeus** (KHERA, 1970) BAQRI, 1985
Dorylaimus multialaeus KHERA, 1970
- L. pinguis** nom. n.
Dorylaimus crassus apud THORNE & SWANGER, 1936
- L. prolificus** (THORNE & SWANGER, 1936) SIDDIQI, 1969
Dorylaimus prolificus THORNE & SWANGER, 1936
Mesodorylaimus prolificus (THORNE & SWANGER, 1936) GOODEY, 1963
- L. proximus** (THORNE & SWANGER, 1936) SIDDIQI, 1969
Dorylaimus proximus THORNE & SWANGER, 1936
Mesodorylaimus proximus (THORNE & SWANGER, 1936) GOODEY, 1963
- L. pseudostagnalis** (MICOLETZKY, 1927) SIDDIQI, 1969
Dorylaimus pseudostagnalis MICOLETZKY, 1927
Mesodorylaimus pseudostagnalis (MICOLETZKY, 1927) GOODEY, 1963
Dorylaimus selangorensis DE MAN, 1929
Mesodorylaimus selangorensis (DE MAN, 1929) GOODEY, 1963
Dorylaimus filiformis papillatus IMAMURA, 1931, nec BASTIAN, 1865
Dorylaimus imamurai THORNE & SWANGER, 1936
Mesodorylaimus imamurai (THORNE & SWANGER, 1936) GOODEY, 1963
Dorylaimus exilicaudatus ALTHERR, 1953
- L. reversus** THORNE, 1974
- L. siddiqii** BAQRI & JANA, 1983
- L. stenopygus** (ANDRÁSSY, 1968) SIDDIQI, 1969
Dorylaimus stenopygus ANDRÁSSY, 1968
- L. unipapillatus** (DADAY, 1905) ANDRÁSSY, 1969
Dorylaimus unipapillatus DADAY, 1905
Mesodorylaimus unipapillatus (DADAY, 1905) GOODEY, 1963
Dorylaimus merogaster STEINER, 1916
Dorylaimus stagnalis merogaster STEINER, 1916 (MICOLETZKY, 1922)
Mesodorylaimus merogaster (STEINER, 1916) GOODEY, 1963

L. *vixamictus* (ANDRÁSSY, 1962) SIDDIQI, 1969

Dorylaimus vixamictus ANDRÁSSY, 1962

Prodorylaimus vixamictus (ANDRÁSSY, 1962) LOOF, 1985

Key to species of *Laimydorus*

- 1 Female tail short and digitate, only 2–3 times as long as anal body diameter 2
- Female tail longer, conoid to attenuate, 4–14 times as long as anal body diameter 6
- 2 The posterior digitate half of female tail dorsally curved 3
- The posterior digitate half of female tail straight or ventrally curved 4
- 3 Body almost 4 mm; female tail shorter than two anal diameters; lips amalgamated. – ♀: L = 3.8 mm; a = 55; b = 5.4; c = 61; V = 43%; c' = 1.7. ♂ unknown. (Kenya)
afer (ANDRÁSSY)
- Body about 2 mm; female tail longer than two anal diameters; lips distinct. – ♀: L = 2.1 mm; a = 42; b = 5.0; c = 28; V = 53%; c' = 2.5. ♂: L = 2.2 mm; a = 36; b = 5.2; c = 86; PO: 20. (United States: Dakota)
reversus THORNE
- 4 Tip of female tail spiculate. – ♀: L = 2.2 mm; a = 35; b = 4.3; c = 22; V = 50%; c' = 2. ♂ unknown. (Denmark)
doryuris (DITLEVSEN)
- Tip of female tail somewhat swollen, rounded 5
- 5 Body 4 mm long; cuticle very thick, at level of spear much thicker than that. – ♀: L = 4.0 mm; a = 28; b = 4.9; c = 17; V = 44%; c' = 3. ♂ unknown. (Germany) ...
aquatilis (SKWARRA)
- Body 2.5–3 mm long; cuticle at level of spear about as thick as that. – ♀: L = 2.5–3.0 mm; a = 24; b = 3.6; c = 15; V = 46%; c' = 3. ♂: L = 2.0–2.5 mm. (Hungary)
halophilus (DADAY)
- 6 Spear 40 μm or longer 7
- Spear 30 μm or shorter 13
- 7 Body longer than 4 mm 8
- Body shorter than 4 mm 11
- 8 Orifice occupying almost half the length of spear 9
- Orifice occupying 1/4 or 1/3 of the length of spear 10
- 9 Cuticle 12 μm on mid-body, thicker than spear at the same level; lips continuous with neck contour. – ♀: L = 5.6 mm; a = 28; b = 5.6; c = 13.5; V = 49%; c' = 6. ♂: unknown. (United States: Utah)
elephas nom. n.
- Cuticle 7 μm thick on mid-body, thinner than spear at the same level; lips distinctly offset. – ♀ unknown. ♂: L = 4.5 mm; a = 30; b = 3.8; c = 90; PO: 30. (Paraguay)
unipapillatus (DADAY)
- 10 Eggs numerous, to 72 in one female; ovoviviparous; female tail 7 anal diameters long. – ♀: L = 4.4 mm; a = 36; b = 5.9; c = 15; V = 47%; c' = 7. ♂: L = 4.0 mm; a = 37; b = 5.6; c = 100; PO: 24–27. (United States: Washington D. C.)
prolificus (THORNE & SWANGER)
- Eggs fewer; oviparous; female tail 5 anal diameters long. – ♀: L = 4.9 mm; a = 25; b = 4.7; c = 13.5; V = 46%; c' = 5. ♂ unknown. (United States: Utah)
pinguis nom. n.
- 11 Cuticle at level of spear much thinner than the latter. – ♀: L = 2.5–3.8 mm; a = 40–60; b = 4.1–5.6; c = 9–12; V = 46–49%; c' = 8–10. ♂: L = 2.5–3.8; a = 45–52; b = 4.2–4.7; c = 80–120; PO: 23–35. (Italy, Soviet Union [Russia, Uzbekistan], India, Japan, Ghana, Kenya, Jamaica)
pseudostagnalis (MICOLETZKY)
- Cuticle at level of spear as thick as or thicker than the latter 12
- 12 Female tail hooked on terminus. – ♀: L = 2.8–3.7 mm; a = 26; b = 4.3; c = 20; V = 45%; c' = 4. ♂: L = 2.9 mm; a = 24; b = 3.6; c = 48; PO: ? (Switzerland)
crassoides (JÄGERSKIÖLD)
- Female tail not hooked. – ♀: L = 3.8–4.1 mm; a = 33–42; b = 5.1–5.4; c = 15–17; V = 40–48%; c' = 5–7. ♂: L = 3.1 mm; a = 35; b = 4.4; c = 90; PO: 47. (India, United States [Nebraska])
finalis (THORNE)

- 13 Body extremely slender, a = 67–86; female prerectum very long, 10–12 anal diameters. – ♀: L = 3.0–3.5 mm; a = 67–86; b = 6.5–8.0; c = 21–29; V = 32–40%; c' = 6–7. ♂: L = 2.7–3.2 mm; a = 68–82; b = 6.3–7.3; c = 140–175; PO: 20–22. (Tanzania) *luettichai* (MEYER)
- Body not so slender (a less than 50); female prerectum 3 to 8 anal diameters 14
- 14 Spear distinctly thicker than cuticle at the same level 15
- Spear as thick as or thinner than cuticle at the same level 16
- 15 Tail longer, c = 5–6. – ♀: L = 2.3–2.5 mm; a = 32–35; b = 5.3–5.4; c = 5.4–5.5*; V = 42–43%. ♂ unknown. (Hungary) *vixamictus* (ANDRÁSSY)
- Tail shorter, c = 10–12. – ♀: L = 2.4–2.6 mm; a = 35–38; b = 5.3–5.9; c = 10–12; V = 43–47%; c' = 7–10. ♂: L = 2.0–2.2 mm; a = 37–39; b = 4.4–4.8; c = 96–109. (India) *multialaeus* (KHERA)
- 16 Supplements 31–33, the posterior one opposite to the proximal ends of spicula. – ♀: L = 2.4 mm; a = 39; b = 5.2; c = 7.7; V = 46%; c' = 12–15. ♂: L = 2.5 mm; a = 37; b = 4.5; c = 90; PO: 31–33. (United States: Virginia) *proximus* (THORNE & SWANGER)
- Supplements less than 30, the posterior one located before the spicula 17
- 17 Female tail 12–14 times as long as anal body diameter. – ♀: L = 2.7–2.8 mm; a = 40–49; b = 4.6–5.1; c = 7.8–8.2; V = 45–48%; c' = 12–14. ♂: L = 2.0–2.7 mm; a = 34–46; b = 4.2–4.7; c = 91–125; PO: 21–26. (India) *siddiqi* BAQRI & JANA
- Female tail 6–10 times as long as anal body diameter 18
- 18 Spear 18–21 μ m long. – ♀: L = 1.4–2.2 mm; a = 24–40; b = 4.0–5.2; c = 10–11; V = 44–45%; c' = 6–7. ♂: L = 2.0 mm; a = 41; b = 5.6; c = 83; PO: 23–26. (Austria, Sweden, Soviet Union [Russia, Novaja Zemlja, Lithuania, Armenia, Uzbekistan], United States [Utah], Brazil) *agilis* (DE MAN)
- Spear 24–29 μ m long 19
- 19 Anal region – both dorsally and ventrally – distinctly constricted. – ♀: L = 1.9–2.2 mm; a = 33–38; b = 4.0–4.3; c = 11–12; V = 41–43%; c' = 7–9. ♂: L = 1.8–1.9 mm; a = 29–34; b = 4.0–4.2; c = 89–98; PO: 28–29. (Congo Republic) *stenopygus* (ANDRÁSSY)
- Anal region not constricted 20
- 20 Spear 28–29 μ m long; supplements 28. – ♀: L = 2.4–2.6 mm; a = 38–41; b = 4.7–4.9; c = 14–15; V = 48–49%; c' = 6–7. ♂: L = 2.7 mm; a = 40; b = 5.0; c = 102; PO: 28. (South Africa) *gazella* ANDRÁSSY
- Spear 24–25 μ m long; supplements 24 21
- 21 Lips amalgamated, practically continuous with neck. – ♀: L = 2.1–2.4 mm; a = 34–36; b = 4.8–5.1; c = 11–12; V = 43–48%; c' = 7–8. ♂: L = 1.8 mm; a = 35; b = 4.3; c = 77; PO: 24. (India) *baldus* BAQRI & JANA
- Lips distinct, slightly offset. – ♀: L = 2.2 mm; a = 42; b = 4.0; c = 12; V = 45%; c' = 8–10. ♂: L = 2.1 mm; a = 39; b = 3.7; c = 98; PO: 24. (Nigeria) *keilini* (LEE)

Remarks

Laimydorus baldus. – This species is probably identical with *Laimydorus keilini* (LEE, 1961).

Laimydorus elephas. – *Dorylaimus callosus* apud THORNE and SWANGER (1936) is hardly identical with SKWARRA's species, *Dorylaimus callosus* SKWARRA, 1921: it is much bigger (5.6 vs. 3.6 mm) and has no longitudinal ridges on the cuticle. I am of LOOF's opinion (1985) who thought it improbable that SKWARRA might have mistaken the subcuticular muscles for the longitudinal ridges of the very thick cuticle. I propose the name "elephas" for the American species since it is very robust and pachyderm.

Laimydorus finalis. – It is quite likely that this species is identical with *Laimydorus crassoides* (JÄGERSKIÖLD, 1908).

* Probably also *L. kherai* (see Remarks).

Laimydorus kherai. — This species is close to *Laimydorus vicamictus* (ANDRÁSSY, 1962). Its identity cannot be stated however with certainty since the tail tip of the single female (holotype) was unfortunately broken (see BAQRI, 1985).

Laimydorus pinguis. — *Dorylaimus crassus* of THORNE and SWANGER (1936) is not conspecific with DE MAN's species, *Dorylaimus crassus* DE MAN, 1884: 1. it has no longitudinal ridges (*crassus* does in fact have 35–40 ridges according to LOOF (1961)); 2. its cuticle is comparatively thin, about 5 μm (that of *crassus* is 14 μm thick). I propose the new name *Laimydorus pinguis* for the species of THORNE and SWANGER.

Genus *Paradorylaimus* ANDRÁSSY, 1969

Dorylaimidae, Laimydorinae. Body 2–3 mm long, slender. Cuticle relatively thin, smooth, subcuticle often finely striated. Lips more or less separate, cehalic region slightly offset. Amphids funnel-shaped, large. Spear straight, comparatively long, 26 to 46 μm , two labial diameters or longer; orifice occupying about 1/3 of spear length. Guiding ring double, one-head diameter behind anterior body end. Oesophagus widened in or posterior to its middle. Prerectum short, in females 1–3 times as long as anal body width, in males beginning far within the range of supplements. Female gonads amphidelphic, vulva pre-equatorial (in 36–50%). Testes two, spermatozoa fusiform. Spicula dorylaimoid. Supplements 13–18, contiguous. Tail showing sexual dimorphism: in females long, filiform (6 to 50 anal diameters), male tail short and rounded.

Type-species: *Dorylaimus parafecundus* DE CONINCK, 1935 = *Paradorylaimus parafecundus* (DE CONINCK, 1935) ANDRÁSSY, 1969.

Paradorylaimus is closely related to *Laimydorus* SIDDIQI, 1969 but differs from that in having a comparatively longer spear, a short prerectum in both sexes and less numerous supplements (13–18 versus 20–35). It resembles also *Mesodorylaimus* ANDRÁSSY, 1959 but the body and the spear are longer and the guiding ring is double.

I originally described the genus *Paradorylaimus* as having longitudinal ridges on the cuticle. In the description of *Dorylaimus parafecundus*, the type-species, DE CONINCK (1935) said: "Cuticle avec des stries longitudinales distinctes, probablement 32 en nombre". LOOF and COOMANS re-examined quite recently (1986) the type specimens of *parafecundus* and found that those "stries longitudinales" were not cuticular ridges but only striae of the subcuticular musculature. On the basis of this they transferred *parafecundus* to the genus *Laimydorus*, and concluded that *Paradorylaimus* ANDRÁSSY, 1969 is consequently identical with *Laimydorus* SIDDIQI, 1969.

Nevertheless, I think that it would be better to retain *Paradorylaimus* as a valid genus. The presence or absence of longitudinal ridges does not alter the *status quo* of it, only the definition must be somewhat modified. The ominous species, *parafecundus* as well as some relative forms do differ still in some respects from the *Laimydorus* species: they have a longer spear, a smaller number of supplements and, especially, a much shorter prerectum both in females and in males. By separating these species from the "true" representatives of the genus *Laimydorus*, this genus would remain more homogeneous and would contain species with long prerectum beginning in males always well before the row of supplements.

The species of *Paradorylaimus* inhabit aquatic biotopes and are distributed in Asia and Africa.

Four species:

- P. jankowskyi** (THALOLIKHIN, 1977) comb. n.
Mesodorylaimus jankowskyi THALOLIKHIN, 1977
Laimydorus jankowskyi (THALOLIKHIN, 1977) ANDRÁSSY, 1986
- P. parafecundus** (DE CONINCK, 1935) ANDRÁSSY, 1969
Dorylaimus parafecundus DE CONINCK, 1935
Laimydorus parafecundus (DE CONINCK, 1935) LOOF & COOMANS, 1986
- L. tenuistriatus** (SCHNEIDER, 1935) comb. n.
Dorylaimus tenuistriatus SCHNEIDER, 1935
Laimydorus tenuistriatus (SCHNEIDER, 1935) LOOF & COOMANS, 1986
- L. wilhelmschneideri** (ANDRÁSSY, 1959) ANDRÁSSY, 1969
Dorylaimus sp. apud SCHNEIDER, 1937
Dorylaimus wilhelmschneideri ANDRÁSSY, 1959

Key to species of *Paradorylaimus*

- 1 Female tail exceedingly long, about 50 anal diameters. — ♀: L = 2.8 mm; a = 50; b = 5.7; c = 2.3; V = 36%; c' = 50. ♂ unknown. (Sumatra) **wilhelmschneideri** (ANDRÁSSY)
- Female tail at most 20 anal diameters long 2
- 2 Spear 26–28 μm long, rather thin; female tail 6–7 times as long as anal body width. — ♀: L = 2.1–2.9 mm; a = 42–52; b = 4.2–5.3; c = 13–18; V = 42–50%; c' = 6–7. ♂: L = 2.0–2.5 mm; a = 38–43; b = 3.8–4.3; c = 63–69; PO: 18. (Soviet Union: Baical Lake) **jankowskyi** (THALOLIKHIN)
- Spear 33–46 μm long; female tail 12–20 times as long as anal body width 3
- 3 Spear shorter, 33–36 μm ; vulva transverse. — ♀: L = 2.5–3.1 mm; a = 43–55; b = 4.9–5.4; c = 4.2–4.6; V = 42–45%; c' = 17–20. ♂: L = 2.0–2.6 mm; a = 36–47; b = 4.2–4.6; c = 61–84; PO: 13–18. (Ivory Coast) **tenuistriatus** (SCHNEIDER)
- Spear longer, 41–46 μm ; vulva longitudinal. — ♀: L = 2.8–2.9 mm; a = 36–39; b = 4.1–4.4; c = 4.6–5.3; V = 43–48%; c' = 13–14. ♂: L = 2.2–2.4 mm; a = 33–35; b = 3.3–3.6; e = 60–63; PO: 16–17. (Zaire). **parafecundus** (DE CONINCK)

Genus *Fuscheila* SIDDIQI, 1982

Dorylaimidae, Laimydorinae. Body moderately large, 1.2 to 2.5 mm. Cuticle fairly thick, practically smooth (with very fine striation only). Lips slightly separate, hardly offset. Amphids comparatively small. Atrium of mouth cavity provided with sclerotized pieces. Spear straight, thin-walled, 24–30 μm , one-and-a-half times as long as labial width; aperture 1/3 of its length. Guiding ring double, located one-head diameter from anterior body end. Oesophagus expanded near its middle. Prerectum short, only 1–1.5 anal body diameters. Female genital organ amphidelphic. Vulva small, transverse, pre-equatorial. Female tail attenuated, 10–24 times as long as anal diameter. Males not known, uteri without spermatozoa.

Type-species: *Fuscheila citrifera* SIDDIQI, 1982.

Fuscheila comes close to *Laimydorus* SIDDIQI, 1969 and *Paradorylaimus* ANDRÁSSY, 1969 but differs from those in having sclerotized rods at the beginning of the mouth cavity. Besides, *Fuscheila* seems to be monosexual.

Soil inhabiting nematodes. Both species have been recorded from South America.

Two species:

- F. *citrifera* SIDDIQI, 1982
- F. *godmanae* SIDDIQI, 1982

Key to species of Fusc Sheila

- 1 Head continuous with neck; body longer, 2–2.5 mm. — ♀: L = 2.0–2.5 mm; a = 37–42; b = 4.5–5.2; c = 3.2–4.6; V = 39–43%. ♂ unknown. (Colombia) *godmanae* SIDDIQI
- Head slightly offset; body shorter, 1.2–1.9 mm. — ♀: L = 1.3–1.8 mm; a = 26–35; b = 3.5–4.1; c = 3.9–7.6; V = 44–55%. ♂ unknown. (Colombia) *citrifera* SIDDIQI

Genus *Crocodyrilyaimus* gen. n.

Dorylaimidae, Laimyodorinae. Body of medium length, 1.4–3.5 mm, slender to very slender (a = 42 to 75). Cuticle relatively thin, smooth or very finely striated transversally. Lips amalgamated, head practically continuous with adjacent body. Amphids funnel-shaped. Spear straight, moderately long, 15–20 μm , 1.3–2.3 times as long as cephalic diameter; aperture occupying 1/3 of spear length. Guiding ring rather small, about one head diameter behind anterior body end. Four spindle-shaped yellowish bodies present near basis of spear. Oesophagus enlarged near middle or posterior to that. Prerectum of female 3–6 anal diameters long, that of male much longer, originating far before the supplements. Female genital organ amphidelphic. Vulva longitudinal or transverse, pre-equatorial (in 40–52%). Testes two, spermatozoa fusiform. Spicula dorylaimoid, more massive than in general. Supplements contiguous, 12 to 32 in number. Precloacal space mostly longer than spicula. Tail with sexual dimorphism: in females attenuated, 3–10 anal diameters long, in males short, more or less finger-shaped, ventrally bent (concave in its ventral contour) and rounded, on ventral surface with a subterminal blister. Females and males generally equally common.

Type-species: *Dorylaimus flavomaculatus* LINSTOW, 1876 — *Crocodyrilyaimus flavomaculatus* (LINSTOW, 1876) comb. n.

This genus resembles *Laimydorus* SIDDIQI, 1969 and *Mesodorylaimus* ANDRÁSSY, 1969, it can be, however, definitely separated from them. Its distinguishing characters are the slender body, the four yellowish spots around the basis of spear, the ventrally curved and narrowly rounded male tail and the presence of a blister-like structure on the latter.

Limnic or semi-aquatic nematodes, very active in movement. The genus is distributed in Europe, Asia, Africa, North and South America. The most common species is *Crocodyrilyaimus flavomaculatus*. ($\chi\rho\acute{o}\chi\epsilon\omicron\varsigma$ = yellow, saffron-coloured.)

Seven species:

C. *aequatorialis* sp. n.

C. *dadayi* (THORNE & SWANGER, 1936) comb. n.

Dorylaimus pusillus apud DADAY, 1905

Dorylaimus dadayi THORNE & SWANGER, 1936

Mesodorylaimus dadayi (THORNE & SWANGER, 1936) GOODEY, 1963

Laimydorus dadayi (THORNE & SWANGER, 1936) ANDRÁSSY, 1969

C. dimorphus sp. n.

C. fecundus (COBB, 1914) comb. n.

Dorylaimus fecundus COBB, 1914

Dorylaimus stagnalis fecundus COBB, 1914 (MICOLETZKY, 1922)

Mesodorylaimus fecundus (COBB, 1914) GOODEY, 1963

Laimydorus fecundus (COBB, 1914) ANDRÁSSY, 1986

C. flavomaculatus (LINSTOW, 1876) comb. n.

Dorylaimus flavomaculatus LINSTOW, 1876

Mesodorylaimus flavomaculatus (LINSTOW, 1876) GOODEY, 1963

Laimydorus flavomaculatus (LINSTOW, 1876) SIDDIQI, 1969

Dorylaimus incae STEINER, 1920

Dorylaimus filiformis incae STEINER, 1920 (MICOLETZKY, 1922)

Mesodorylaimus incae (STEINER, 1920) GOODEY, 1963

Laimydorus incae (STEINER, 1920) THORNE, 1974

C. maior nom. n.

Dorylaimus flavomaculatus apud THORNE & SWANGER, 1936

C. paraincae (THORNE, 1974) comb. n.

Laimydorus paraincae THORNE, 1974

Key to species of Crocodorylaimus

- 1 Larger species, 3–3.5 mm 2
– Smaller species, 1.5–2.3 mm 3
- 2 Female tail 3–4 anal body widths long; supplements 18–25. – ♀: L = 3.4 mm; a = 52; b = 6.3; c = 25; V = 43%; c' = 3–4. ♂: L = 3.5 mm; a = 71; b = 5.9; c = 100; PO: 18–25. (United States: Washington D. C.) **fecundus** (COBB)
- Female tail 7–9 anal body widths long; supplements 21–32. – ♀: L = 3.0 mm; a = 56–75; b = 6.3–6.7; c = 16–17; V = 40–46%; c' = 7–9. ♂: L = 2.6 mm; a = 62; b = 5.6; c = 111; PO: 21–32. (Hungary, United States [Utah]) **maior** sp. n.
- 3 Each side of vulva with some small ventral papillae 4
– No ventral papillae near vulva 5
- 4 Supplements 17–22; subterminal blister on male tail large and flat; larger species. – ♀: L = 2.0–2.2 mm; a = 41–44; b = 4.9–5.1; c = 11–13; V = 43–44%; c' = 7–8. ♂: L = 1.9–2.2 mm; a = 40–48; b = 4.4–4.7; c = 66–77; PO: 17–22. (Ecuador) **aequatorialis** sp. n.
- Supplements 12–14; subterminal blister on male tail small and convex; smaller species. – ♀: L = 1.6–1.7 mm; a = 42–47; b = 5.3–5.6; c = 8–12; V = 42–50%; c' = 8. ♂: L = 1.6–1.8 mm; a = 43–46; b = 5.0–5.6; c = 50–70; PO: 12–14. (Soviet Union [Russia], Mauretania, Paraguay) **dadayi** (THORNE & SWANGER)
- 5 Spear of both sexes different in length; in females 19–20 μ m, 2.1–2.3 head diameters, in males 13–14 μ m, 1.5–1.6 head diameters; supplements beginning level with anterior end of spicula. – ♀: L = 1.8–2.1 mm; a = 52–58; b = 5.0–5.3; c = 13–14; V = 44–45%; c' = 7–8. ♂: L = 1.4 mm; a = 44–48; b = 5.0–5.9; c = 57–66; PO: 14–15. (Vietnam). **dimorphus** sp. n.
- Spear of both sexes equal in length; supplements beginning at a distance before spicula 6
- 6 Vulva longitudinal; supplements slightly spaced. – ♀: L = 2.3 mm; a = 59; b = 5.8; c = 16; V = 49%; c' = 6–7. ♂: L = 2.4 mm; a = 59; b = 5.9; c = 75; PO: 14–16. (United States: South Dakota) **paraincae** THORNE
- Vulva transverse; supplements dense, contiguous. – ♀: L = 1.5–2.0 mm; a = 40–55; b = 4.0–5.5; c = 7–13; V = 45–52%; c' = 7–10. ♂: L = 1.4–1.9 mm; a = 44–60; b = 5–6; c = 70–80; PO: 13–18. (This species has been recorded from 21 countries or states but we cannot be sure that all the data refer to the true *flavomaculatus*. Occurrence with certainty: Federal Germany, Switzerland, Austria, Hungary, United States [South Dakota]) **flavomaculatus** (LINSTOW)

Remarks

Crocodyrilyaimus dadayi. — The *Laimydorus* spec. apud BAQRI and COOMANS (1973) is probably conspecific with *C. dadayi* (THORNE & SWANGER, 1936).

Crocodyrilyaimus secundus. — Although COBB did not say anything about yellowish spots around the basis of spear, the other characters of this species correspond very well to the criteria of *Crocodyrilyaimus*.

Crocodyrilyaimus flavomaculatus. — We can take it for certain that in the literature more than one species have been mixed under the name "*flavomaculatus*". Thus, the *flavomaculatus* described by THORNE and SWANGER (1936) obviously does not belong to LINSTOW's species. The measurements given by LINSTOW are as follows: L = 2.0 mm; a = 46; c = 9; the "true" *flavomaculatus* is to be found among the shorter species of the genus. The following data certainly refer to this species: HOFMÄNNER and MENZEL (1915), MICOLETZKY (1922, 1925), THORNE (1974). Besides, the species *Dorylaimus inca* STEINER, 1920 is conspecific with LINSTOW's *flavomaculatus*.

Crocodyrilyaimus maior. — As mentioned above, the *Dorylaimus flavomaculatus* apud THORNE and SWANGER, 1936 is not identical with the species of LINSTOW. Its body is longer (3 versus 1.5–2 mm), the tail is shorter (c = 17 versus 7–13) and the number of supplements is higher (21–32 versus 13–18). I propose the name *Crocodyrilyaimus maior* nom. n. for the species of the American authors. — I have found this species in Hungary with the following data: ♀: L = 3.03 mm; a = 75; b = 6.7; c = 16; V = 46%; c' = 9; spear 17 μ m long, 1.4 times as long as cephalic diameter; head 12 μ m wide; cuticle 1.8–2 μ m thick; oesophagus expanded in 58%; tail 192 μ m long; rectum 2 times, prerectum 5 times as long as anal body width; yellowish bodies 18 μ m long. Locality: Sirok in Hungary, Nyirjes Lake, moist soil with grass roots, August 1984.

Genus *Mesodorylaimus* ANDRÁSSY, 1959

Dorylaimidae, Laimydorinae. Body small to moderately long, 0.8 to 2.3 mm. Cuticle smooth or very finely annulated. Lips rounded or angular, head continuous with adjacent body or more or less offset. Amphids large, funnel-shaped. Spear straight, varying in length between 7 and 25 μ m; orifice occupying mostly 1/3 of the spear length. Guiding ring single, thin. Oesophagus widened in its middle or posterior to that. Prerectum varying in length, in males beginning before or, mostly, within the range of supplements. Posterior end of intestine often with a long, tongue-like structure. Female genital organ amphidelphic, each gonad lying on the same side of intestine. Vulva transverse or longitudinal, with sclerotized lips. Testes two, spermatozoa fusiform or sausage-shaped. Spicula dorylaimoid, 26 to 72 μ m long. Supplements 4 to 26 in number, contiguous or spaced. Tail with sexual dimorphism: in females more or less elongate, conoid or in anterior part convex-conoid, in posterior part slender, digitiform, straight or dorsally curved, varying in length between 1 to 20 anal body diameters; in males short and rounded. Females in general more common than males.

Type-species: *Dorylaimus mesonyctius* KREIS, 1930 (in sense of THORNE & SWANGER, 1936) = *Mesodorylaimus mesonyctius* (KREIS, 1930) ANDRÁSSY, 1959.

The genus resembles *Laimydorus* SIDDIQI, 1969 but its species are shorter, the spear is smaller, the guiding ring simple, and the supplements are fewer and, partly, spaced. As far as the number of species, *Mesodorylaimus* is by far the richest genus within the family Dorylaimidae, yet it is fairly homogeneous.

Although I published in a recent paper (ANDRÁSSY, 1986) a new concept of the genus *Mesodorylaimus*, I want to propose here some alterations to that, even if only little ones. The reason of these modifications is that in the present study the genus is not surveyed alone, as a taxonomic unit, but in respect to its relationship, i. e. together with the other members of the family Dorylaimidae.

The representatives of *Mesodorylaimus* predominantly live in terrestrial habitats, i.e. in the soil, but a good part of the species may occur in aquatic or semi-aquatic biotopes, too. They are distributed all over the world, including the Antarctic. They are especially common in Africa (29 species), Europe (29 species), North (27 species) and South America (26 species).

A hundred-and-three species :

- M. aberrans** LOOF, 1969
M. adalberti ANDRÁSSY, 1963
M. aduncus ANDRÁSSY, 1986
M. aegypticus (ANDRÁSSY, 1958) ANDRÁSSY, 1959
Dorylaimus aegypticus ANDRÁSSY, 1958
M. aequatorialis ANDRÁSSY, 1986
M. aestuarii (TIMM, 1952) ANDRÁSSY, 1959
Dorylaimus aestuarii TIMM, 1952
M. alpestris (THORNE, 1939) ANDRÁSSY, 1959
Dorylaimus alpestris THORNE, 1939
Mesodorylaimus vaalensis HEYNS & KRUGER, 1983
M. americanus ANDRÁSSY, 1986
Mesodorylaimus recurvus THORNE, 1974, nec ANDRÁSSY, 1964
M. angustus ANDRÁSSY, 1964
M. arcuatus ANDRÁSSY, 1986
M. baini BASSON & HEYNS, 1974
M. bastiani (BÜTSCHLI, 1873) ANDRÁSSY, 1959
Dorylaimus bastiani BÜTSCHLI, 1873
Dorylaimus macrourus LINSTOW, 1876
Dorylaimus langii COBB, 1888
Dorylaimus javanicus ZIMMERMANN, 1898
M. bastianoides (MEYL, 1961) ANDRÁSSY, 1967
Dorylaimus bastiani longicaudatus DADAY, 1894, nec BÜTSCHLI, 1874
Dorylaimus bastianoides MEYL, 1961
M. biroi (DADAY, 1899) ANDRÁSSY 1959
Dorylaimus biroi DADAY, 1899
Dorylaimus biroi zeylandicus LOOS, 1945
M. brassicus SONI & NAMA, 1981
M. brevidens THORNE, 1974
M. brevispicatus (SCHUURMANS STEKHOVEN, 1951) ANDRÁSSY, 1986
Dorylaimus brevispicatus SCHUURMANS STEKHOVEN, 1951
Eudorylaimus brevispicatus (SCHUURMANS STEKHOVEN, 1951) ANDRÁSSY, 1959
M. cardiacus THORNE, 1974
M. chekiangensis (WU & HOEPLI, 1929) ANDRÁSSY, 1986
Dorylaimus filiformis chekiangensis WU & HOEPLI, 1929
M. clavicaudatus (THORNE & SWANGER, 1936) ANDRÁSSY, 1959
Dorylaimus clavicaudatus THORNE & SWANGER, 1936
M. cognatus ANDRÁSSY, 1986
M. conurus (THORNE, 1939) GOODEY, 1963
Dorylaimus conurus THORNE, 1939
Laimydorus conurus (THORNE, 1939) SIDDIQI, 1969
Mesodorylaimus sabaudiensis JUGET, 1969

- M. cryptosperma** LOOF, 1969
Dorylaimus agilis apud THORNE & SWANGER, 1936
Laimydorus cryptosperma (LOOF, 1969) LOOF, 1985
- M. delicatus** LORDELLO, 1965
- M. dorni** LOOF, 1969
- M. deuberti** (ANDRÁSSY, 1958) GOODEY, 1963
Dorylaimus deuberti ANDRÁSSY, 1958
- M. dolomiticus** VINCIGUERRA, 1982
- M. dreyeri** (VAN DER LINDE, 1938) GOODEY, 1963
Dorylaimus dreyeri VAN DER LINDE, 1938
- M. effilatus** (SCHUURMANS STEKHOVEN & TEUNISSEN, 1938) ANDRÁSSY, 1959
Dorylaimus effilatus SCHUURMANS STEKHOVEN & TEUNISSEN, 1938
Laimydorus effilatus (SCHUURMANS STEKHOVEN & TEUNISSEN, 1938) ANDRÁSSY, 1969
- M. erdelyii** ANDRÁSSY, 1965
- M. exilis** (COBB, 1893) ANDRÁSSY, 1959
Dorylaimus exilis COBB, 1893
Dorylaimus filiformis exilis COBB, 1893 (MICOLETZKY, 1922)
- M. flagellatus** (WILLIAMS, 1959) ANDRÁSSY, 1960
Dorylaimus flagellatus WILLIAMS, 1959
- M. ghanae** ANDRÁSSY, 1965
- M. globiceps** LOOF, 1964
- M. graciosus** ANDRÁSSY, 1986
- M. guarani** ANDRÁSSY, 1968
- M. hofmaenneri** (MENZEL in HOFMÄNNER & MENZEL, 1914) GOODEY, 1963
Dorylaimus hofmaenneri MENZEL in HOFMÄNNER & MENZEL, 1914
Dorylaimus filiformis hofmaenneri MENZEL in HOFMÄNNER & MENZEL, 1914 (MICOLETZKY, 1922)
Laimydorus hofmaenneri (MENZEL in HOFMÄNNER & MENZEL, 1914) ANDRÁSSY, 1969
- M. imperator** LOOF, 1975
- M. importunus** BASSON & HEYNS, 1974
- M. intermedius** DASSONVILLE & HEYNS, 1984
- M. intervallis** (THORNE & SWANGER, 1936) ANDRÁSSY, 1959
Dorylaimus intervallis THORNE & SWANGER, 1936
- M. japonicus** (COBB in THORNE & SWANGER, 1936) ANDRÁSSY, 1987
Dorylaimus japonicus COBB in THORNE & SWANGER, 1936
Oxydirus japonicus (COBB in THORNE & SWANGER, 1936) ANDRÁSSY, 1960
Dorylaimus arvensis COBB in THORNE & SWANGER, 1936
Mesodorylaimus arvensis (COBB in THORNE & SWANGER, 1936) ANDRÁSSY, 1959
Mesodorylaimus musae GERAERT, 1962
- M. johanni** BASSON & HEYNS, 1974
- M. kamandeanus** BAQRI & COOMANS, 1973
Dorylaimus filiformis apud SCHUURMANS STEKHOVEN, 1944
- M. kittenbergeri** sp. n.
- M. kowyni** BASSON & HEYNS, 1974
- M. lissus** THORNE, 1974

- M. litoralis** LOOF, 1969
Mesodorylaimus prerectus THORNE, 1974
- M. lopadusae** VINCIGUERRA & LA FAUCI, 1978
- M. lourdesae** (LORDELLO, 1955) ANDRÁSSY, 1959
Dorylaimus lourdesae LORDELLO, 1955
- M. luci** BRZESKI & SZCZYGIEL, 1961
- M. macrophallus** THORNE, 1974
- M. macrospiculum** ZULLINI, 1987
- M. margaritifer** ANDRÁSSY, 1986
- M. margaritus** BASSON & HEYNS, 1974
- M. meridianus** ANDRÁSSY, 1963
- M. mesonyctius** (KREIS, 1930) ANDRÁSSY, 1959
Dorylaimus mesonyctius KREIS, 1930
Dorylaimus subulatus COBB in THORNE & SWANGER, 1936
Mesodorylaimus subulatus (COBB in THORNE & SWANGER, 1936) ANDRÁSSY, 1959
Aporclaimus subulatus (COBB in THORNE & SWANGER, 1936) BRZESKI, 1962
- M. mexicanus** ZULLINI, 1973
- M. meyli** (ANDRÁSSY, 1958) ANDRÁSSY, 1959
Dorylaimus meyli ANDRÁSSY, 1958
Drepanodorylaimus meyli (ANDRÁSSY, 1958) ANDRÁSSY, 1986
- M. nigritulus** (SCHNEIDER, 1937) ANDRÁSSY, 1959
Dorylaimus nigritulus SCHNEIDER, 1937
- M. nudus** (THORNE, 1939) ANDRÁSSY, 1959
Dorylaimus nudus THORNE, 1939
- M. obscurus** THORNE, 1974
- M. orientalis** ANDRÁSSY, 1970
- M. paetzoldi** ALTHERR, 1965
- M. parabastiani** (PAETZOLD, 1958) comb. n.
Dorylaimus parabastiani PAETZOLD, 1958
Laimydorus parabastiani (PAETZOLD, 1958) SIDDIQI, 1969
- M. paraguayensis** (KREIS, 1932) ANDRÁSSY, 1959
Dorylaimus paraguayensis KREIS, 1932
- M. paralitoralis** BASSON & HEYNS, 1974
- M. parasubtilis** (MEYL, 1957) ANDRÁSSY, 1959
Dorylaimus parasubtilis MEYL, 1957
- M. parasubulatus** (MEYL, 1954) ANDRÁSSY, 1959
Dorylaimus parasubulatus MEYL, 1954
- M. paulbuchneri** (MEYL, 1956) ANDRÁSSY, 1959
Dorylaimus paulbuchneri MEYL, 1956
- M. pendschikenticus** (TULAGANOV, 1949) ANDRÁSSY, 1959
Dorylaimus pendschikenticus TULAGANOV, 1949
- M. pizai** LORDELLO, 1965
- M. plicatus** ANDRÁSSY, 1986
- M. potus** HEYNS, 1963
- M. procerus** ANDRÁSSY, 1986
- M. pseudobastiani** LOOF, 1969
Dorylaimus bastiani apud THORNE & SWANGER, 1936
- M. pseudosubtilis** BASSON & HEYNS, 1974

- M. puellae** ANDRÁSSY, 1963
M. pulcher ANDRÁSSY, 1986
M. pusillus (COBB, 1893) ANDRÁSSY, 1959
Dorylaimus pusillus COBB, 1893
M. recurvus ANDRÁSSY, 1964
M. rhenanus ALTHERR, 1965
M. rotundolabiatus BASSON & HEYNS, 1974
M. sanctus BASSON & HEYNS, 1974
M. similibastiani ZELL, 1986
M. simplex THORNE, 1974
M. spengelii (DE MAN, 1912) ANDRÁSSY, 1959
Dorylaimus spengelii DE MAN, 1912
M. subtiliformis (ANDRÁSSY, 1959) ANDRÁSSY, 1959
Dorylaimus subtiliformis ANDRÁSSY, 1959
M. subtilis (THORNE & SWANGER, 1936) ANDRÁSSY, 1959
Dorylaimus subtilis THORNE & SWANGER, 1936
Dorylaimus krishnaraoi MOORTHY, 1938
Mesodorylaimus krishnaraoi (MOORTHY, 1938) GOODEY, 1963
M. subtiloides (PAETZOLD, 1958) ANDRÁSSY, 1959
Dorylaimus subtiloides PAETZOLD, 1958
M. sveltus (MEYL, 1957) ANDRÁSSY, 1959
Dorylaimus sveltus MEYL, 1957
M. sylphus (THORNE, 1939) GOODEY, 1963
Dorylaimus sylphus THORNE, 1939
Laimydorus sylphus (THORNE, 1939) SIDDIQI, 1969
M. szechenyii ANDRÁSSY, 1961
M. szunyoghyi ANDRÁSSY, 1968
M. tenellus (THORNE & SWANGER, 1936) ANDRÁSSY, 1959
Dorylaimus tenellus THORNE & SWANGER, 1936
M. thermae (COBB in HOEPPLI, 1926) GOODEY, 1963
Dorylaimus thermae COBB in HOEPPLI, 1926
M. tholocercus ANDRÁSSY, 1968
M. thorneiswangerae ANDRÁSSY, 1968
Dorylaimus biroi apud THORNE & SWANGER, 1936
M. transkeiensis BASSON & HEYNS, 1974
M. trapaeifructus ANDRÁSSY, 1986
M. usitatus BASSON & HEYNS, 1974
M. vulneratus ANDRÁSSY, 1986
M. vulvapapillatus BAGATURIA & ELIAVA, 1966

Key to species of Mesodorylaimus

- 1 Female tail 14–20 times as long as anal body diameter 2
 – Female tail at most 12 times as long as anal body diameter 7
 2 Body 1 mm long; core in tail articulate in its basis. – ♀: L = 1.0 mm; a = 35–38; b = 4.4–4.7; c = 3.9; V = 43–46%; c' = 18–20, ♂ unknown. (Mauritius) .. **flagellatus** (WILLIAMS)
 – Body 1.4–1.9 mm long; core in tail not articulate 3
 3 Lips angular, well offset. – ♀: L = 1.5–1.8 mm; a = 35–43; b = 4.6–5.5; c = 4–5; V = 41–46%; c' = 14–20. ♂: L = 1.0–1.3 mm; a = 27–39; b = 2.9–6.6; c = 57–83; PO: 11–14. (South Africa) **bainsi** BASSON & HEYNS
 – Lips rounded, not offset 4

4	Female tail one-sixth of body length. — ♀: L = 1.7 mm; a = 42; b = 5.2; c = 5.9; V = 43%; c' = 14. ♂ unknown. (United States: New York)	<i>dreyeri</i> (VAN DER LINDE)
—	Female tail one-fourth of body length or longer	5
5	Supplements 7, spaced. — ♀: L = 1.45 mm; a = 41; b = 4.9; c = 4.1; V = 44%; c' = 20. ♂: L = 1.0–1.1 mm; a = 32–35; b = 3.6–3.7; c = 50–52; PO: 7. (Ecuador)	<i>graciosus</i> ANDRÁSSY
—	Supplements 17 or more, contiguous	6
6	Body 1.5 mm; supplements 17. — ♀: L = 1.5 mm; a = 44; b = 5.1; c = 3.5; V = 44%; c' = 21. ♂: L = 1.1 mm; a = 34; b = 4.0; c = 68; PO: 17. (Ecuador)	<i>pulcher</i> ANDRÁSSY
—	Body 1.7–1.8 mm; supplements 24–28. — ♀: L = 1.7–1.8 mm; a = 36–42; b = 4.9–5.5; c = 4.6–5.6; V = 41%; c' = 14. ♂: L = 1.3 mm; a = 33; b = 4.1; c = 50; PO: 24–28. (United States: Virginia, Utah, South Dakota)	<i>sylyphus</i> (THORNE)
7	Tip of female tail distinctly swollen	8
—	Tip of female tail not swollen	11
8	Tail 5–6 anal diameters long	9
—	Tail 3–4 anal diameters long	10
9	Body 1.9–2.3 mm long; lips angular, offset. — ♀: L = 1.9–2.3 mm; a = 34–37; b = 4.7–5.1; c = 10–14; V = 44–49%; c' = 6. ♂: L = 1.9–2.2 mm; a = 33–39; b = 4.3–5.0; c = 63–87; PO: 16–23. (Holland, Democratic Germany, Soviet Union [Russia, Moldavia, Uzbekistan])	<i>parabastiani</i> (PAETZOLD)
—	Body 1.3–1.4 mm long; lips rounded, not offset. — ♀: L = 1.3–1.4 mm; a = 36–39; b = 3.7–4.6; c = 12–13; V = 49–51; c' = 5–6. ♂ unknown. (Denmark, Sweden, Soviet Union [Russia, Kirghizia], Egypt, Kerguelen Islands)	<i>aegypticus</i> (ANDRÁSSY)
10	Labial region offset; supplements 13, spaced. — ♀: L = 1.2–1.3 mm; a = 33–39; b = 4.4–4.8; c = 15–17; V = 50%; c' = 4. ♂: L = 1.0–1.2 mm; a = 32–39; b = 4.1–4.3; c = 47–51; PO: 13. (Brazil)	<i>paulbuchneri</i> (MEYL)
—	Labial region not offset; supplements 17, contiguous. — ♀: L = 1.2 mm; a = 31; b = 4.7; c = 12.5; V = 49%; c' = 3. ♂: L = 1.2 mm; a = 35; b = 5.0; c = 59; PO: 17. (Poland, Spain)	<i>clavicaudatus</i> (THORNE & SWANGER)
11	Posterior half of female tail dorsally bent	12
—	Posterior half of female tail straight or slightly bent ventrally	35
12	Tail 4–10 anal diameters long	13
—	Tail shorter than 4 anal diameters	22
13	Posterior end of intestine with a long tongue-like structure; sclerotized vulval lips angular. — ♀: L = 1.5–1.9 mm; a = 38–46; b = 3.9–4.3; c = 14–18; V = 52–55%; c' = 5–6. ♂ unknown. (Peru)	<i>trapae fractus</i> ANDRÁSSY
—	Posterior end of intestine without such a structure	14
14	Supplements 7–11, spaced	15
—	Supplements 9–16, contiguous	17
15	Supplements 11. — ♀: L = 1.3–1.6 mm; a = 26–35; b = 4.2–4.8; c = 8–10; V = 48–49%; c' = 5–8. ♂: L = 1.3 mm; a = 27; b = 3.8; c = 83; PO: 11. (Federal Germany, Czechoslovakia, Bulgaria, Soviet Union [Russia, Tadzhikistan])	<i>nicyli</i> (ANDRÁSSY)
—	Supplements 7–8	16
16	Vulva pre-equatorial; female tail as long as 6–7 anal diameters. — ♀: L = 1.5 mm; a = 34; b = 4.8; c = 10; V = 44%; c' = 6–7. ♂: L = 1.3 mm; a = 36; b = 4.0; c = 51; PO: 7–8. (United States: South Dakota)	<i>obscurus</i> THORNE
—	Vulva post-equatorial; female tail as long as 4–5 anal diameters. — ♀: L = 1.5–1.8 mm; a = 38–40; b = 4.7–4.9; c = 14–18; V = 53–55%; c' = 4–5. ♂: L = 1.4 mm; a = 36–40; b = 4.2–4.8; c = 63–66; PO: 8. (Ghana)	<i>ghanae</i> ANDRÁSSY
17	Spear 16–17 μ m long, robust, almost as thick as 1/3 labial diameter. — ♀: L = 1.5–2.0 mm; a = 35–38; b = 4.5–5.4; c = 14–17; V = 44–46%; c' = 4–6. ♂: L = 1.7 mm; a = 34; b = 5.0; c = 56; PO: 15. (Tanzania)	<i>szechenyii</i> ANDRÁSSY
—	Spear 7–13 μ m long, never so robust	18
18	Cuticle perceptibly thickened on neck region	19
—	Cuticle not thickened on neck region	20

- 19 Head continuous with neck contour. - ♀: L = 1.1-1.6 mm; a = 28-40; b = 5.1-7.6; c = 8-16; V = 39-43%; c' = 10-11. ♂: L = 1.3-1.4 mm; a = 36-38; b = 5.2-7.5; c = 48-83; PO: 11-15. (South Africa) *sanctus* BASSON & HEYNS
 - Head slightly offset. - ♀: L = 1.1-1.2 mm; a = 24-31; b = 4.5-5.4; c = 8-10; V = 43-46%; c' = 6-7. ♂: L = 0.9-1.1 mm; a = 22-27; b = 4.1-4.9; c = 36-55; PO: 11-14. (South Africa) *kowyni* BASSON & HEYNS
- 20 Head distinctly offset; spear 7-9 μ m long. - ♀: L = 1.0-1.2 mm; a = 27-47; b = 3.9-4.9; c = 8-12; V = 37-47%; c' = 6-7. ♂: L = 0.9-1.1 mm; a = 24-29; b = 3.8-4.4; c = 51-61; PO: 9-10. (South Africa) *transkeiensis* BASSON & HEYNS
 - Head not or hardly offset; spear 11-13 μ m long 21
- 21 Supplements 11; female tail 110-153 μ m (6-9 anal diameters) long. - ♀: L = 1.4-1.7 mm; a = 29-40; b = 5.3-6.5; c = 9-13; V = 39-44%; c' = 6-9. L = 1.4 mm; a = 29; b = 5.4; c = 62; PO: 11. (South Africa) *johanni* BASSON & HEYNS
 - Supplements 13; female tail 90-128 μ m (4-6 anal diameters) long. - ♀: L = 1.5-1.7 mm; a = 35-47; b = 5.5-6.8; c = 13-16; V = 43%; c' = 4-6. ♂: L = 1.4-1.6 mm; a = 36-44; b = 5.2-6.2; c = 59-66; PO: 13. (South Africa) *importunus* BASSON & HEYNS
- 22 Female tail unusually shaped: short, conoid and bluntly rounded on its tip. - ♀: L = 1.3 mm; a = 33; b = 4.3; c = 40; V = 49%; c' = 1.5. ♂: L = 1.4-1.5 mm; a = 36; b = 4.2-4.6; c = 61-62; PO: 10-19. (Hungary) *deuberti* (ANDRÁSSY)
 - Female tail not so unusually shaped, never bluntly rounded 23
- 23 Female tail cupola-shaped, abruptly narrowing to a thin appendix; posterior end of intestine with a long tongue-like structure 24
 - Female tail not so, at least its ventral contour continuous, not abruptly narrowing 26
- 24 Prerectum unusually short, shorter than rectum; intestinal "tongue" 45-48 μ m long. - ♀: L = 1.4-1.5 mm; a = 22-25; b = 3.9-4.3; c = 18-25; V = 52-54%; c' = 2. ♂ unknown. (Cuba, Paraguay) *tholocercus* ANDRÁSSY
 - Prerectum twice as long as rectum; intestinal "tongue" 10-20 μ m long 25
- 25 Spear robust, 23-24 μ m long; lips rounded and amalgamated. - ♀: L = 1.3-1.4 mm; a = 24-25; b = 3.8-3.9; c = 20-30; V = 54-58%; c' = 1.2-1.3. ♂ unknown. (Mexico) *mexicanus* ZULLINI
 - Spear slender, 15 μ m long; lips angular and separate. - ♀: L = 1.2 mm; a = 31; b = 4.5; c = 25; V = 52%; c' = 2-2.5. ♂ unknown. (Brazil) *thorneiswangerae* ANDRÁSSY
- 26 Female tail shorter than two anal diameters, its anterior rounded part longer than the posterior tapering one 27
 - Female tail two anal diameters or longer, its anterior rounded part as long as, or shorter than the posterior tapering one 31
- 27 Vulva longitudinal, open (sclerotized lips spaced) 28
 - Vulva transverse, closed (sclerotized lips not spaced) 30
- 28 Body 1.8-2 mm, spear 22-24 μ m long. - ♀: L = 1.8-2.0 mm; a = 33-40; b = 4.3-4.5; c = 38-48; V = 53-55%; c' = 1.3-1.4. ♂: L = 1.8-2.0 mm; a = 34-38; b = 4.2-4.7; c = 73-86; PO: 10-11. (Australia) *procerus* ANDRÁSSY
 - Body 1.2-1.4 mm, spear 14-16 μ m long 29
- 29 Female tail as long as anal body diameter, its tip strongly bent; cuticle 3-3.5 μ m thick on mid-body. - ♀: L = 1.4 mm; a = 24-28; b = 4.3-4.5; c = 39-46; V = 50-52%; c' = 1. ♂: L = 1.2 mm; a = 29; b = 4.0; c = 5; PO: 19. (Hungary) *aduncus* ANDRÁSSY
 - Female tail distinctly longer than anal body diameter, its tip slightly bent; cuticle 2-2.5 μ m thick on mid-body. - ♀: L = 1.2-1.3 mm; a = 29-31; b = 4.0-4.6; c = 31-33; V = 53-55%; c' = 1.3-1.6. ♂ unknown. (Hungary). *recurvus* ANDRÁSSY
- 30 Lips angular; spear as thick as cuticle at the same level; supplements 13-14. - ♀: L = 1.2 mm; a = 24-25; b = 3.8-3.9; c = 28-31; V = 52-53%; c' = 1.4-1.8. ♂: L = 1.1-1.2 mm; a = 27-30; b = 3.6-3.8; c = 46-49; PO: 13-14. (Ecuador) .. *vulneratus* ANDRÁSSY
 - Lips rounded; spear thinner than cuticle at the same level; supplements 17-18. - ♀: L = 1.2-1.4 mm; a = 26-31; b = 4.1-4.3; c = 29-39; V = 52-54%; c' = 1.4-1.5; ♂: L = 1.1-1.2 mm; a = 26-28; b = 4.1-4.6; c = 58-69; PO: 17-18. (Ecuador) *cognatus* ANDRÁSSY

- 31 Spear long, 20–25 μm 32
 – Spear shorter, 9–15 μm 33
- 32 Spear twice as thick as cuticle at the same level; female tail strongly bent dorsally. – ♀: L = 1.6–1.7 mm; a = 32–34; b = 4.1–4.2; c = 25–32; V = 51–52%; c' = 1.9–2.3. ♂: L = 1.4–1.6 mm; a = 25–32; b = 3.9–4.1; c = 58–63; PO: 15–20. (Bolivia) *arcuatus* ANDRÁSSY
 – Spear as thick as cuticle at the same level; female tail slightly bent dorsally. – ♀: L = 1.2–1.4 mm; a = 26–31; b = 3.7–4.3; c = 20–24; V = 49–50%; c' = 2–2.3. ♂: L = 1.5 mm; a = 33; b = 4.5; c = 62; PO: 16. (Ecuador) *aequatorialis* ANDRÁSSY
- 33 Head well offset. – ♀: L = 1.4–1.7 mm; a = 30–39; b = 4.8–6.1; c = 20–31; V = 41–46%. ♂: L = 1.3–1.7 mm; a = 31–39; b = 5.1–6.2; c = 48–60; PO: 12–16. (South Africa) *margaritus* BASSON & HEYNS
 – Head not offset 34
- 34 Body about 2 mm long, slender. – ♀: L = 1.8–2.1 mm; a = 40; b = 4.8; c = 32–46; V = 53%; c' = 2.5. ♂ unknown. (United States: North Dakota) *americanus* ANDRÁSSY
 – Body 1–1.5 mm long, less slender. – ♀: L = 1.0–1.5 mm; a = 21–34; b = 4.1–5.5; c = 12–22; V = 47–52%; c' = 2–4. ♂: L = 1.3–1.5 mm; a = 30–35; b = 4.6–5.3; c = 48–61; PO: 12–15. (South Africa) *rotundolabiatius* BASSON & HEYNS
- 35 Vulval region – both sides of vulva – with prominent papillae or cuticular folds 36
 – Vulval region without papillae or folds 44
- 36 Labial region offset 37
 – Labial region practically continuous with neck 40
- 37 Female tail about 3 anal diameters long 38
 – Female tail 6–8 anal diameters long 39
- 38 Female tail unusually short, 1.3–1.5 anal diameters; supplements 11. – ♀: L = 1.1–1.3 mm; a = 28–35; b = 3.5–5.5; c = 31–44; V = 49–54%; c' = 1.3–1.5. ♂: L = 1.5 mm; a = 40; b = 4.8; c = 80; PO: 11. (Kenya.) *kittenbergeri* sp. n.
 – Female tail about 2.5 anal diameters long; supplements 16. – ♀: L = 1.4 mm; a = 31; b = 4.4; c = 17; V = 53%; c' = 2.7. ♂: L = 1.3 mm; a = 34; b = 3.6; c = 43; PO: 16. (Soviet Union: Georgia.) *vulvapapillatus* BAGATURIA & ELIAVA
- 39 Oesophagus widened in 2/3 of its length; tip of female tail pointed; supplements 16–19. – ♀: L = 1.0–1.4 mm; a = 29–35; b = 4.4–5.8; c = 7.5–9.4; V = 42–46%; c' = 7–8. ♂: L = 1.0–1.4 mm; a = 28–33; b = 4.1–5.5; c = 44–58; PO: 16–19. (Venezuela.) *globoiceps* LOOF
 – Oesophagus widened not so far back; tip of female tail rounded; supplements 9–13. – ♀: L = 1.4–1.6 mm; a = 25–40; b = 4.8–5.2; c = 7.7–10; V = 48–50%; c' = 6–8. ♂: L = 1.1–1.5 mm; a = 23–37; b = 3.8–5.1; c = 43–56; PO: 9–13. (Italy.) *lopadusae* VINCIGUERRA & LA FAUCI
- 40 Vulva with one papilla on each side 41
 – Vulval region with cuticular folds 42
- 41 Spicula 50–60 μm long, supplements 18–20; female tail 4–6 anal diameters long. – ♀: L = 1.3–1.8 mm; a = 33–38; b = 5.5–6.8; c = 11–16; V = 40–45%; c' = 3.9–5.6. ♂: L = 1.2–1.6 mm; a = 34–45; b = 5.3–6.2; c = 67–78; PO: 18–20. (Ethiopia.) *macroscopiculum* ZULLINI
 – Spicula about 40 μm long, supplements 13; female tail 9–10 anal diameters long. – ♀: L = 1.0–1.1 mm; a = 30–34; b = 5.3–5.8; c = 6.4–7.3; V = 44–45%; c' = 9–10. ♂: L = 0.9 mm; a = 29; b = 5.0; c = 50; PO: 13. (Vietnam.) *orientalis* ANDRÁSSY
- 42 Cuticular folds deep; spear 17–19 μm long. – ♀: L = 1.6–1.9 mm; a = 38–45; b = 4.2–4.7; c = 15–19; V = 49–53%; c' = 5.2–6.5. ♂: L = 1.4–1.5 mm; a = 35–37; b = 4.0–4.5; c = 74–90; PO: 7–10. (Ecuador.) *plicatus* ANDRÁSSY
 – Cuticular folds not so deep, rather superficial; spear 12–14 μm long 43
- 43 Female tail 3–5 anal diameters long; cuticle densely wrinkled on vulval region. – ♀: L = 1.2–1.5 mm; a = 26–30; b = 3.9–4.8; c = 13–18; V = 50–55%; c' = 3.6–4.6. ♂: L = 1.1–1.5 mm; a = 29; b = 3.8–4.5; c = 55–68; PO: 11–13. (Antarctic.) ... *imperator* LOOF

- Female tail 6–7 anal diameters long; cuticle with some innervations on vulval region. – ♀: L = 1.6 mm; a = 39; b = 6.3; c = 12; V = 50%; c' = 6–7. ♂: L = 1.3 mm; a = 40; b = 5.6; c = 50; PO: 11. (Egypt, United States [Nebraska].) ... **intervallis** (THORNE & SWANGER)
- 44 Female tail of *mesonyctius*-type: first convex-conoid then suddenly narrowing both on ventral and dorsal side and passing into a thinner subdigitate part; this latter once to twice as long as the anterior rounded part 45
 – Female tail not so: either long, more or less uniformly attenuated, or narrowing on the dorsal side only, or the posterior subdigitate part more than twice as long as the anterior rounded one 60
- 45 Lips offset by deep constriction 46
 – Lips not or only slightly offset 48
- 46 Female tail longer (c = 12). – ♀: L = 1.2 mm; a = 22; b = 4.9; c = 12; V = 49%; c' = 4. ♂ unknown. (Soviet Union: Uzbekistan.) **pendschikenticus** (TULAGANOV)
 – Female tail shorter (c = 18–22) 47
- 47 Supplements 8, spaced; tip of female tail rounded. – ♀: L = 0.9 mm; a = 28; b = 4.1; c = 18; V = 52%; c' = 2.5. ♂: L = 0.9–1.2 mm; a = 29–33; b = 4.1–4.7; c = 50–61; PO: 8. (Federal Germany, Czechoslovakia, Soviet Union [Far East], Mongolia.) **parasubulatus** (MEYL)
 – Supplements 17–20, contiguous; tip of female tail pointed. – ♀: L = 1.1–1.2 mm; a = 26–34; b = 3.7–5.1; c = 18–22; V = 47–51%; c' = 2.4–3.6. ♂: L = 1.0–1.3 mm; a = 25–38; b = 4.1–5.2; c = 46–61; PO: 17–20. (South Africa.) **paralitoralis** BASSON & HEYNS
- 48 Posterior end of intestine possessing a tongue-like process; vulva longitudinal. – ♀: L = 1.5 mm; a = 32; b = 5.0; c = 16; V = 49%; c' = 3–4. ♂ unknown. (United States: South Dakota.) .. **simplex** THORNE
 – Posterior end of intestine without such a process; vulva transverse 49
- 49 Posterior tapering part of female tail as long as, or shorter than the anterior rounded part ... 50
 – Posterior tapering part of female tail distinctly longer than the anterior rounded part 52
- 50 Lips completely amalgamated; body about 1 mm long. – ♀: L = 1.1 mm; a = 21–26; b = 4.6–5.3; c = 17–18; V = 49%; c' = 2–2.5. ♂: L = 1.0–1.1 mm; a = 27; b = 4.9–5.9; c = 44–47; PO: 11–12. (Brazil.) **pizai** LORDELLO
 – Lips more or less separate; body 1.5 mm long or longer 51
- 51 Female tail as long as three anal diameters; body 2 mm long. – ♀: L = 2.1 mm; a = 49; b = 5.1; c = 29; V = 52%; c' = 3. ♂ unknown. (Zaire.) **effilatus** (SCHUURMANS STEKHOVEN & TEUNISSEN)
 – Female tail as long as two anal diameters; body 1.5 mm long. – ♀: L = 1.5 mm; a = 33; b = 4.4; c = 27; V = 55%; c' = 2. ♂ unknown. (Federal Germany.) **rhenanus** ALTHERR
- 52 Tip of female tail conoid and pointed (very narrowly rounded) 53
 – Tip of female tail cylindrical, rounded 54
- 53 Supplements 9–13, spaced. – ♀: L = 1.5–1.7 mm; a = 38–48; b = 4.5–5.0; c = 12–22; V = 52–60%; c' = 3–4. ♂: L = 1.5–1.7 mm; a = 41–53; b = 4.5–4.9; c = 65–80; PO: 9–13. (Holland, Federal and Democratic Germany, Sweden, Poland, Austria, Czechoslovakia, Hungary, Yugoslavia, Spain, France, Italy, Soviet Union [Russia, Belorussia, Ukraine, Estonia, Latvia, Lithuania, Georgia, Armenia, Uzbekistan, Tadzhikistan], Sumatra, Java, Canary Islands, Morocco, Cameroon, Annobon, Mauritius, Tanzania, Zambia, Zaire, South Africa, United States, Mexico, Australia. It is questionable whether all these data refer to the "true" *bastiani*.) **bastiani** (BÜTSCHLI)
 – Supplements 18–24, contiguous. – ♀: L = 1.4–2.1 mm; a = 34–41; b = 4.3–5.3; c = 14–28; V = 52–59%; c' = 2–3. ♂: L = 1.4–1.5 mm; a = 39–40; b = 5.1–5.2; c = 62–68; PO: 18–24. (Soviet Union [Russia], United States [Utah].) **pseudobastiani** LOOF
- 54 Spear 18–20 μ m long 55
 – Spear shorter, 10 to 16 μ m long 56
- 55 Body about 2 mm long; vagina heavily swollen. – ♀: L = 1.9 mm; a = 36; b = 4.3; c = 17; V = 55%; c' = 4. ♂ unknown. (Federal Germany.) **paetzoldi** ALTHERR

- Body 1.2–1.7 mm; vagina not so swollen. — ♀: L = 1.2–1.7 mm; a = 27–34; b = 3.7–5.5; c = 7–25; V = 47–53%; c' = 4–5 (–8). ♂: L = 1.3–1.5 mm; a = 30–35; b = 3.9–4.4; c = 52–58; PO: 10–15. (Holland, Switzerland, Yugoslavia.) **aberrans** LOOR
- 56 Posterior tapering part of female tail comparatively shorter, about 1.5 times as long as the anterior rounded part* 57
 — Posterior tapering part of female tail longer, about 2 times as long as the anterior rounded part 58
- 57 Body longer (1.5 mm) and very slender (a = 50–70). — ♀: L = 1.5 mm; a = 50–70; b = 4.5; c = 30; V = ?; c' = 3. ♂ unknown. (Soviet Union [Russia], India, Mauritius, Brazil, New Guinea.) **biroi** (DADAY)
 — Body shorter (0.8–1.2 mm) and much stouter (a = 23–33). — ♀: L = 0.8–1.2 mm; a = 23–33; b = 3.8–4.7; c = 15–20; V = 50–56%; c' = 3–5. ♂: L = 0.9–1.1 mm; a = 24–33; b = 3.8–4.9; c = 45–70; PO: 9–12. (Poland, Czechoslovakia, Hungary, Italy, Soviet Union [Russia], China, India, South Africa, Jamaica, Venezuela.) **mesonyctius** (KREIS)
- 58 Vulva longitudinal; cardia about as long as body width. — ♀: L = 1.4 mm; a = 34; b = 4.3; c = 13–15; V = 52%; c' = 3.5. ♂: L = 1.3 mm; a = 35; b = 4.1; c = 65; PO: 8–10. (United States: Montana, Nebraska, North- and South Dakota.) **cardiacus** THORNE
 — Vulva transverse; cardia shorter 59
- 59 Spicula unusually massive; body 1.6 mm long. — ♀: L = 1.6 mm; a = 37; b = 4.5; c = 15–28; V = 54%; c' = 4. ♂: L = 1.6 mm; a = 37; b = 4.6; c = 80; PO: 7. (United States: Nebraska.) **macrophallus** THORNE
 — Spicula normal; body 1.0–1.4 mm long. — ♀: L = 1.0–1.4 mm; a = 28–41; b = 3.8–5.0; c = 9–16; V = 47–53%; c' = 4–9. ♂: L = 0.9–1.3 mm; a = 28–39; b = 4.0–4.7; c = 45–47; PO: 5–9. (South Africa.) **usitatus** BASSON & HEYNS
- 60 Female tail shorter, 2 to 5 anal diameters 61
 — Female tail longer, 6 to 12 anal diameters 68
- 61 Tail 2–2.5 times anal diameter 62
 — Tail 3–5 times anal diameter 64
- 62 Labial region completely continuous with neck contour. — ♀: L = 1.2–1.6 mm; a = 30–36; b = 4.3–5.2; c = 20–35; V = 50–53%; c' = 2. ♂: L = 1.2–1.4 mm; a = 31–38; b = 4.5–4.8; c = 59–83; PO: 7–9. (India) **brassicus** SONI & NAMA
 — Labial region well offset 63
- 63 Tail ventrally curved; body about 1 mm long. — ♀: L = 1.1 mm; a = 33; b = 3.3; c = 20; V = 50%; c' = ? ♂: L = 1.1 mm; a = 40; b = 4.1; c = 71; PO: 4. (Holland.) **spengelii** (DE MAN)
 — Tail straight; body about 2 mm long. — ♀: L = 1.9 mm; a = 44; b = 4.5; c = 30; V = 53%; c' = 2–2.5. ♂ unknown. (Zaire.) **brevispicatus** (SCHUURMANS STEKHOVEN)
- 64 Body shorter, 0.8–1.1 mm 65
 — Body longer, 1.3–1.7 mm 67
- 65 Intestine blackish coloured. — ♀: L = 0.9 mm; a = 26–33; b = 3.3–3.7; c = 12–14; V = 51–59%; c' = 3.5–4.5. ♂ unknown. (Sumatra.) **nigritulus** (SCHNEIDER)
 — Intestine lightly coloured 66
- 66 Supplements 8, well spaced. — ♀: L = 0.8–1.0 mm; a = 28–35; b = 3.7–5.1; c = 6–8; V = 43–47%; c' = 5–6. ♂: L = 0.7–0.8 mm; a = 24; b = 5; c = 40–50; PO: 8. (Hungary, Brazil, Venezuela.) **parasubtilis** (MEYL)
 — Supplements 11, contiguous. — ♀: L = 1.1 mm; a = 27–28; b = 3.9–4.1; c = 12–18; V = 55–59%; c' = 3–4. ♂: L = 1.0–1.1 mm; a = 27–28; b = 3.9–4.7; c = 47–54; PO: 11. (Argentina.) **adalberti** (ANDRÁSSY)
- 67 Tail ventrally bent; spear about 1.5 times as long as labial width. — ♀: L = 1.4 mm; a = 20; b = 5.2; c = 15; V = 41%; c' = 3.5–4. ♂: L = 1.8 mm; a = 26; b = 4.7; c = 63; PO: ? (China.) **chekiangensis** (WU & HOEPPLI)

* The quite recently described species, *Mesodorylainus similibastiani* ZELL, 1986, probably belongs to this group.

- Tail straight; spear about as long as labial width. - ♀: L = 1.3-1.6 mm; a = 30-43; b = 4.8-6.1; c = 13-21; V = 49-50%; c' = 3-5. ♂: L = 1.4-1.6 mm; a = 30-37; b = 5.0-5.6; c = 56-75; PO: 15-18. (Holland, Spain, United States [South Dakota].) **litoralis** LOOF
- 68 Marine species. - ♀: L = 1.7 mm; a = 31; b = 5; c = 16; V = 45%. ♂ unknown. (United States: Maryland.) **aestuarii** (TRMM)
- Continental species 69
- 69 Larger species, 1.8-2.3 mm, body generally very slender 70
- Smaller species, less than 1.8 mm, body not so slender 74
- 70 Dorsal side of body, opposite to the vulva, perceptibly impressed; male tail constricted in the middle. - ♀: L = 2.0-2.2 mm; a = 47-57; b = 4.6-5.1; c = 11-15; V = 47-52%; c' = 7-10. ♂: L = 1.7-2.5 mm; a = 46-58; b = 3.9-5.1; c = 66-93; PO: 8-10. (Kenya.) ... **angustus** ANDRÁSSY
- Dorsal side of body not impressed; male tail not constricted in the middle 71
- 71 Head offset by constriction 72
- Head not offset 73
- 72 Supplements 21-26. - ♀: L = 1.9-2.3 mm; a = 25-40; b = 4.0-5.2; c = 10-12; V = 45-48%; c' = 6-7. ♂: L = 1.8-2.1 mm; a = 32-41; b = 4.0-5.6; c = 64-84; PO: 21-26. (United States: Utah.) **cryptosperma** LOOF
- Supplements 16. - ♀: L = 1.8 mm; a = 41; b = 3.7; c = 12; V = 55%; c' = 6. ♂: L = 1.6-2.0 mm; a = 37; b = 3; c = 66; PO: 16. (Fiji, Ivory Coast, Suriname.) **exilis** (COBB)
- 73 Supplements 6; male tail conoid, with narrowly rounded tip. - ♀: L = 1.8-2.0 mm; a = 32-34; b = 4.8-5.8; c = 4.6-5.9; V = 39-41%; c' = 7-12. ♂: L = 1.3 mm; a = 31; b = 5.1; c = 62; PO: 6. (Poland.) **luci** BRZESKI & SZCZYGIEL
- Supplements 12-14; male tail not conoid, with blunt tip. - ♀: L = 1.8 mm; a = 45; b = 4.5; c = 6.7; V = 44%; c' = 10-11. ♂: L = 1.6 mm; a = 47; b = 4.5; c = 67; PO: 12-14. (Italy, United States [Virginia].) **nudus** (THORNE)
- 74 Body 1 mm or smaller 75
- Body over 1 mm 83
- 75 Labial region offset by deep constriction 76
- Labial region offset by slight depression or continuous with neck 77
- 76 Orifice occupying 1/2 of spear length. - ♀: L = 1.0 mm; a = 33-34; b = 4.9; c = 5.0-5.4; V = 43-47%; c' = 10. ♂ unknown. (Brazil.) **delicatus** LORDELO
- Orifice occupying 1/3 of spear length. - ♀ (juv.): a = 30-33; b = 3.8-4.0; c = 5.8-6.6; c' = 8-10. ♂: L = 0.9 mm; a = 30-32; b = 4.0-4.1; c = 40-43; PO: 10-12. (Tanzania.) **szunyoghyi** ANDRÁSSY
- 77 Spear almost twice as long as labial width. - ♀: L = 0.9 mm; a = 33; b = 4.3; c = 5.6; V = 44%; c' = 10-11. ♂ unknown. (Soviet Union [Georgia], Jamaica, Australia.) **pusillus** (COBB in THORNE & SWANGER)
- Spear as long as labial width or only slightly longer 78
- 78 Supplements 5-8, spaced 79
- Supplements 15-17, contiguous 81
- 79 Supplements 7-8 (mostly 8). - ♀: L = 1.0-1.1 mm; a = 31-36; b = 4.1-4.8; c = 7.6-9.5; V = 47-51%; c' = 7. ♂: L = 0.8-1.0 mm; a = 29-34; b = 3.7-4.7; c = 43-59; PO: 7-8. (Democratic Germany.) **subtiloides** (PAETZOLD)
- Supplements 5 or 6 80
- 80 Supplements 5; spicula 26-28 μm long. - ♀: L = 0.9 mm; a = 27-32; b = 4.1-4.3; c = 6-7; V = 46-49%; c' = 9-11. ♂: L = 0.8 mm; a = 30; b = 3.7; c = 48; PO: 5. (Paraguay.) **guarani** ANDRÁSSY
- Supplements 6; spicula 35 μm long. - ♀: L = 0.8 mm; a = 28; b = 4.1; c = 6.7; V = 46%; c' = 7-8. (Soviet Union [Far East], Japan, Angola, Zaire, South Africa, United States [Virginia].) **japonicus** (COBB in THORNE & SWANGER)

- 81 Spear massive, nearly as wide as 1/3 labial diameter. — ♀: L = 1.0–1.1 mm; a = 30–32; b = 4.8–5.6; c = 8.9–9.3; V = 46–47%; c' = 7. ♂: L = 1.0 mm; a = 29; b = 4.8; c = 43; PO: 17. (Ghana.) *erdelyii* ANDRÁSSY
 — Spear thin, as wide as 1/6–1/8 labial diameter 82
- 82 Female tail 11–12 times anal diameter (c = 4–5). — ♂: L = 1.1 mm; a = 27; b = 5.4; c = 4.6; V = 39%; c' = 11–12. ♂: L = 0.9 mm; a = 22; b = 4.5; c = 41; PO: 16. (Argentina.) *puellae* ANDRÁSSY
 — Female tail 6 times anal diameter (c = 9–11). — ♀: L = 0.8–1.0 mm; a = 26–32; b = 4.3–5.5; c = 8.8–10.6; V = 39–58%; c' = 6. ♂: L = 0.7–0.9 mm; a = 26–29; b = 4.3–5.2; c = 43–53; PO: 15–16. (Paraguay, Brazil.) *paraguayensis* (KREIS)
 83 Spear 25 μ m long. — ♀: L = 1.4–1.5 mm; a = 25–30; b = 3.8–4.3; c = 5.4–5.6; V = 46–48; c' = 10. ♂ unknown. (Brazil.) *lourdesae* (LORDELLO)
 — Spear length between 9 and 20 μ m 84
- 84 Cuticle over entire length of body finely annulated; female tail ventrally arcuate. — ♀: L = 1.5 mm; a = 41–44; b = 4.5; c = 6.0; V = 40–41%; c' = 11–12. ♂ unknown. (Hungary.) *margaritifera* ANDRÁSSY
 — Cuticle at most on both ends of body annulated; female tail predominantly straight 85
- 85 Supplements spaced, 6 to 15 in number 86
 — Supplements contiguous, 11 to 21 in number 91
- 86 Supplements 6–9. — ♀: L = 1.4–1.5 mm; a = 37–38; b = 4.9–5.0; c = 8.3–8.5; V = 44–50%; c' = 8. ♂: L = 1.3 mm; a = 32–36; b = 4.6–4.7; c = 62–67; PO: 6–9. (Holland, Federal and Democratic Germany, Yugoslavia, Israel, India, United States [Utah, South Dakota], Brazil.) *subtilis* (THORNE & SWANGER)
 — Supplements 10–15 87
- 87 Posterior part of intestine with a long tongue-like process. — ♀: L = 1.5–1.6 mm; a = 28–36; b = 4.8–5.4; c = 5.2–5.7; V = 43–44%; c' = 9–10. ♂: L = 1.0–1.3 mm; a = 22–35; b = 3.1–4.2; c = 38–48; PO: 10–13. (Italy.) *dolomiticus* VINCIGUERRA
 — Posterior part of intestine without such a process. 88
- 88 Supplements 10 89
 — Supplements 13–15 90
- 89 Spear conspicuously thicker than cuticle at the same level; male tail narrowly rounded. — ♀: L = 1.3 mm; a = 33; b = 4.6; c = 11; V = 52%; c' = 5.8–7.5. ♂: L = 1.2 mm; a = 32; b = 3.8; c = 63; PO: 10. (Czechoslovakia, Rumania.) *subtiliformis* (ANDRÁSSY)
 — Spear as thick as cuticle at the same level; male tail broadly rounded. — ♀: L = 0.9–1.5 mm; a = 24–37; b = 4.4–5.0; c = 5–7; V = 46–50%; c' = 7–12. ♂: L = 1.0 mm; a = 30; b = 4.0; c = 65; PO: 10. (South Africa.) *pseudosubtilis* BASSON & HEYNS
- 90 Body very slender (a = 50–55); spear 20–21 μ m long. — ♀: L = 1.5 mm; a = 50–55; b = 4.5–4.8; c = 9–12; V = 50–60%; c' = 8–9. ♂: L = 1.3–1.5 mm; a = 50–60; b = 4.0–4.5; c = 65–75; PO: 13–15. (Brazil.) *sveltus* (MEYL)
 — Body not so slender (a = 36–45); spear 11–13 μ m long. — ♀: L = 1.0–1.6 mm; a = 36–45; b = 4.7–6.3; c = 9–14; V = 42–49%; c' = 6.5–7.8. ♂: L = 1.3 mm; a = 40; b = 5.3; c = 78; PO: 14. (South Africa.) *intermedius* (DASSONVILLE & HEYNS)
- 91 Lips well offset 92
 — Lips not or hardly offset 94
- 92 Spear massive, twice as thick as cuticle at the same level; supplements 14–16. — ♀: L = 1.3–1.6 mm; a = 27–42; b = 5.0–6.2; c = 6–8; V = 40–47%; c' = 9–12. ♂: L = 1.1–1.4 mm; a = 24–38; b = 4.8–5.2; c = 49–66; PO: 14–16. (Soviet Union [Russia], South Africa.) *potus* HEYNS
 — Spear slender, about as thick as cuticle at the same level; supplements 18–21 93
- 93 Spear twice as long as labial width. — ♀: L = 1.6 mm; a = 32; b = 5.9; c = 6.0; V = 42%; c' = 10–11. ♂: L = 1.6 mm; a = 34; b = 4.1; c = 45; PO: 20. (United States: South Dakota.) *lissus* THORNE
 — Spear only slightly longer than labial width. — ♀: L = 1.4–1.8 mm; a = 24–31; b = 4.5–5.0; c = 9.4–13; V = 47%. ♂: L = 1.3–1.7 mm; a = 26–37; b = 4–5; c = 50–65; PO: 18–21 (Federal Germany, Hungary.) *bastianoides* (MEYL)

- 94 Spear 18–20 μm , nearly twofold labial diameter. — ♀: L = 1.6 mm; a = 35; b = 4.3; c = 9.0; V = 48%; c' = 9. ♂: L = 1.6 mm; a = 32; b = 4.3; c = 125; PO: 21. (Switzerland, Tanganyika Lake, United States [Washington D. C.]) **conurus** (THORNE)
 — Spear 9 to 15 μm , as long as, or slightly longer than labial diameter 95
- 95 Vulva equatorial or a little post-equatorial in position 96
 — Vulva pre-equatorial in position. (Closely allied species, difficult to separate) 97
- 96 Female tail shorter, 5–6 anal diameters; spear as long as labial width. — ♀: L = 1.3 mm; a = 30; b = 4.1; c = 11; V = 51%; c' = 6. ♂: L = 1.3 mm; a = 36; b = 4.0; c = 62; PO: 14–17. (South Africa, United States [Utah]) **alpestris** (THORNE)
 — Female tail longer, 9–10 anal diameters; spear distinctly longer than labial width. — ♀: L = 1.5 mm; a = 41; b = 4.7; c = 8.3; V = 51%; c' = 9–10. ♂: L = 1.2 mm; a = 37; b = 4.5; c = 59; PO: 15–16. (Spain, United States [Virginia]) **tenellus** (THORNE & SWANGER)
- 97 Spear 9–10 μm , hardly as long as cephalic diameter 98
 — Spear 11–15 μm , longer than cephalic diameter 100
- 98 Female tail uniformly conoid over its entire length. — ♀: L = 1.1–1.6 mm; a = 33–37; b = 5.3–6.0; c = 10–12; V = 43–45%; c' = 5–8. ♂: L = 1.1–1.6 mm; a = 36; b = 1.1–1.6 mm; a = 36; b = 4.8; c = 90; PO: 18–20. (United States: Wyoming, Utah.) **thermae** (COBB in HOEPLI)
 — Female tail first convex-conoid then subcylindrical 99
- 99 Tip of female tail sharply pointed; body 1.5–1.7 mm long. — ♀: L = 1.5–1.7 mm; a = 32–35; b = 6.1–6.8; c = 9–10; V = 43–44%; c' = 7.5–8. ♂: L = 1.2–1.5 mm; a = 31–33; b = 5.1–6.1; c = 67–76; PO: 15–20. (Mexico, Argentina.) **meridianus** ANDRÁSSY
 — Tip of female tail finely rounded; body 1.3 mm long. — ♀: L = 1.3 mm; a = 35; b = 6; c = 9.5; V = 45%; c' = 7. ♂: L = 1.2 mm; a = 38; b = 5.2; c = 55; PO: 16. (United States: South Dakota.) **brevidens** THORNE
- 100 Lips separate, head slightly offset. — ♀: L = 1.4–1.8 mm; a = 34–41; b = 4.5–5.2; c = 7.5–8.6; V = 46–49%; c' = 8–10. ♂: L = 1.0–1.4 mm; a = 29–42; b = 3.7–4.6; c = 45–65; PO: 11–20. (Holland, Federal Germany, Soviet Union [Russia], India.) **derni** LOOF
 — Lips completely amalgamated, head continuous with neck 101
- 101 Supplements 12–16. — ♀: L = 1.2–1.6 mm; a = 30–39; b = 4.0–5.5; c = 5–10; V = 43%; c' = 12. ♂: L = 1.4 mm; a = 30–35; b = 4.0; c = 45–57; PO: 12–16. (Federal Germany, Switzerland, Austria, Hungary, Yugoslavia, Spain, Soviet Union [Latvia], Sumatra, Java, United States [California, Virginia]) **hofmaenneri** (MENZEL in HOFFMÄNNER & MENZEL)
 — Supplements 18–21. — ♀: L = 1.0–1.3 mm; a = 32–37; b = 4.4–5.1; c = 9–11; V = 43–48%; c' = 6–7. ♂: L = 1.1–1.2 mm; a = 32–41; b = 4.2–5.1; c = 53–70; PO: 18–21. (Zaire.) **kamandeanus** BAQRI & COOMANS

Genus *Miodorylaimus* ANDRÁSSY, 1986

Dorylaimidae, Laimyodorinae. Body small and slender, 0.9–1.2 mm. Cuticle very thin and smooth. Labial region not or hardly offset, lips angular. Amphids large, caliciform. Spear straight, rather short, 11–12 μm ; aperture occupying one-third of spear length. Guiding ring single, thin. Oesophagus enlarged posterior to its middle. Prerectum long, especially in males. Posterior end of intestine with a long tongue-like process. Female genital organ amphidelphic. Vulva transverse, in 43–52% of body length, vulval lips not sclerotized. Spicula dorylaimoid, weakly sclerotized. Testes two. Spermatozoa elongate. Supplements far spaced, very few in number (4). Tail of females long and filiform, 7 to 15 anal body diameters, that of males short and rounded, ventrally bent.

Type-species: *Miodorylaimus decens* ANDRÁSSY, 1986.

This genus comes close to *Mesodorylaimus* ANDRÁSSY, 1959 but the cuticle is very thin, the vulval lips not sclerotized, the male prerectum very long, the spicula are short and the supplements restricted.

Both species of *Miodorylaimus* inhabit terrestrial biotopes and occur in South America.

Two species:

M. decens ANDRÁSSY, 1986

M. iucundus ANDRÁSSY, 1986

Key to species of Miodorylaimus

- 1 Body very slender (a = 50); female tail 7–8 anal diameters long. — ♀: L = 1.2 mm; a = 50; b = 4.5; c = 10; V = 52%; c' = 7.5. ♂: L = 1.1 mm; a = 46–49; b = 4.2–5.0; c = 44–50; PO: 4. (Peru.) *decens* ANDRÁSSY
— Body less slender (a = 33); female tail 15 anal diameters long. — ♀: L = 0.9 mm; a = 33; b = 4.5; c = 4; V = 43%; c' = 15. ♂ unknown. (Peru.) *iucundus* ANDRÁSSY

Genus *Calcaridorylaimus* ANDRÁSSY, 1986

Dorylaimidae, Laimyodorinae. Body of medium length, 1.2 to 1.7 mm, slender. Cuticle thin and smooth. Lips rounded or somewhat angular, not or slightly offset. Amphids calliciform. Spear short and straight, 11–20 μ m, with aperture occupying 1/3 of its length. Guiding ring thin and simple. Oesophagus expanded posterior to its middle. Prerectum comparatively short, in males beginning within the range of supplements. An intestinal tongue maybe present. Female gonads amphidelphic, vulva transverse or longitudinal, with strongly sclerotized inner lips. Testes two. Spermatozoa fusiform. Spicula somewhat differing from the usual dorylaimoid type: elongate, about twice as long as tail, with a small but distinct spur before the distal tip. Supplements 7–13, spaced. Tails different in sexes: in females elongate, 3 to 11 anal diameters, in males shorter than anal diameter and rounded. Posterior end of male body generally twisted. Males in general as common as females.

Type-species: *Calcaridorylaimus calcarifer* ANDRÁSSY, 1986.

This genus comes closest to *Mesodorylaimus* ANDRÁSSY, 1959, the differences between them are to be found in the males: the posterior end of body is strongly twisted, the spicula are larger and other-shaped, showing a spur each near the tip, and the supplements are very small. In fixed specimens the spicula are in almost every case thrust out.

The species of the genus *Calcaridorylaimus* are limited to the southern hemisphere: two species occur in Africa and one each in South America, Australia and the Antarctic.

Five species:

C. calcarifer ANDRÁSSY, 1986

C. promissus ANDRÁSSY, 1986

- C. ruwenzorii** (DE CONINCK, 1935) ANDRÁSSY, 1986
Dorylaimus ruwenzorii DE CONINCK, 1935
Mesodorylaimus ruwenzorii (DE CONINCK, 1935) ANDRÁSSY, 1959
- C. signatus** (LOOF, 1975) ANDRÁSSY, 1986
Mesodorylaimus signatus LOOF, 1975
- C. simillimus** ANDRÁSSY, 1986

Key to species of Calcaridorylaimus

- 1 Spear 16–20 μm , body 1.3–1.7 mm long 2
 – Spear 11–14 μm , body 1.2–1.4 mm long 3
- 2 Supplements 12; female tail 3–4 anal diameters long. – ♀: L = 1.3–1.7 mm; a = 25–33; b = 3.9–4.6; c = 12–18; V = 49–56%; c' = 2.9–4.2. ♂: L = 1.7 mm; a = 29; b = 4; c = 61; PO: 12. (Antarctic.) **signatus** (LOOF)
 – Supplements 7–8; female tail 7 anal diameters long. – ♀: L = 1.6 mm; a = 32; b = 4.3; c = 10; V = 47%; c' = 7. ♂: L = 1.3–1.5 mm; a = 35–40; b = 3.5–4.3; c = 44–74; PO: 7–8. (Zaire.) **ruwenzorii** (DE CONINCK)
- 3 Vulva longitudinal; supplements 8–9. – ♀: L = 1.2–1.3 mm; a = 30–32; b = 4.2–4.4; c = 8–10; V = 49–52%; c' = 6–8. ♂: L = 0.9–1.1 mm; a = 26–28; b = 3.3–3.4; c = 45–46; PO: 8–9. (Congo Republic.) **calcarifer** ANDRÁSSY
 – Vulva transverse; supplements 10–13 4
- 4 Posteriormost supplement(s) located level with spicula; spear 11 μm long. – ♀: L = 1.3 mm; a = 43; b = 4.4; c = 7.4; V = 50%; c' = 11. ♂: L = 1.1 mm; a = 33; b = 3.8; c = 0.7; PO: 11. (Bolivia.) **simillimus** ANDRÁSSY
 – Posteriormost supplement located before the spicula; spear 11 μm long. – ♀: L = 1.3–1.4 mm; a = 36–38; b = 4.3–4.5; c = 7.7–8.4; V = 45–47%; c' = 8.4–9. ♂: L = 1.0–1.1 mm; a = 28–30; b = 3.5–3.8; c = 47–57; PO: 10–13. (Australia.) **promissus** ANDRÁSSY

Genus *Calodorylaimus* ANDRÁSSY, 1969

Dorylaimidae, Laimyodorinae. Body large, between 1.5 and 5.4 mm. Cuticle smooth, moderately thick. Labial region continuous with neck or offset, lips rounded or angular. Amphids caliciform. Spear and guiding ring located farther back in mouth cavity than usual in the family. Spear relatively long and slender, between 19 and 53 μm ; aperture occupying 1/3 or more its length. Guiding ring thin, located one-and-a-half or two head diameters from anterior body end. Oesophagus widened in or behind its middle. Female gonads amphidelphic, well developed. Vulva transverse or longitudinal, mostly pre-equatorial (in 36–51%). Testes two, spermatozoa fusiform. Spicula long and slim, generally twice as long as tail. Supplements 16 to 31, arranged in three groups: two contiguous rows and between them 1–8 separate elements. Tails of both sexes different, in females long and filiform, 5 to 27 anal diameters, in males short and rounded. Males known in every species.

Type-species: *Calodorylaimus octo* ANDRÁSSY, 1969.

The genus differs from *Mesodorylaimus* and related forms by the position of spear and guiding ring, the long spicula, the male prerectum beginning far before the supplements, and the characteristic arrangement of the supplements.

The representatives of *Calodorylaimus* live in limnic habitats; three species have been described from paddy fields. They are distributed in Asia (6 species) and Africa (3 species).

Nine species:

C. andrassyi BAQRI & JANA, 1983

C. chassanicus (ALEKSEEV & NAUMOVA, 1977) comb. n.

Dorylaimus chassanicus ALEKSEEV & NAUMOVA, 1977

C. densus sp. n.

C. gravidus ANDRÁSSY, 1986

C. indicus AHMAD & JAIRAJPURI, 1982

Calodorylaimus simplex BAQRI & JANA, 1983

C. insignis (GAGARIN, 1981) comb. n.

Drepanodorylaimus insignis GAGARIN, 1981

Laimydorus insignis (GAGARIN, 1981) LOOF, 1985

C. mongolicus nom. n.

Dorylaimus montanus apud THALOLIKHIN, 1985

C. octo ANDRÁSSY, 1969

C. parhomalopapillatus (SCHUURMANS STEKHOVEN, 1944) comb. n.

Dorylaimus parhomalopapillatus SCHUURMANS STEKHOVEN, 1944

Laimydorus parhomalopapillatus (SCHUURMANS STEKHOVEN, 1944) BAQRI & COOMANS, 1973

Key to species of Calodorylaimus

- 1 Body small, 1.5–1.8 mm; spear 19–22 μ m long 2
– Body longer, 2.1–5.4 mm; spear 23–53 μ m long 3
- 2 Body strongly tapering to its anterior end; female gonads unusually long (anterior branch reaching to the oesophagus); female tail as long as 9–10 anal diameters. – ♀: L = 1.6 mm; a = 27–29; b = 5.0–5.3; c = 9–11; V = 44–47%; c' = 9–10. ♂: L = 1.3 mm; a = 28; b = 4.8; c = 80; PO: 18 (9+2+7). (Ethiopia.) **gravidus** ANDRÁSSY
– Body hardly tapering to its anterior end; female gonads much shorter; female tail as long as 5–6 anal diameters. – ♀: L = 1.5–1.8 mm; a = 30–32; b = 4.5–5.0; c = 13–16; V = 44–47%; c' = 5–6. ♂: L = 1.4–1.5 mm; a = 29–38; b = 39–4.1; c = 78–91; PO: 21–22 (9+3–4+9). (Soviet Union: Tadzhikistan.) **insignis** (GAGARIN)
- 3 Supplements 31, also the middle ones hardly separate. – ♀: L = 2.8–3.0 mm; a = 44–49 mm; b = 4.7–5.4; c = 12–14; V = 45–51%; c' = 6.5–8. ♂: L = 2.2 mm; a = 35; b = 3.9; c = 116; PO: 31. (India.) **densus** sp. n.
– Supplements 16–29, the middle ones well separate 4
- 4 Body very large, 5.4 (♀) mm. – ♀: L = 5.4 mm; a = 50; b = 4.7; c = 13; V = 40%; c' = 5. ♂: L = 3.6–4.5 mm; a = 41–48; b = 3.8–4.5; c = 83–120; PO: 25–29. (Zaire.) **parhomalopapillatus** (SCHUURMANS STEKHOVEN)
– Body smaller, to 3.9 mm 5
- 5 Lip region practically continuous with neck 6
– Lip region distinctly offset by a constriction 7
- 6 Spear 23–27 μ m long; spicula shorter than 50 μ m. – ♀: L = 2.1–2.7 mm; a = 35–51; b = 4.3–5.4; c = 5–7; V = 43–47%; c' = 14–20. ♂: L = 1.7–2.0 mm; a = 29–49; b = 3.9–4.6; c = 98–118; PO: 20–22 (9–10+1–2+9–10). (India.) **indicus** AHMAD & JAIRAJPURI
– Spear 39–42 μ m long; spicula longer than 70 μ m. – ♀ unknown. ♂: L = 2.1–2.9 mm; a = 26–50; b = 3.9–4.1; c = 74–76; PO: 24–25 (12+2–3+10). (Soviet Union: Far East.) **chassanicus** (ALEKSEEV & NAUMOVA)
- 7 Female tail short, 5–6 anal diameters. – ♀: L = 3.6–3.9 mm; a = 37–49; b = 5.0–5.7; c = 16–19; V = 42–43%; c' = 5–6. ♂: L = 3.3–3.6 mm; a = 31–36; b = 4.4–5.1; c = 70–110; PO: 23–27 (with 7–8 intermediate supplements). (Mongolia.) .. **mongolicus** nom. n.
– Female tail long, 12–27 anal diameters 8

- 8 Vulva in 36–37% of body length; female tail 20–27 times as long as anal body width. — ♀
 L = 3.0–3.6 mm; a = 40–45; b = 6.0–6.6; c = 5.0–5.5; V = 36–37%; c' = 20–27;
 ♂: L = 2.2–2.6 mm; a = 30–36; b = 5.0–5.6; c = 100–130; PO: 17–20 (9–10+2+1–9).
 (Ivory Coast.) octo ANDRÁSSY
 – Vulva in 44–45% of body length; female tail 12–15 times as long as anal body width. — ♀:
 L = 2.9–3.5 mm; a = 60–64; b = 5.6–6.1; c = 8–11; V = 44–45%; c' = 12–15. ♂:
 L = 2.6–3.1 mm; a = 58–61; b = 4.8–5.6; c = 131–260; PO: 16–18. (India.)
 andrassyi BAQRI & JANA

Genus *Halodorylaimus* gen. n.

Dorylaimidae, Laimyodorinae. Body 1.6–2 mm long, moderately slender. Cuticle smooth. Lips slightly separate, somewhat offset. Amphids funnel- or barrel-shaped with unusually narrow aperture measuring only 1/6–1/8 of corresponding width of body. Spear straight, 16–20 μ m, 1.1–1.5 times as long as cephalic diameter; aperture occupying one-fourth of spear length. Guiding ring double, lying less than one head diameter from anterior body end. Oesophagus enlarged in posterior half. Prerectum in females 4 to 10 anal diameters long, in males beginning somewhat before the supplements. Vulva longitudinal, mostly pre-equatorial. Female gonads amphidelphic. Testes two. Spicula rather thick, dorylaimoid. Supplements closely approximated, 13 to 21. Female tail attenuated to filiform, 7–8 anal diameters long, male tail short and rounded. Both females and males occur together.

Type-species: *Dorylaimus marinus* DUJARDIN, 1845 = *Halodorylaimus marinus* (DUJARDIN, 1845) comb. n.

Halodorylaimus may be distinguished from the other genera of the Laimyodorinae in having a very small amphid aperture and a short orifice in the spear. Marine or halophilic animals occurring in Europe and North America.

Two species:

H. marinus (DUJARDIN, 1845) comb. n.

Dorylaimus marinus DUJARDIN, 1845

Mesodorylaimus marinus (DUJARDIN, 1845) ANDRÁSSY, 1959

Laimyodorus marinus (DUJARDIN, 1845) SIDDIQI, 1969

H. micramphus (CHESUNOV, 1985) comb. n.

Laimyodorus micramphus CHESUNOV, 1985

Key to species of *Halodorylaimus*

- 1 Supplements 21; amphids barrel-shaped; vulva far pre-equatorial. — ♀: L = 2.0 mm; a = 28; b = 5.2; c = 8.6; V = 39%; c' = 7. ♂: L = 1.8 mm; a = 27; b = 4.7; c = 62; PO: 21. (On the shores of France and the United States [Massachusetts].) *marinus* (DUJARDIN)
 – Supplements 13–15; amphids funnel-shaped; vulva almost equatorial. — ♀: L = 1.8–2.0 mm; a = 34–43; b = 5.3–6.5; c = 14–23; V = 42–52%; c' = 7–8. ♂: L = 1.6–1.8 mm; a = 33–42; b = 4.4–5.6; c = 65–69; PO: 13–15. (Soviet Union: Caspian Sea.)
 micramphus (CHESUNOV)

Genus *Chrysodorus* JIMÉNEZ-GUIRADO & CADENAS, 1985

Dorylaimidae, Laimyodorinae. Body 2.2–4.3 mm long, extremely slender (a = 60–92). Cuticle thin, smooth. Head truncate, continuous with neck or

offset. Amphids funnel-shaped. Spear weak and unusually slender, somewhat longer than labial width, 20 to 43 μm ; aperture occupying 1/3 to 1/6 of its length. Guiding ring double but small, located less than one-head diameter behind anterior body end. Oesophagus enlarged in or behind its middle. Female pre-rectum 6–10 times as long as anal body diameter, male pre-rectum originating well before the supplements. Vulva slightly pre-equatorial (in 40–50%), longitudinal. Female genital organ amphidelphic, long. Testes two. Spermatozoa fusiform. Spicula dorylaimoid, not too slender. Supplements closely packed or contiguous, 7 to 16 in number. Tail in females attenuate, 5 to 20 anal diameters long, in males short and rounded.

Type-species: *Chrysodoros longicaudatus* JIMÉNEZ-GUIRADO & CADENAS, 1985.

Chrysodoros may be distinguished from the other genera of the family in having an unusually thin spear, a truncate head and an excessively slender body.

Limnic or terrestrial animals, occurring in Europe, Asia and South America.

Five species:

C. attenuatus (DE MAN, 1880) comb. n.

Dorylaimus attenuatus DE MAN, 1880

Mesodorylaimus attenuatus (DE MAN, 1880) ANDRÁSSY, 1959

C. dhanachandi (JAIRAJPURI & AHMAD, 1983) JIMÉNEZ-GUIRADO & CADENAS, 1985

Laimydorus dhanachandi JAIRAJPURI & AHMAD, 1983

C. filiformis (BASTIAN, 1865) comb. n.

Dorylaimus filiformis BASTIAN, 1865

Dorylaimus stagnalis filiformis BASTIAN, 1865 (KREIS, 1924)

Mesodorylaimus filiformis (BASTIAN, 1865) GOODEY, 1963

Laimydorus filiformis (BASTIAN, 1865) SIDDIQI, 1969

Paradorylaimus filiformis (BASTIAN, 1865) ANDRÁSSY, 1969

C. longicaudatus JIMÉNEZ-GUIRADO & CADENAS, 1985

C. lordelloi (MEYL, 1957) JIMÉNEZ-GUIRADO & CADENAS, 1985

Dorylaimus lordelloi MEYL, 1957

Mesodorylaimus lordelloi (MEYL, 1957) ANDRÁSSY, 1959

Paradorylaimus lordelloi (MEYL, 1957) ANDRÁSSY, 1987

Key to species of *Chrysodoros*

- 1 Tail very long, about 20 anal diameters. — ♀: L = 4.3 mm; a = 82; b = 6.1; c = 8.1; V = 40%; c' = 20. ♂: L = 3.6–3.7 mm; a = 64–65; b = 5.3; c = 188–203; PO: 15–16. (Spain.)
longicaudatus JIMÉNEZ-GUIRADO & CADENAS
- Tail shorter, at most 10 anal diameters 2
- 2 Spear about 40 μm long. — ♀: L = 2.5 mm; a = 59; b = 6.0; c = 13; V = 50%; c' = 6–7. ♂ unknown. (England; the other data are uncertain.) filiformis (BASTIAN)
- Spear 20–25 μm long 3
- 3 Lip region broad, wider than adjacent body; tail about as long as 10 anal diameters. — ♀: L = 2.2 mm; a = 65; b = 5; c = 14; V = 50%; c' = 10. ♂ unknown. (Holland, Federal Germany, Denmark, Sweden, Poland, Spain, Soviet Union [Russia], Mongolia.) .. attenuatus (DE MAN)
- Lip region not wider than adjacent body; tail as long as 5–7 anal diameters 4

- 4 Supplements 15–16; oesophagus enlarged in the middle. — ♀: L = 3.0 mm; a = 65–74; b = 5.2–6.0; c = 17–20; V = 46–48%; c' = 6–7. ♂: L = 2.7–2.8 mm; a = 78–82; b = 5.1–5.4; c = 188–195; PO: 15–16. (India.) **dhanachandi** (JAIRAJPURI & AHMAD)
- Supplements 7–9; oesophagus enlarged posterior to the middle. — ♀: L = 2.9–3.2 mm; a = 71–92; b = 5.3–6.2; c = 26–31; V = 46–47%; c' = 5. ♂: L = 2.5–2.7 mm; a = 80–94; b = 5.0–5.4; c = 92–109; PO: 7–9. (Brazil.) **lordelloi** (MEVIL)

Remarks

Chrysodorus filiformis. — I tentatively propose BASTIAN's *Dorylaimus filiformis* to be ordered into the genus *Chrysodorus*. The short description (females only) and the figures strongly suggest that this species is congeneric with the other members of *Chrysodorus*. BASTIAN says: „Body very long and slender, tapering only slightly anteriorly ... Head truncate...” Whether the spear is thinner than usual in the family it cannot be stated with certainty on the basis of the small figure (Plate X, Fig. 48). The species described by DE MAN (1880 and 1884) under the name *Dorylaimus filiformis* is probably not conspecific with that of BASTIAN; DE MAN described and illustrated the labial region as being distinctly offset and conspicuously wider than adjacent body.

Mesodorylaimus argentinus ALTHERR, 1963. — This species resembles the representatives of *Chrysodorus* in having a thin spear, its body is however not too slender (a = 36–48) and the pre-rectum is short. Incertae sedis.

Genus *Aporcedorus* JAIRAJPURI & AHMAD, 1983

Dorylaimidae, Laimydorinae. Body 3–3.5 mm long, very slender. Cuticle smooth, subcuticle finely striated. Head offset, lips distinct. Amphids calciform. Spear 18–20 μ m long, somewhat longer than cephalic diameter; orifice 60% of spear length. Oral opening slit-like, dorso-ventral. Guiding ring single, thin, located less than one head diameter from anterior body end. Oesophagus expanded near its middle. Pre-rectum long, 5–7 anal diameters. Female gonads amphidelphic, vulva transverse, pre-equatorial. Female tail very long, uniformly attenuated to the fine tip. Males not known.

Type-species: *Aporcedorus filicaudatus* JAIRAJPURI & AHMAD, 1983.

In its general habit and appearance *Aporcedorus* fits well into the subfamily Laimydorinae but it differs in two characters from the other genera: 1. the oral opening is a dorso-ventral slit (not pore-like), 2. the orifice is longer than half the length of spear. Owing to these characters, JAIRAJPURI and AHMAD regarded their genus as a representative of the family Aporcelaimidae; in my opinion this long-tailed form does come closer to the family Dorylaimidae than Aporcelaimidae.

The single species has been reported from soil and from Asia.

One species:

A. *filicaudatus* JAIRAJPURI & AHMAD, 1983

- ♀: L = 3.0–3.4 mm; a = 57–67; b = 5.5–6.0; c = 4.1–5.3; V = 40–44%; c' = 20–27. ♂ unknown. (India.) **filicaudatus** JAIRAJPURI & AHMAD

Subfamily AFRODORYLAIMINAE ANDRÁSSY, 1969

The fifth subfamily of the Dorylaimidae, the Afrodorylaiminae, will be discussed elsewhere in a separate paper.

Species inquirendae seu incertae

The following species have either been insufficiently described or by one sex only. Although they may be ordered into the family Dorylaimidae, they cannot be identified with certainty.

Dorylaimus acris THORNE, 1939

Mesodorylaimus acris (THORNE, 1939) GOODEY, 1963

Laimydorus acris (THORNE, 1939) ANDRÁSSY, 1969

Prodorylaimus acris (THORNE, 1939) LOOF, 1985

Dorylaimus africanus DADAY, 1908

Mesodorylaimus africanus (DADAY, 1908) ANDRÁSSY, 1959

Dorylaimus angusticephalus STEINER, 1914

Eudorylaimus angusticephalus (STEINER, 1914) ANDRÁSSY, 1959

Laimydorus angusticephalus (STEINER, 1914) ANDRÁSSY, 1986

Dorylaimus atratus LINSTOW, 1901

Dorylaimus callosus SKWARRA, 1921

Mesodorylaimus callosus (SKWARRA, 1921) GOODEY, 1963

Laimydorus callosus (SKWARRA, 1921) ANDRÁSSY, 1969

Dorylaimus cashmerensis ALTHERR & DELAMARE DEBOUTTEVILLE, 1972

Dorylaimus exilicaudatus ALTHERR, 1953

Dorylaimus fastigatus THORNE & SWANGER, 1936

Mesodorylaimus fastigatus (THORNE & SWANGER, 1936) ANDRÁSSY, 1959

Drepanodorylaimus fastigatus (THORNE & SWANGER, 1936) ANDRÁSSY, 1986

Dorylaimus festivus PAESLER, 1941

Mesodorylaimus festivus (PAESLER, 1941) ANDRÁSSY, 1959

Dorylaimus gaussi STEINER, 1916

Mesodorylaimus gaussi (STEINER, 1916) GOODEY, 1963

Laimydorus gaussi (STEINER, 1916) ANDRÁSSY, 1986

Dorylaimus libycus PIERANTONI, 1915

Dorylaimus longicaudatus BÜTSCHLI, 1874

Prodorylaimus longicaudatus (BÜTSCHLI, 1874) ANDRÁSSY, 1959

Dorylaimus maximodorus SCHUURMANS STEKHOVEN & TEUNISSEN, 1938

Ischiodorylaimus maximodorus (SCHUURMANS STEKHOVEN & TEUNISSEN, 1938) BAQRI & COOMANS, 1973

Dorylaimus nyongi ALTHERR, 1960

Prodorylaimus nyongi (ALTHERR, 1960) LOOF, 1985

Dorylaimus pachydermis DADAY, 1908

Dorylaimus pachysoma LINSTOW, 1876

Dorylaimus paraagilis ALTHERR, 1953

Mesodorylaimus paraagilis (ALTHERR, 1953) ANDRÁSSY, 1959

Prodorylaimus paraagilis (ALTHERR, 1953) ANDRÁSSY, 1986

Dorylaimus polyblastus BASTIAN, 1865

Mesodorylaimus polyblastus (BASTIAN, 1865) GOODEY, 1963

Dorylaimus serpentinus THORNE & SWANGER, 1936

Mesodorylaimus serpentinus (THORNE & SWANGER, 1936) GOODEY, 1963

Laimydorus serpentinus (THORNE & SWANGER, 1936) SIDDIQI, 1969

Prodorylaimus serpentinus (THORNE & SWANGER, 1936) LOOF, 1985

Dorylaimus sulcatus COBB in COBB, 1915

- Dorylaimus tenuicaudatus** BASTIAN, 1865
Mesodorylaimus tenuicaudatus (BASTIAN, 1865) GOODEY, 1963
Laimydorus tenuicaudatus (BASTIAN, 1865) SIDDIQI, 1969
- Dorylaimus tenuissimus** STEFANSKI, 1925
- Dorylaimus tenuistriatus** SCHNEIDER, 1935
- Dorylaimus zograffi** DE MAN, 1885
- Eudorylaimus aquaticus** ELIAVA, 1968
Paradorylaimus aquaticus (ELIAVA, 1968) ANDRÁSSY, 1986
- Laimydorus longissimicaudatus** ALTHERR, 1977
Prodorylaimus longissimicaudatus (ALTHERR, 1977) LOOF, 1985
- Laimydorus thornei** ANDRÁSSY, 1969
Dorylaimus filicaudatus apud THORNE & SWANGER, 1936
Prodorylaimus thornei (ANDRÁSSY, 1969) LOOF, 1985
- Mesodorylaimus argentinus** ALTHERR, 1963
Drepanodorylaimus argentinus (ALTHERR, 1963) ANDRÁSSY, 1986
- Prodorylaimus uliginosus** Loof, 1985
- Urolabes palustris** Carter, 1859
Dorylaimus palustris (CARTER, 1859) BASTIAN, 1865

Descriptions of new species

Hereunder seven new species of the family Dorylaimidae are described; one of them belongs to the subfamily Amphidorylaiminae, two belong to the subfamily Dorylaiminae and four to the subfamily Laimydorinae. They have been collected in Asia (4 species), Africa (2 species) and South America (1 species).

Apodorylaimus bini sp. n.

(Fig. 1 A–F)

♀: L = 1.24–1.74 mm; a = 37–42; b = 3.8–4.7; c = 3.1–3.9; V = 38–43%; c' = 18–22.

♂: L = 1.58 mm; a = 45; b = 4.5; c = 3.6; c' = 16.

Body more transparent than usual, 38–41 μm wide. Cuticle 1.8–2 μm thick on mid-body, smooth, only anterior end very finely annulated. Head not offset, 11–12 μm wide, lips hardly separate. Amphids as wide as 2/3 corresponding diameter of body, funnel-shaped. Body at posterior end of oesophagus 3–3.2 times as wide as head.

Spear 24–26 μm , 2–2.2 times as long as labial diameter, about 7% of entire length of oesophagus; its walls not parallel but somewhat widening posteriorly (spear 2.3–2.6 μm thick in its first third and 3.5–3.8 μm thick just before the posterior end). Aperture occupying one-third of spear length. Guiding ring simple, thin, at a distance of 15–17 μm (1.3–1.4 head diameters) from anterior body end. Oesophagus 326–367 μm long, gradually widening in 54–56% of its length. Prerectum 1.3–1.7, rectum 1.4–1.9 times as long as anal body width. Intestinal tongue present, just before the prerectum about 25 μm long.

Female gonads amphidelphic. Vulval opening round, vulval lips not sclerotized. Vagina longer than 1/3 corresponding diameter of body. Each gonad 4–4.5 times as long as body width. One egg: 102 × 31 μm .

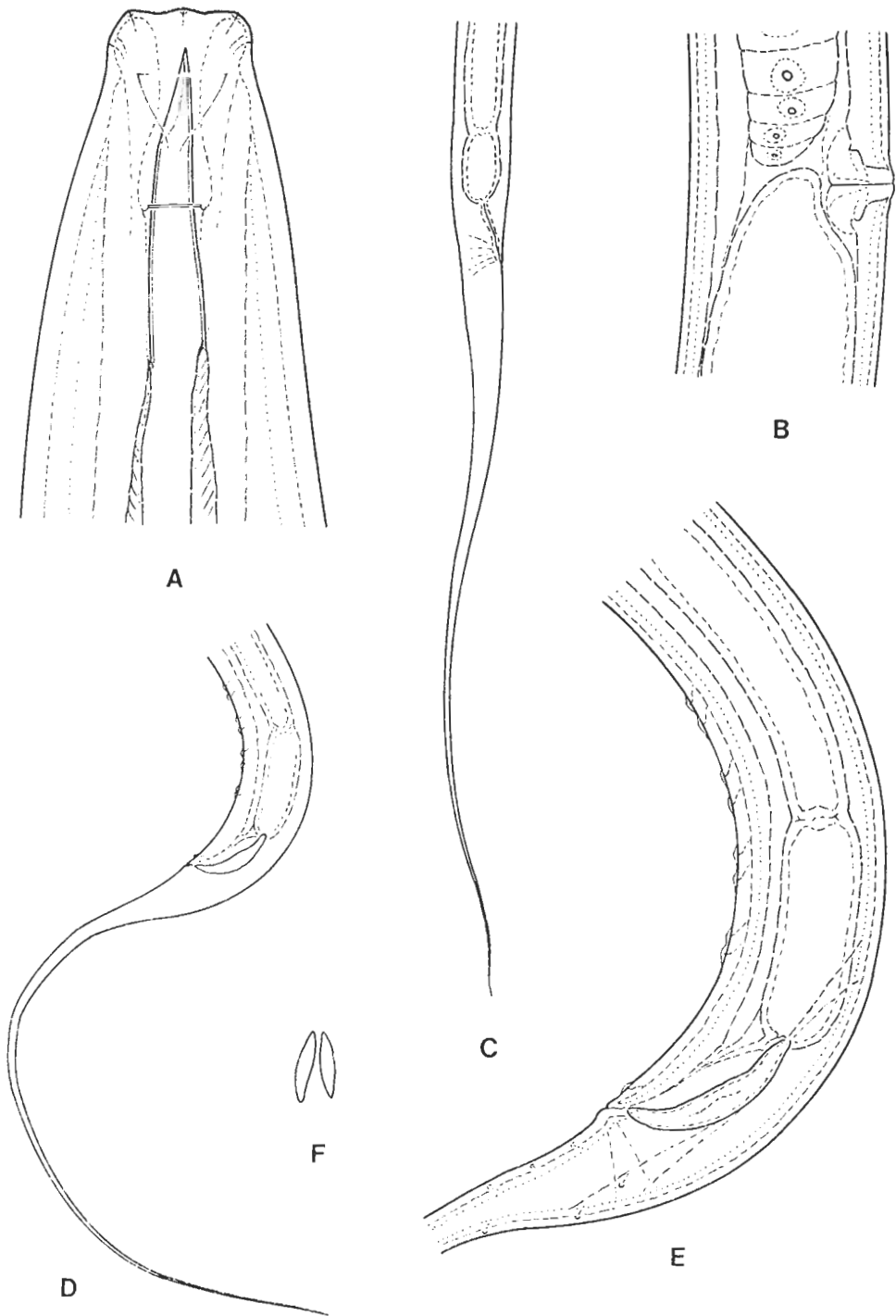


Fig. 1. *Apodorylaimus bini* gen. n., sp. n. A: anterior end (1800 \times); B: vulval region (760 \times); C: posterior end of female (240 \times); D: posterior end of male (240 \times); E: cloacal region of male (560 \times); F: spermatozoa (1800 \times)

Distance between vulva and anus 0.9–1.2 times as long as tail. The latter 380–490 μm , 18–22 times anal body diameters, or 25–32% of body length, respectively; filiform with sharply pointed terminus.

Testes two. Spermatozoa fusiform, 5–5.5 μm long, 1/8 as long as corresponding diameter of body. Spicula 44 μm long, rather simple, semi-dorylaimoid. Supplements 8, arranged two by two, standing in a row of 53 μm . Tail 438 μm , 16 anal diameters long, 28% of body length, with six pairs of papillae.

H o l o t y p e: ♂ on slide No. 11640. Paratypes: 4 ♀ and 2 juveniles. All in the collection of the author.

T y p e - l o c a l i t y: India, Bangalore, Lal Bagh Botany Garden, marshy soil, February 1986, leg. A. FODOR.

Apodorylaimus bini sp. n. may be distinguished from *A. congolensis* (ANDRÁSSY, 1960) comb. n. as follows: body longer (1.2–1.7 vs. 0.8 mm), spear much longer (24–26 vs. 10 μm), tail longer as well and more sharply pointed (18–22 vs. 10 anal diameters), supplements more numerous (8 vs. 5 or 6?) and lying before the spicula.

Dorylaimus numidicus sp. n.

(Fig. 2 A–E)

♀: L=3.12–3.25 mm; a = 40–47; b = 4.4–4.6; c = 13–15; V = 36–39%; c' = 6–7.

♂: L = 2.63–2.80 mm; a = 40–42; b = 4.0–4.3; c = 91–96.

Body 68–80 (♀) or 63–68 (♂) μm wide. Cuticle 3.5–4.5 μm thick on mid-body, much thinner than spear at the same level, provided with 32–34 longitudinal ridges. Head hardly offset, 18–20 μm wide, lips rounded, slightly separate. Body at proximal end of oesophagus 3.7–4 times as wide as head. Amphids funnel-shaped, half as wide as corresponding diameter of body.

Spear 43–45 μm long and 6–6.5 μm thick, 2.2–2.3 times as long as labial width, about 6% of oesophagus length. Aperture occupying more than one-third of spear length. Guiding ring double, located at a distance of 24–25 μm from anterior end of body. Oesophagus 690–720 μm long, in 49–50% enlarged. Distance between oesophagus and vulva always shorter than oesophagus. Pre-rectum 6–7, rectum 1.5–1.8 anal diameters long.

Female gonads amphidelphic, each lying on the right side of the intestine, and 6–8 times as long as body width. Vulva longitudinal, with sclerotized lips, vagina 36–43 μm long. Distance vulva-anus 6.7–8.3 times as long as tail. Tail 220–247 μm , 6–7 anal diameters long or 7–8% of body length, respectively; conoid with pointed terminus.

Testes two. Spermatozoa spindle-shaped, 8–10 μm long, 1/7–1/8 as long as corresponding width of body. Spicula 82–90 μm , slender. Supplements 22–27, contiguous. Pre-rectum very long, originating 3–5 body widths before the row of supplements. Tail 27–30 μm long with small papillae.

H o l o t y p e: ♀ on slide No. 8298. Paratypes: 2 ♀, 5 ♂ and 2 juveniles. In the collection of the author.

T y p e - l o c a l i t y: Algeria, in the vicinity of Medea, periphyton from plants in a rivulet, 1973.

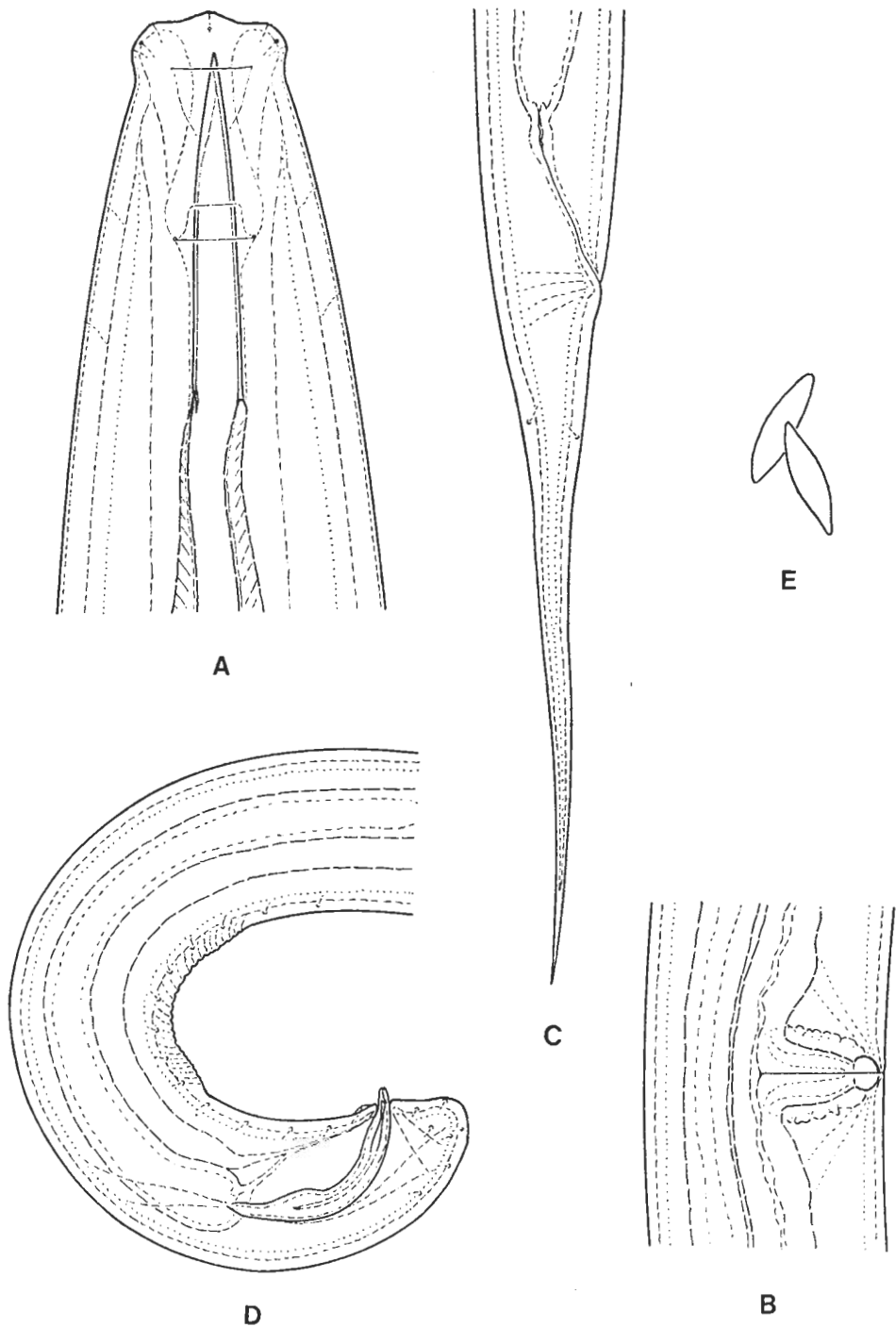


Fig. 2. *Dorylaimus numidicus* sp. n. A: anterior end (1100 \times); B: vulval region (480 \times); C: female tail (390 \times); D: posterior end of male (390 \times); E: spermatozoa (1800 \times)

Dorylaimus numidicus sp. n. resembles *D. afghanicus* ANDRÁSSY, 1960 and *D. popus* GAGARIN, 1981; it differs a) from *afghanicus*: the number of supplements is much fewer (22–27 vs. 52); b) from *popus*: the vulva is located farther ahead (36–39 vs. 44–49%), the distance between the posterior end of oesophagus and vulva is shorter (0.6–0.8 vs. 1.2–1.3 oesophageal length), the body smaller (♀: 3.1–3.2 vs. 3.3–4.1, ♂: 2.6–2.8 vs. 3.5–4.0 mm).

Dorylaimus fodori sp. n.

(Fig. 3 A–E)

♀: L = 3.6–4.2 mm; a = 37–41; b = 4.9–5.3; c = 15–16; V = 38–41%; c' = 5–5.3.

♂: L = 3.34 mm; a = 39; b = 5.0; c = 76.

Body 87–104 μm wide in the middle. Cuticle 4.5–5 μm thick on mid-body, at level of spear somewhat thinner than that. Longitudinal ridges 32–34 on mid-body, and 8–11 μm from each other. Head 17–20 μm wide, hardly offset, lips amalgamated. Body at proximal end of oesophagus 5–5.5 times as wide as head. Amphids caliciform, half as wide as corresponding width of body.

Spear 40–42 μm long and 5 μm thick, 2–2.4 times as long as labial width, or 5–6% of oesophageal length, respectively. Aperture occupying somewhat more than one-third length of spear. Guiding ring double, at a distance of 26–27 μm (1.3–1.4 head diameters) from anterior end. Oesophagus 658–794 μm long, in 50–52% expanded. Distance between posterior end of oesophagus and vulva somewhat longer than oesophagus. Prerectum 5.5–7.5 times as long as anal body width.

Female genital organ amphidelphic, each gonad 6–7.5 times as long as body width. Vulva longitudinal, vulval lips slightly sclerotized; vagina occupying half the width of body. Distance vulva-anus 8–8.5 times as long as tail. Tail 230–274 μm , 5–5.3 times anal body diameter or 6–6.5% of entire length of body, respectively. Tip of tail pointed or finely rounded.

Testes two. Spermatozoa oval, 5 μm long, 1/16–1/17 as long as corresponding diameter of body. Spicula 88 μm , twice as long as tail, slender. Supplements 46, very small and dense, arranged in a row of 135 μm . Prerectum beginning 3.3 body diameters before the row of supplements. Tail 44 μm long, with 12 pairs of small papillae. Copulatory hump absent.

H o l o t y p e: ♀ on slide No. 11630. Paratypes: 3 ♀ and 1 ♂. In the collection of the author.

T y p e - l o c a l i t y: India, Bangalore, paddy field, April 1986, leg. A. FODOR.

Among the species provided with 32–34 cuticular ridges, *Dorylaimus fodori* sp. n. comes closest to *D. afghanicus* ANDRÁSSY, 1960; it differs from that in having a shorter and thinner spear (40–42 vs. 46–50 μm ; 5 vs. 7–8 μm), a lower guiding ring and less numerous supplements (46 vs. 52). It is similar in some respects also to *D. numidicus* sp. n. but its cuticle is thicker at level of spear, the spermatozoa are shorter and less elongate (5 vs. 8 μm ; 1/16–1/17 vs. 1/7–1/8 body diameter) and the supplements more numerous (46 vs. 22–27).

I dedicate this species to the collector, my friend, Dr. ANDRÁS FODOR (Szeged).

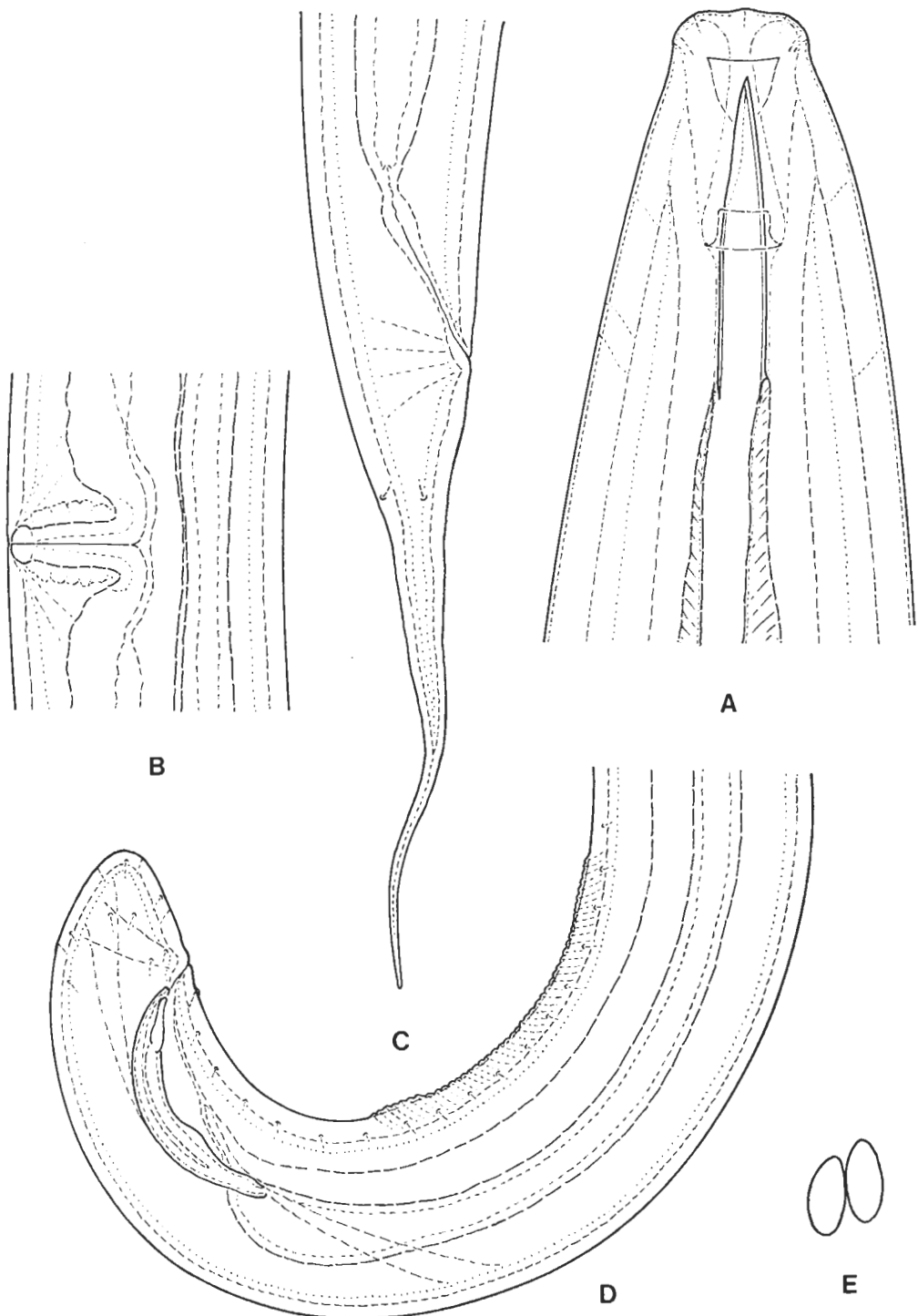


Fig. 3. *Dorylaimus fodori* sp. n. A: anterior end (1100 \times); B: vulval region (390 \times); C: female tail (390 \times); D: posterior end of male (390 \times); E: spermatozoa (1800 \times)

Crocodyrilaimus aequatorialis sp. n.

(Fig. 4 A–E)

♀: L = 2.03–2.18 mm; a = 41–44; b = 4.9–5.1; c = 10.9–12.6; V = 43–44%; c' = 7–8.

♂: L = 1.88–2.16 mm; a = 40–48; b = 4.4–4.7; c = 66–77.

Body slender, 44–49 μm wide. Cuticle very thin, 1–1.2 μm on mid-body, at level of spear somewhat thinner than that. Head 12–12.5 μm wide, not offset, lips slightly angular, amalgamated. Body at proximal end of oesophagus 3.2–3.3 times as wide as head. Amphids larger than half the width of corresponding body.

Spear rather weak, 17–19 (♀) or 17–18 (♂) μm , 1.3–1.5 times as long as labial diameter, or about 4% of entire length of oesophagus, respectively. Orifice occupying one-third length of spear. Guiding ring thin. Yellow spots around the basis of spear comparatively weakly expressed, light in colour. Oesophagus 400–460 μm long, shorter than distance between posterior oesophageal end and vulva, in 55–60% widened. Cardia short, conoid. Prerectum 4.5–5, rectum 1.5–1.8 anal diameters long. Intestinal tongue absent.

Female gonads amphidelphic, each 6–7.5 times as long as body width. Vulva longitudinal, with sclerotized lips. Vagina 26–28 μm long. Distance vulva-anus 5–6 times as long as tail. This latter 167–186 μm , 7–8 anal diameters long, 8–9% of body length, elongate-conoid, with very finely rounded tip. On both sides of vulva, 30–40 μm from that, 1–3 small papillae are present.

Testes two. Spermatozoa large, fusiform, 15–17 μm , one-third corresponding diameter long. Spicula 54–58 μm long. A weak copulatory hump present. Supplements 17–22 (in one male 17, in five males 18, in seven males 19, in three males 20, and in one male 22); predominantly contiguous, arranged in a row of 72–80 μm . Tail short, 28–32 μm , ventrally bent, short, digitiform, with 6–7 pairs of papillae, of which the ventral-subterminal one is large and flat (blister-like). Between the anteriormost supplement and anus 7–8 pairs of small subventral papillae present.

H o l o t y p e: ♂ on slide No. 11940. Paratypes: 9 ♀, 8 ♂ and 14 juveniles. Further specimens from an other locality: 2 ♀, 9 ♂, 10 juveniles. In the collection of the author.

T y p e - l o c a l i t y: Ecuador, Antisana, 4200 m, submerged plants from a creek, October 1985, leg. I. LOKSA and A. ZICSI. Other locality: Ecuador, Limpipungo, submerged plants from a rivulet; date and collectors are the same as above.

This new species comes closest to *Crocodyrilaimus dadayi* (THORNE & SWANGER, 1936) comb. n. DADAY described his species under the name *Dorylaimus pusillus* DADAY, 1905 – nec *D. pusillus* COBB, 1893 – from Paraguay. The type specimens still exist in fairly good condition in the old collection of DADAY, so that I could compare them with my new species. *Crocodyrilaimus aequatorialis* sp. n. is somewhat longer (2.0–2.2 : 1.6–1.7 mm), its spear also longer (17–19 : 15–16 μm) and its head wider (12 : 9–10 μm). The main differences can be found, however, in the males: in *aequatorialis* the spermatozoa are larger (15–17 μm , one-third body width: 10–12 μm , one-fourth body width), the spicula longer (54–58 : 35–38 μm), the supplements more numerous (17–22 : 12–14) and the subterminal blister on the tail is in *aequatorialis* large and flat, in *dadayi* (Fig. 4 F) small and convex (a constant character!).

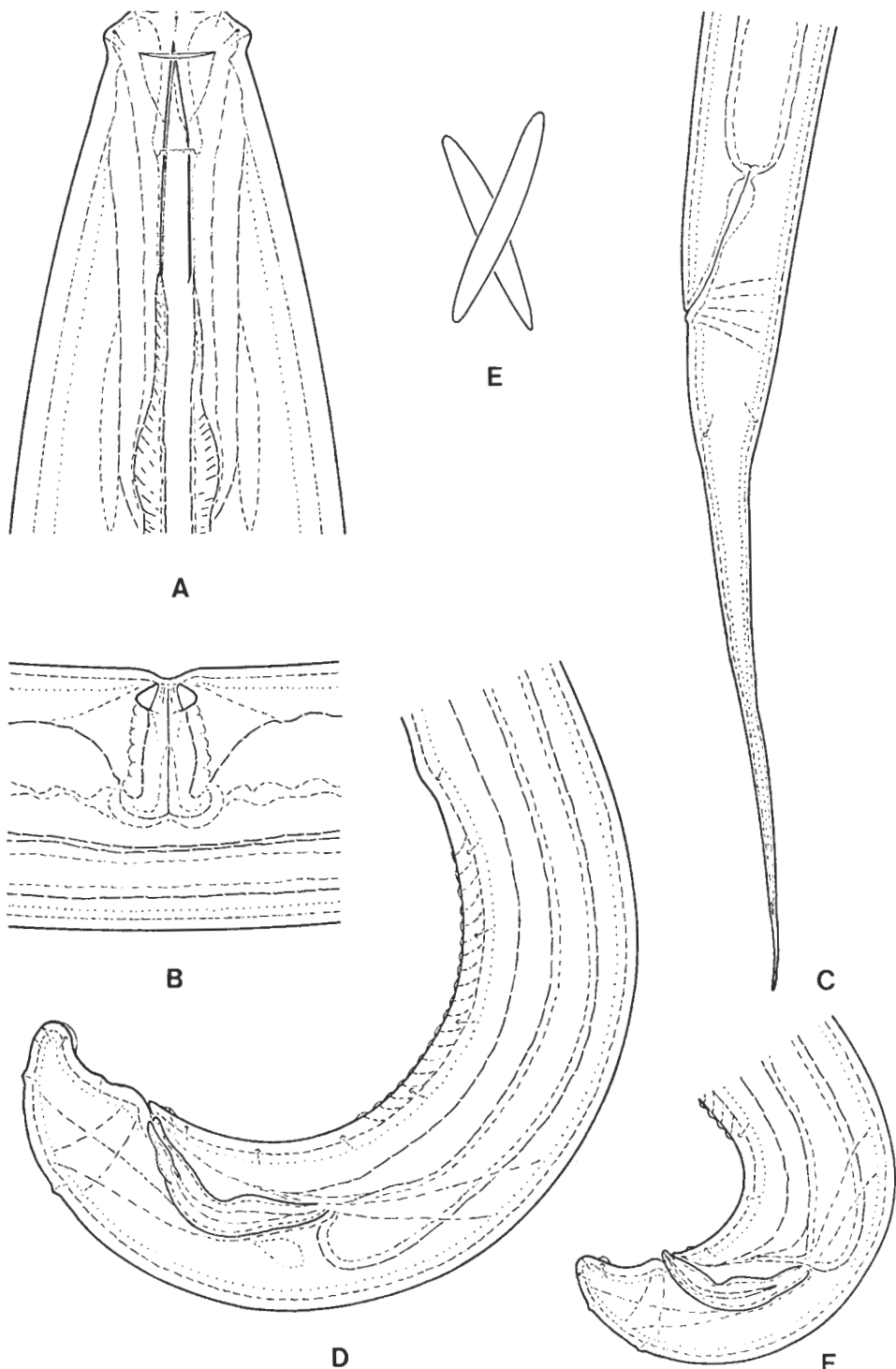


Fig. 4. *Crocodorylaimus aeqatorialis* sp. n. A: anterior end (1800 \times); B: vulval region (760 \times); C: female tail (560 \times); D: posterior end of male (560 \times); E: spermatozoa (1800 \times). — F: *Crocodorylaimus dadayi* (THORNE&SWANGER, 1936) comb. n., posterior end of male (holotype from DADAY's collection)

Crocodyrilyaimus dimorphus sp. n.

(Fig. 5 A-G)

♀: L = 1.76-2.06 mm; a = 52-58; b = 5.0-5.3; c = 13-14; V = 44-45%; c' = 7-8.

♂: L = 1.37-1.45 mm; a = 44-48; b = 5.0-5.9; c = 57-66.

Body slender, 33-38 (♀) or 30-33 (♂) μm wide. Cuticle smooth and thin (♀: 1.2-1.4, ♂: 1.5-1.6 μm). Head continuous with adjacent body, 8-9 μm wide, lips amalgamated. Body at posterior end of oesophagus 3-3.3 times as wide as head. Amphids caliciform, occupying half width of corresponding body.

Spear of different lengths in both sexes: in females 19-20 μm , 2.1-2.3 head diameters, in males 13-14 μm , 1.5-1.6 head diameters. Orifice occupying one-third length of spear. Guiding ring thin. Yellowish spots spindle-shaped, 16-21 μm long. Oesophagus 350-384 μm (♀) or 246-274 μm (♂) long, in 57-60% widened. Prerectum 3.5-4.5, rectum 1.5-1.9 times as long as anal body diameter. Intestinal tongue before the prerectum present.

Female gonads amphidelphic, each 4-6 times as long as body width. Vulva transverse, vulval lips not sclerotized. Vagina 16-18 μm long. Distance vulva-anus 6.3-7 times as long as tail. Tail elongate-conoid, 134-152 μm , 7-8 anal diameters long. Tip of tail pointed.

Testes two. Spermatozoa elongate-fusiform, 11-12 μm long, one-third of body width. Spicula 40-43 μm long, fairly plump. Supplements 14-15, contiguous, flat, arranged in a row measuring 70-74 μm . Prerectum long, originating two body widths before the supplements. Tail 22-25 μm , as long as anal body width, short-digitiform, ventrally bent, with 6-7 pairs of papillae. Subterminal blister distinct.

H o l o t y p e: ♂ on slide No. 11664. Paratypes: 7 ♀, 2 ♂, 6 juveniles. In the collection of the author.

T y p e - l o c a l i t y: Vietnam, Uminh, wet forest soil, December 1983.

Crocodyrilyaimus dimorphus sp. n. may be distinguished from the smaller species of the genus, *C. dadayi* (THORNE & SWANGER, 1936), *C. flavomaculatus* (LINSTOW, 1876) and *C. paraincae* (THORNE, 1974), in showing a sexual dimorphism in the length of spear and in having supplements just beginning at the proximal end of the spicula.

Mesodorylaimus kittenbergeri sp. n.

(Fig. 6 A-F)

♀: L = 1.10-1.35 mm; a = 28-35; b = 3.5-5.5; c = 31-44; V = 49-54%; c' = 1.3-1.5.

♂: L = 1.54 mm; a = 40; b = 4.8; c = 80.

Body 38-41 μm wide. Cuticle thin, 1.5-1.8 μm on mid-body, at level with spear thinner than the latter; smooth. Labial region offset, 12-13 μm wide, lips separate, papillae protruding. Body at proximal end of oesophagus 3-3.4 times as wide as head. Amphids caliciform, half as wide as corresponding body.

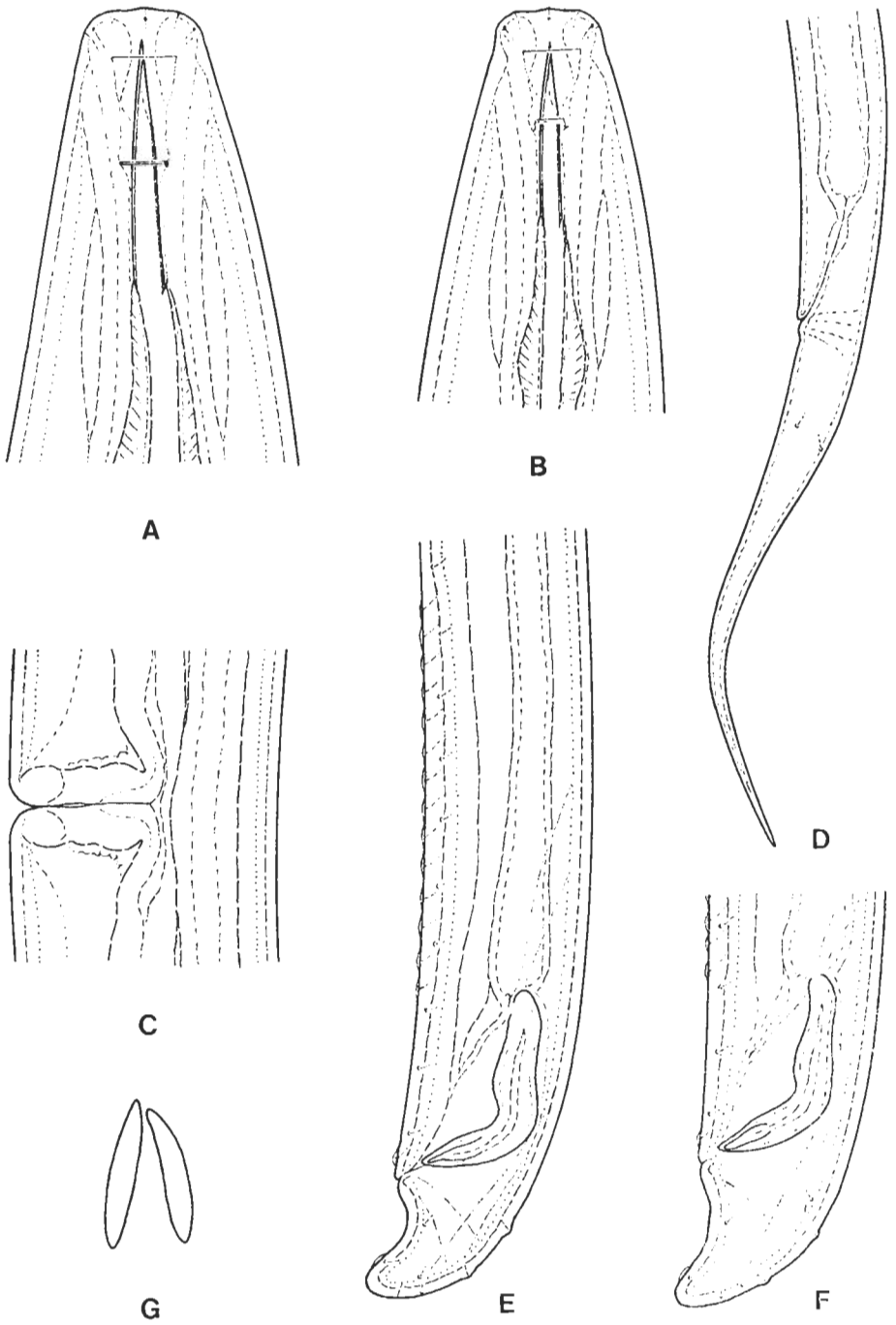


Fig. 5. *Crocodorylaimus dimorphus* sp. n. A: anterior end of female (1800 \times); B: anterior end of male (1800 \times); C: vulval region (1100 \times); D: posterior end of female (480 \times); E–F: posterior ends of two male specimens (760 \times); G: spermatozoa (1800 \times)

Spear short, 14–15 μm , 1.1–1.3 labial diameters, 4–5% of entire length of oesophagus. Orifice occupying one-third of spear length. Guiding ring simple. Oesophagus 270–310 μm long, in 58–60% enlarged. Prerectum short, 1.5–2 times, rectum 1.4–1.5 times as long as anal body width. Intestinal tongue lacking.

Female gonads amphidelphic, each branch 5.5–7 times as long as body diameter. Vulva transverse, vagina 21–23 μm long. Distance between vulva and anus 13–21 times as long as tail. The latter very short, 29–36 μm , only 1.3–1.5 times as long as anal diameter, or 2–2.5% of body length, respectively; first dome-shaped then continuing in a short, slightly ventrally curved finger-like portion with rounded tip. Number of caudal papillae two pairs. On each side of vulva a papilliform cuticular fold present.

Testes two. Spermatozoa sausage-shaped, 9 μm long, one-fourth of corresponding body diameter. Spicula plump, 42 μm long, lateral guiding pieces 12 μm long. Supplements 11, closely approximated, located well before the spicula. Prerectum originating level with the anteriormost supplement. Tail 22 μm long with 8 pairs of small papillae. Number of preanal papillae (between the first supplement and the anus) 10 pairs.

H o l o t y p e: ♀ on slide No. 11670. **Paratypes:** 8 ♀, 1 ♂. In the collection of the author.

T y p e - l o c a l i t y: Kenya, Ukunda, Diani Persian Mosque, mosses and lichens from a baobab tree, September 1985, leg. S. MAHUNKA.

This new species may be distinguished from all known species of the genus by its short and characteristic female tail. Although we know some species which are characterized by a very short tail (shorter than two anal body diameters), viz. *M. aduncus* ANDRÁSSY, 1987, *M. arcuatus* ANDRÁSSY, 1987, *M. cognatus* ANDRÁSSY, 1987, *M. deuberti* (ANDRÁSSY, 1958), *M. mexicanus* ZULLINI, 1973, *M. procerus* ANDRÁSSY, 1987, *M. recurvus* ANDRÁSSY, 1964, *M. tholocercus* ANDRÁSSY, 1968, *M. thorneiswungerae* ANDRÁSSY, 1968 and *M. vulneratus* ANDRÁSSY, 1987, but they all differ from *M. kittenbergeri* sp. n. by the dorsally curved digitate process of their tail.

This species is dedicated to honour of KÁLMÁN KITTENBERGER (1881–1958) in appreciation of his imperishable merits in exploring the fauna of East Africa.

Calodorylaimus densus sp. n.

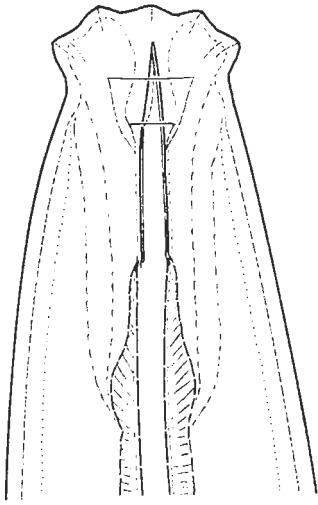
(Fig. 7 A–E)

♀: L = 2.82–3.03 mm; a = 44–49; b = 4.7–5.4; c = 11.8–14.5; V = 45–51%; c' = 6.5–8.2.

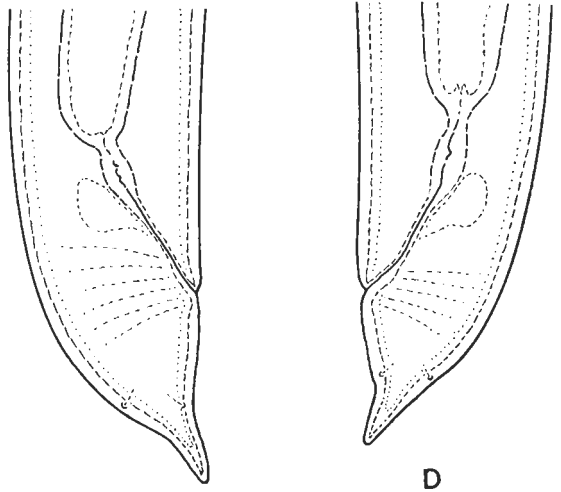
♂: L = 2.18 mm; a = 35; b = 3.9; c = 11.6.

Body 57–68 μm wide. Cuticle smooth, in mid-body 3–4 μm thick, at level of spear much thinner than the latter. Head slightly offset, 15–17 μm wide, lips angular. Body at posterior end of oesophagus 3.8–4.2 times as wide as head. Amphids funnel-shaped, about half as wide as body at the same level.

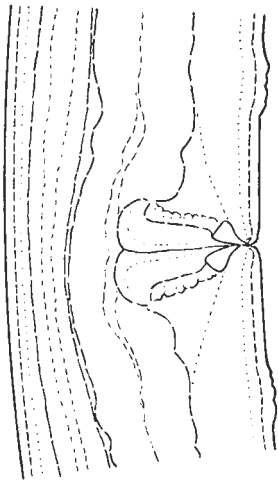
Spear 30–31 (♀) or 29 (♂) μm , 1.9–2.1 times as long as labial diameter, straight, its tip located at a distance of 8–9 μm from anterior body end. Orifice occupying one-third of spear length. Guiding ring thin but double, always more



A



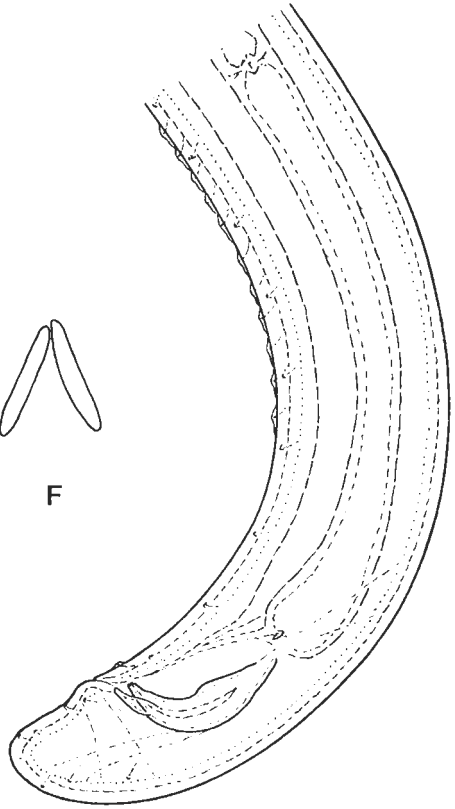
D



B



F



E

Fig. 6. *Mesodorylaimus kittenbergerei* sp. n. A: anterior end (1800 \times); B: vulval region (760 \times); C-D: tails of two females (760 \times); E: posterior end of male (560 \times); F: spermatozoa (1800 \times)

than one head diameter from anterior end. Oesophagus 545–615 μm long, gradually expanded in 49–52% of its length. Cardia conoid. Distance between posterior end of oesophagus and vulva 1.4–1.6 times longer than oesophagus. Prerectum 6–6.5, rectum 1.3–1.5 times as long as anal body diameter. Intestinal tongue lacking.

Female gonads amphidelphic, long, each branch 8–9 times as long as body width. Vulva transverse, with slightly sclerotized lips. Uteri with 2 to 7 eggs at the same time; eggs 77–98 \times 30–33 μm , 1.3–1.6 times as long as body width.

Distance vulva-anus 5.5–6.2 times as long as tail. Tail 194–246 μm , 6.5–8.2 anal diameters long, or 7–8% of body length; straight with finely rounded tip. Two pairs of caudal papillae present.

Testes two. Spermatozoa elongate-fusiform, 10–12 μm long, about 1/5 of corresponding body width. Spicula 55 μm long. Supplements 31, flat, arranged in a row measuring 125 μm ; the marginal ones contiguous, the middle ones closely approximated, almost contiguous. Precloacal space 98 μm long. Prerectum very long, originating more than two body diameters before the supplements. Tail 19 μm long, broadly rounded, with 10 pairs of small papillae.

H o l o t y p e: ♂ on slide No. 11630. Paratypes: 10 ♀. In the collection of the author.

T y p e - l o c a l i t y: India, Bangalore, periphyton from a cistern, February 1986, leg. A. FODOR.

Calodorylaimus densus sp. n. may be easily distinguished from the other known species of the genus by the greater number (31 vs. 16–27) and arrangement of supplements (also the middle ones close to each other).

REFERENCES

Owing to the great extent of the present article the References are limited to some cited papers only.

1. ANDRÁSSY, I. (1969): Taxonomische Übersicht der Familien Prodorylaimidae n. fam. und Dorylaimidae de Man, 1876. — Opusc. Zool. Budapest, 9: 187–233.
2. ANDRÁSSY, I. (1976): Evolution as a basis for the systematization of nematodes. — Budapest: 1–288.
3. ANDRÁSSY, I. (1986): The genus *Mesodorylaimus* Andrassy, 1959 and its relatives (Nematoda: Dorylaimidae). — Acta Zool. Hung., 32: 207–261.
4. ANDRÁSSY, I. (1987): The superfamily Dorylaimoidea (Nematoda) — a review. Families Thoroidae and Thornenematidae. — Acta Zool. Hung., 33: 277–315.
5. BAKER, A. D. (1962): Check list of the nematode superfamilies Dorylaimoidea, Rhabditoidea, Tylenchoidea, and Aphelenchoidea. Leiden: 1–261.
6. BAQRI, Q. H. (1985): A taxonomic revision of the nematode species (Dorylaimida) reported by Khera (1970) from India. — Bull. Zool. Surv. India, 7: 271–284.
7. BAYLIS, H. A. & DAUBNEY, R. (1926) A synopsis of the families and genera of Nematoda. — London: 1–277.
8. CHITWOOD, B. G. & CHITWOOD, M. B. (1950): An introduction to nematology. — Baltimore: 1–213.
9. DE CONINCK, L. (1965): Systematique des Nématodes. — In: Traité de Zoologie, 4/2: 586–731.
10. ELIAVA, I. (1984): Svobodnozhivushchie nematody semeystva Dorylaimidae. — Leningrad: 1–263.
11. FERRIS, V. R. (1971): Taxonomy of the Dorylaimida. — In: Plant Parasitic Nematodes, 164–189.
12. GOODEY, J. B. (1963): Soil and freshwater nematodes. — London: 1–544.
13. LOOF, P. A. A. (1973): Freshwater nematodes from Suriname collected by J. van der Land. — Zool. Verhand., 129: 3–46.

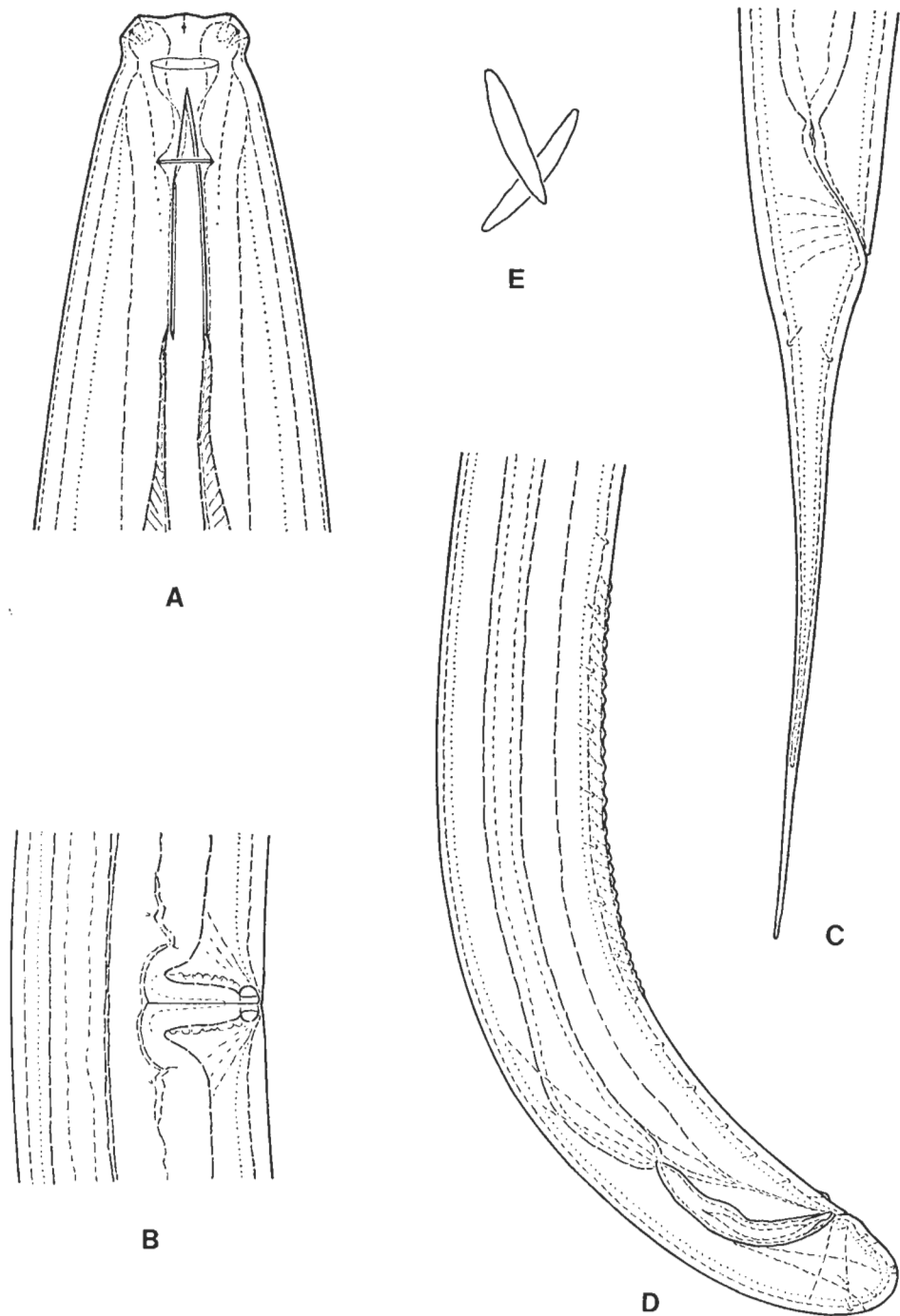


Fig. 7. *Calodorylaimus densus* sp. n. A: anterior end (1100 \times); B: vulval region (560 \times); C: female tail (480 \times); D: posterior end of male (1100 \times); E: spermatozoa (1800 \times)

14. LOOF, P. A. A. (1983): Taxonomic problems in long-tailed dorylaims. — In: Concepts in Nematode Systematics: 175 — 186.
15. LOOF, P. A. A. (1985): Taxonomic studies on the genus *Prodorylaimus* Andrassy, 1959 (Nematoda: Dorylaimina). — *Revue Nématol.*, 8: 193 — 213.
16. LOOF, P. A. A. & COOMANS, A. (1986): The genus *Paradorylaimus* Andrassy, 1969 (Dorylaimoidea: Nematoda). — *Hydrobiologia*, 133: 179 — 186.
17. DE MAN, J. G. (1876): Onderzoekingen over vrij in de aarde levende Nematoden. — *Tijdschr. Nederl. Dierk. Vereen.*, 2: 78 — 196.
18. MICOLETZKY, H. (1922): Die freilebenden Erd-Nematoden. — *Arch. Naturgesch.*, A, 87: 1 — 650.
19. PARAMONOV, A. A. (1964): Osnovy fitogelmintologii. II. — Moscow: 1 — 446.
20. SIDDIQI, M. R. (1969): *Crateronema* n. gen. (*Crateronematidae* n. fam.), *Poronemella* n. gen. (*Lordellonematinae* n. sub-fam.) and *Chrysoncmoides* n. gen. (*Chrysonematidae* n. fam.) with a revised classification of Dorylaimoidea (Nematoda). — *Nematologica*, 15: 81 — 100.
21. THORNE, G. (1939): A monograph of the nematodes of the superfamily Dorylaimoidea. — *Capita Zool.*, 8: 1 — 261.
22. THORNE, G. & SWANGER, H. H. (1936): A monograph of the nematode genera *Dorylaimus* Du Jardin, *Aporcelaimus* n. g., *Dorylaimoides* n. g. and *Pungentus* n. g. — *Capita Zool.*, 6: 1 — 223.