

FOUR NEW SPECIES OF THE GENUS *IRONUS* BASTIAN, 1865 (NEMATODA: IRONIDAE) FROM SOUTH AFRICA

(Met opsomming in Afrikaans)
(Avec résumé en français)

ANNE-DOROTHEE ARGO¹ and JUAN HEYNS²

ABSTRACT

Four new species of the genus *Ironus* Bastian, 1865 (Nematoda: Ironidae) are described and figured: *Ironus dentifurcatus* n.sp., *Ironus crassatus* n.sp., *Ironus ernsti* n.sp. and *Ironus lautus* n.sp.

INTRODUCTION

This is the first taxonomic study on species of the genus *Ironus* Bastian, 1865 from South Africa. The only existing record of an *Ironus* from South Africa is that of Andrassy (1970) who found *I. tenuicaudatus* De Man, 1876 in various rivers in South Africa. This species was, however, not recorded by us.

Many species of *Ironus* have exceedingly long filiform tails, which are very apt to break off during handling and mounting. Due to the very thin threadlike nature of the tail, one cannot always be sure whether part of it has been lost or not, but since we suspected that this was the case in many specimens, measurements were made in two ways: (1) total length from lips to tail tip and (2) total length from lips to anus. In the description the second value and related ratios are also given and are marked as L', a', b' etc. However, other characters on which species differentiations were made are distinct enough to permit identification of the different species without regard to the additional measurements.

Since the stoma, pharynx and teeth of the four species described display basically the same structure, a detailed description of these structures is given only for the first species, viz. *I. dentifurcatus*, and in the other species these structures are referred to only in so far as they differ from *dentifurcatus*.

All measurements and drawings were made from specimens killed by the gradual application of heat, fixed in F.A.A. and mounted in dehydrated glycerine. All slides are deposited in the collection of the Plant Protection Research Institute, Pretoria.

DESCRIPTIONS

Ironus dentifurcatus n.sp. (Fig. 1, A - L)

Female: (n = 59) L = 1,51 (1,16 - 1,82) mm; a = 52 (39 - 76); b = 5,9 (4,5 - 7,2); c = 4,3 (3,1 - 7,4); V = 42 (38 - 55)%; ov₁ = 6,21 (3,39 - 11,44)%; ov₂ = 7,19 (4,01 - 13,49)%; pr. = 0,91 (0,33 - 1,88)%
L' = 0,93 - 1,33 mm; a' = 30 - 56; b' = 3,6 - 5,4; V' = 51 - 67%; ov₁' = 4,39 - 14,61%; ov₂' = 5,45 - 16,55% pr. = 0,61 - 2,21%

Holotype female: L = 1,68 mm; a = 57; b = 7,2; c = 3,8; V = 38%; ov₁ = 6,04%; ov₂ = 5,96%; pr. = 0,61%; cuticle on neck = 0,73μ; cuticle on middle of body = 1,1μ; cuticle on tail = 1,1μ; width of lip region = 17μ; length of stomaplates = 6,5μ; thickness of dorsal plate = 1,1μ; thickness of subventral plates = 1,4μ; broadest point of stoma = 3,6μ; anterior end to base of stoma = 78μ; anterior end to nerve ring =

111μ; vagina = 18μ; rectum = 22,5μ; tail = 438μ; lateral chord = 8,8μ

L' = 1,24 mm; a' = 42; b' = 5,4; V' = 52%; ov₁' = 8,10%; ov₂' = 8,00%; pr.' = 0,82%

Male: Unknown

Female: Body slender, cylindroid, except towards the extremities; strongly curved ventrally when relaxed. Cuticle with fine longitudinal striae, slightly zig-zag, its width 0,73 - 1,1μ on the neck, 0,73 - 1,8μ on the middle of the body, and 0,73 - 1,8μ on the tail. Head slightly offset, lips rounded. Lip region 13 - 19μ wide. Amphids stirrup-shaped, about two-thirds the width of the neck, sensilla pouches barely visible. Head with four small setae, about one-fifth the corresponding head width long, slightly anteriorly curved. Pharynx composed of three dome-shaped heavily sclerotized shields. At the base of each shield begins the root of a robust, clawlike, pointed tooth, one dorsal and two subventral. The dorsal tooth is furcate for about its apical four-fifths, each prong ending in a pointed tip, and each prong slightly smaller than the subventral teeth. At the base of the teeth-roots, after a deep constriction, begins the stoma with three plate-like structures, about 6,0 - 6,5μ long, the dorsal plate 0,7 - 1,4μ thick and the two subventral plates 1,1 - 1,8μ thick, offset by a second deep constriction from the rest of the stoma wall. Base of stoma 68 - 108μ from the anterior end. Stoma at its broadest point 2,9 - 6,2μ wide. Stomatal gland opening at the base of the plate-like structures. The oesophageal musculature begins on the dorsal side at about the middle of the stoma, on the ventral side at about the beginning of the last third of the stoma. Oesophagus cylindroid. Cardia hemispherical, about one-third the corresponding body width. Nerve ring rarely visible. Intestine four cells in circumference. Vulva a transverse slit; vagina 11 - 25μ long, with distinct muscles, uteri very large with granular cells. Ovaries paired, opposed, symmetrical, reflexed about half-way back towards the vulva. Prerectum indistinct. Rectum 16,1 - 29,4μ long. Tail 207 - 519μ long, filiform. About one and a half anal width from the anus the somatic muscle layer ends abruptly. Lateral chord 6,6 - 12,5μ wide, uniformly glandular.

Diagnosis: *Ironus dentifurcatus* n.sp. is very closely related to *Ironus longicaudatus* De Man, 1884 but differs from it in the width of the head (13 - 19μ compared with 12 - 13μ in *longicaudatus*), the length of the stoma (68 - 108μ compared with 62 - 65μ in *longicaudatus*), shape and width of the amphids and shape of the vagina. From *Ironus tenuicaudatus* De Man, 1876 it differs in the shorter body (1,16 - 1,82 mm compared with

¹Plant Protection Research Institute, Pretoria

²Rand Afrikaans University, Johannesburg

Received 26 January 1972

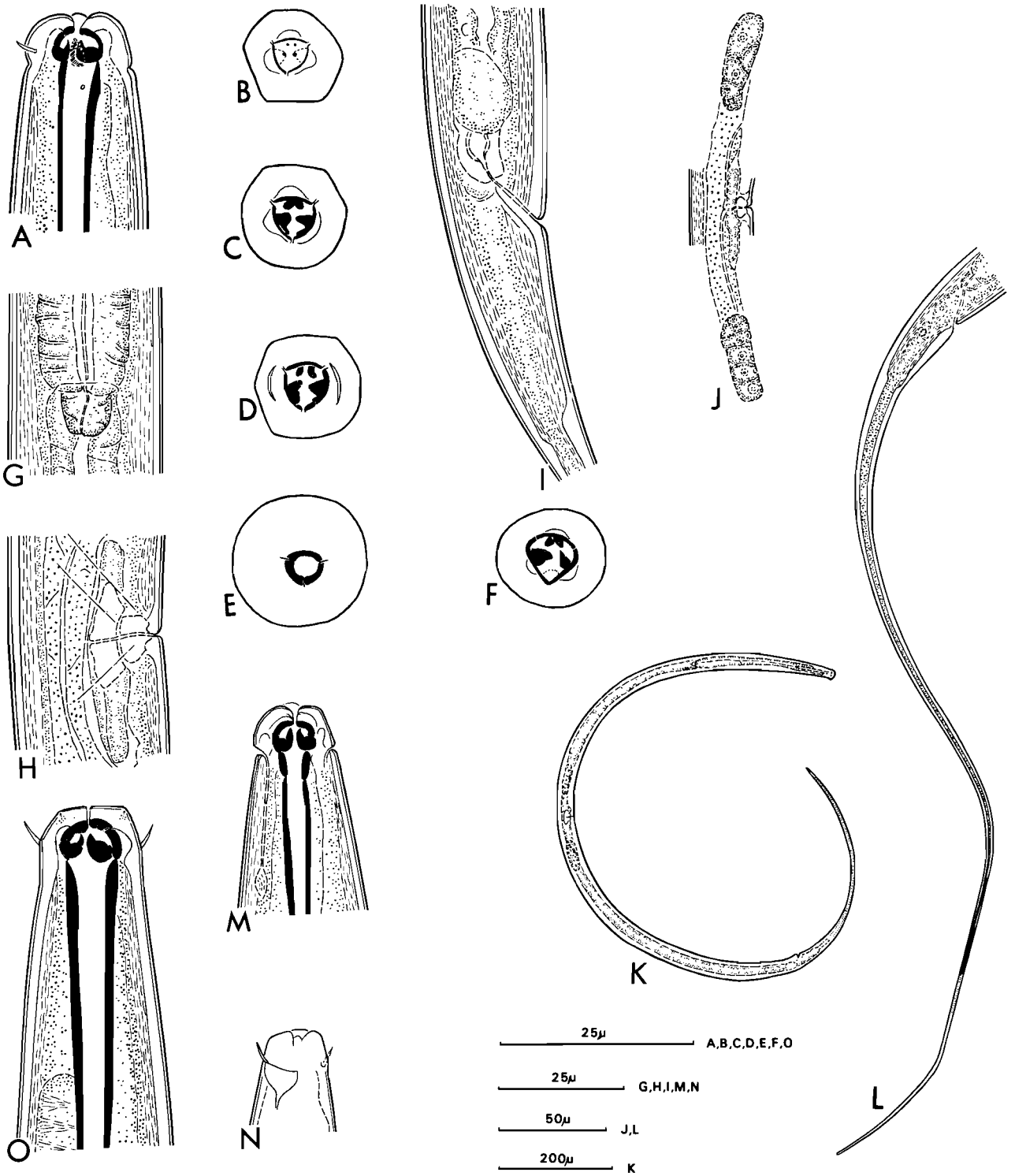


FIG. 1 A - L: *Ironus dentifurcatus* n.sp.

A: Head/Kop

B: Face view, showing oral aperture and toothtips/Vooraansig om die mondopening en tandpunte te wys

C-F: Cross sections through pharynx at different levels to show the teeth/Dwarssnitte deur mondbolte op verskillende vlakke om die tande aan te toon

G: Cardiac region/Kardiamyok

H: Vulva/Vulva

I: Female tail/Stert van wyfie

J: Female gonad/Geslagsorgane van wyfie

K: Holotype female, thermal death position/Holotipe wyfie in natuurlike liggaamshouding wanneer ontspan

L: Complete female tail (paratype)/Volledige stert van paratipe wyfie

FIG. 1 M - O: *Ironus crassatus* n.sp.

M: Ventral view of head, showing amphidial openings and plate-like structures of the stoma/Ventrale aansig van kop om amphiede openinge en plate van die stoma te wys

N: Amphids/Amphiede

O: Head/Kop

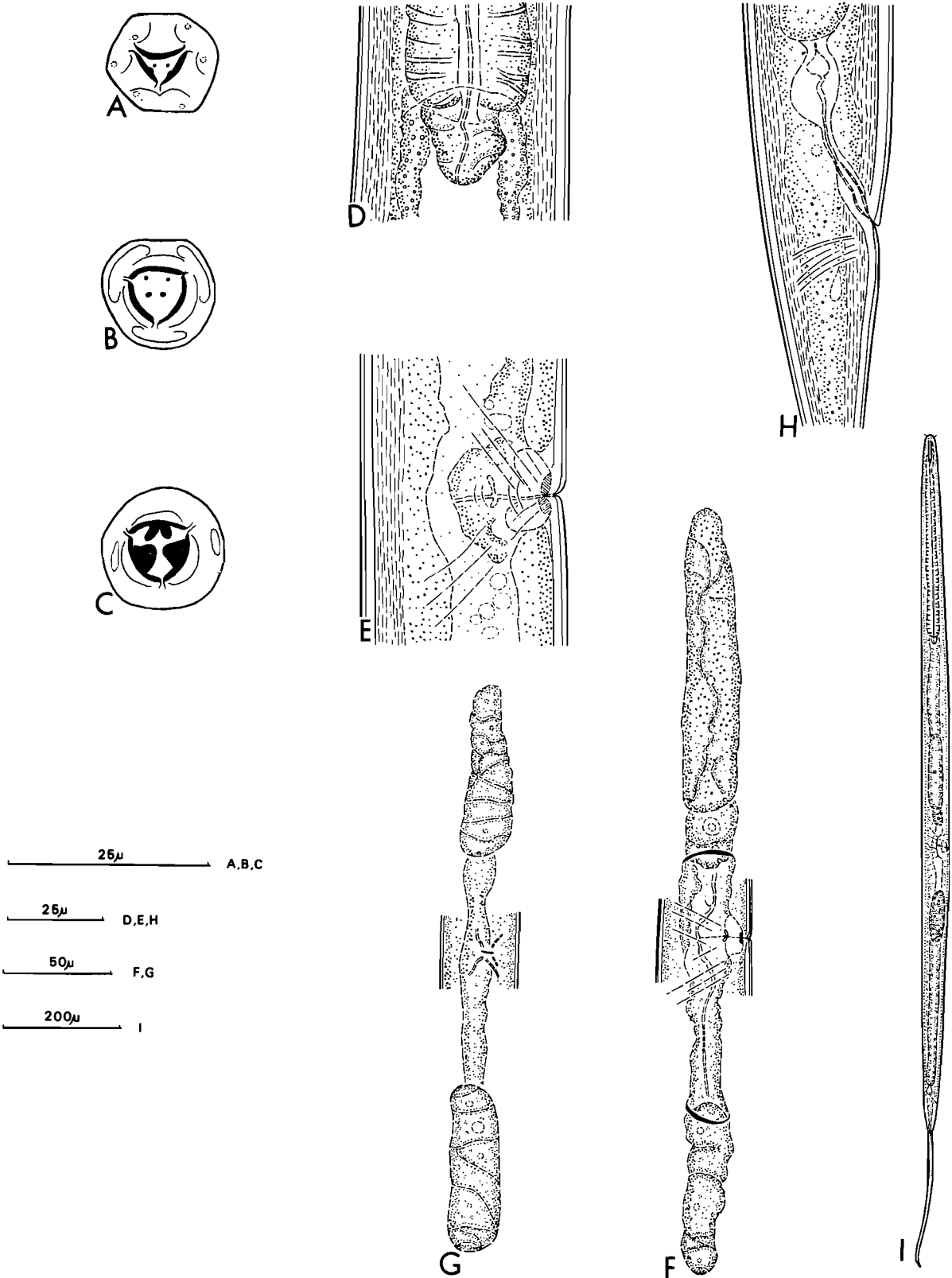


FIG. 2 A - I: *Ironus crassatus* n.sp.

A: Face view, showing oral aperture and toothtips/Vooraansig om mondopening en tandpunte te wys

B-C: Cross sections through pharynx at different levels to show the teeth/Dwarssnitte deur mondbolte op verskillende vlakke om die tande aan te toon

D: Cardiac region/Kardiawyk

E: Vulva/Vulva

F: Female gonad with egg/Geslagsorgane van wyfie met eier

G: Ventral view of female gonad/Ventrale aansig van geslagsorgane van wyfie

H: Female tail/Stert van wyfie

I: Holotype female, thermal death position/Holotipe wyfie in natuurlike liggaamsbouing wanneer ontspan

3,0 - 4,2 mm in *tenuicaudatus*), the length of the stoma (68 - 108 μ compared with 120 - 150 μ in *tenuicaudatus*), length of the tail ($c = 3,1 - 7,4$ compared with $c = 12 - 16$ in *tenuicaudatus*), and the position of the vulva (38 - 55% compared with 52 - 57% in *tenuicaudatus*). It differs from both these species in the abrupt ending of the somatic muscle layer of the tail.

Holotype female and two paratype females on slide 5245, collected from soil in a citrus orchard, East London, Cape Province; paratypes on slide 390, collected from soil around roots of a fig tree, Brits, Transvaal; slide 415, collected from soil in natural bushveld, Barkleyvale, Transvaal; slide 514, collected from soil around roots of banana plants, Potgietersrus, Transvaal; slides 498 and 499, collected from soil around the roots of old citrus trees, Potgietersrus, Transvaal; slide 1523, collected from soil around flowers, Crystal Waters, Transvaal; slide 1123, collected from soil around roots of peach trees, Hekpoort, Transvaal; slides 1887, 1888 and 1889, collected from soil in a citrus orchard, Rustenburg, Transvaal; slide 1618, collected from soil of a Florida-grass lawn, Brakpan, Transvaal; slide 1997, collected from soil around citrus trees, experimental area, Dept. of Lands, Levubu, Transvaal; slides 6005 and 6006, collected from soil around indigenous bushes at Louis Trichardt, Soutpansberg, Transvaal; slide 6637, collected from soil around the roots of a wild fig tree on the bank of the Olifants River, Loskopdam district, Transvaal; slides 638, 639 and 640, collected from soil around the roots of grapevine, Parys, Orange Free State; slides 1408, 1409 and 1410, collected from soil in a vegetable garden, Clocolan, Orange Free State; slide 760, collected from soil in natural bushveld with trees and grass, Mount Edgecombe, Natal; slide 6738, collected from sandy soil with indigenous vegetation, Port St. Johns, Transkei; slide 7160, collected from lucerne field, Groot Brak River, Cape Province.

This is a very common nematode species in South African soils. It is remarkable in that it occurs mostly in dry, often cultivated soils, in contrast with other *Ironus* species, which are commonly found in more or less aquatic or wet habitats.

Ironus crassatus n.sp. (Fig. 1, M - O; Fig. 2, A - I)

Female: (n = 14) L = 1,63 (1,34 - 1,99) mm; a = 45 (30 - 58); b = 4,9 (3,9 - 6,4); c = 5,3 (2,8 - 7,9); V = 46 (37 - 52)%; ov₁ = 10,09 (4,6 - 14,42)%; ov₂ = 8,52 (5,02 - 13,52)%; pr. = 1,53 (0,56 - 2,5)%; eggs = 159 \times 27 (141 - 186 \times 23 - 29) μ
L' = 1,05 - 1,79 mm; a' = 26 - 53; b' = 3,1 - 4,9; V' = 54 - 67%; ov₁' = 5,84 - 26,67%; ov₂' = 7,12 - 17,06%; pr.' = 0,62 - 2,92%

Holotype female: L = 1,51 mm; a = 39; b = 4,1; c = 5,0; V = 48%; ov₁ = 13,62%; ov₂ = 10,12%; pr. = 2,33%; cuticle on neck = 0,73 μ ; cuticle on middle of body = 1,1 μ ; cuticle on tail = 0,73 μ ; lip region = 16 μ ; length of setae = 6,2 μ ; length of stomaplates = 6,4 μ ; thickness of dorsal and subventral plates = 1,4 μ ; broadest point of stoma = 5,5 μ ; anterior end to base of stoma = 110 μ ; anterior end to nerve ring = 138 μ ; vagina = 22 μ ; egg = 141 \times 23 μ ; rectum = 39 μ ; tail = 346 μ ; lateral chord = 15 μ
L' = 1,21 mm; a' = 31; b' = 3,3; V' = 61%; ov₁' = 17,01%; ov₂' = 12,64%; pr.' = 2,92%

Male: Unknown

Female: Body tapering slightly from the middle towards the extremities, and almost straight when relaxed. Cuticle smooth, its width 0,73 - 1,8 μ on the neck,

0,73 - 1,8 μ on the middle of the body, and 0,73 - 1,4 μ on the tail. Head not offset, lips conoid, flattened, with one papilla on each lip. Lip region 14 - 21 μ wide. Amphids stirrup-shaped, about two-thirds the neck width, sensilla pouches barely visible. Head with four setae, 5,1 - 8,8 μ long, uncurved but somewhat anteriorly directed. Stoma, pharynx and teeth as in *I. dentifurcatus* n.sp. Base of stoma 80 - 132 μ from the anterior end. Stoma at its broadest point 3,6 - 5,8 μ wide. Stomatal gland opening at about the middle of the plate-like structures. Oesophageal musculature begins on the ventral side at about the last third of the stoma, on the dorsal side at about the first third of the stoma, with a deep constriction opposite the beginning of the ventral musculature. Cardia hemispherical, half the corresponding body width. Nerve ring rarely distinct. Intestine four cells in circumference, with large round, yellow granules. Vulva transverse slit; vagina 16 - 22 μ long, muscular. About three-fifths its length posterior to the vulva the vagina forms two slender, elongate sacks on either side of it. Ovaries paired, opposed, symmetrical, reflexed about half-way back towards the vulva. Eggs 141 - 186 \times 23 - 29 μ . Pre-rectum indistinct. Rectum 16 - 39 μ long. Tail 186 - 672 μ long, slightly biconcave at its base and then elongated to filiform, at the end slightly ventrally curved. Lateral chord 8 - 17 μ wide, uniformly glandular.

Diagnosis: *Ironus crassatus* n.sp. is closely related to *Ironus ignavus* Bastian, 1865 but differs from it in the width of the head (14 - 21 μ compared with 12 - 13 μ in *ignavus*), length of the stoma (80 - 132 μ compared with 78 - 82 μ in *ignavus*), shape of the amphids, shape and position of the setae, shape of the cardia and position of the vulva (37 - 52% compared with 52 - 54% in *ignavus*).

Holotype female on slide 2941, collected from soil on the bank of a stream at Mac-Mac-Pools, Sabie, Transvaal; paratypes on slides 2933 and 2934 from the same locality as the holotype; slides 1724, 1725 and 1959, collected from soil on a river bank, Sibasa, Transvaal; slide 1913, collected from soil beside the main road, Louis Trichardt, Transvaal; slide 1922, collected from soil on a river bank between Levubu and Louis Trichardt, Transvaal; slide 2984, collected from soil in a marshy area in a pine plantation, Mariepskop, Transvaal; slide 6609, collected from soil around the roots of a banana plant on the bank of the Olifants River, Loskopdamdistrict, Transvaal; and slides 4572, 4573 and 4574, collected from soil around a waterpool, Bizana, Transkei.

Ironus ernsti n.sp. (Fig. 3, A - K, Fig. 4, A - F)

Female: (n = 14) L = 1,91 (1,35 - 2,53) mm; a = 39 (34 - 48); b = 4,6 (3,6 - 5,3); c = 8,0 (2,6 - 15,8); V = 49 (37 - 56)%; ov₁ = 17,39 (10,17 - 33,57)%; ov₂ = 16,63 (10,68 - 31,36)%; pr. = 1,71 (0,76 - 2,22)%
L' = 1,12 - 2,31 mm; a' = 25 - 43; b' = 3,1 - 4,8; V' = 54 - 63%; ov₁' = 16,5 - 36,61%; ov₂' = 14,30 - 34,20%; pr.' = 0,82 - 2,99%

Holotype female: L = 2,01 mm; a = 39; b = 4,7; c = 9,6; V = 53%; ov₁ = 21,82%; ov₂ = 16,98%; pr. = 1,90%; cuticle on neck, middle of body and on tail = 0,73 μ ; lip region = 20,5 μ ; length of setae = 0,73 μ ; third-stage larval tooth = 31,6 μ from the anterior end; length of stomaplates = 8,7 μ ; thickness of dorsal plate = 1,1 μ ; thickness of subventral plates = 1,4 μ ; anterior end to base of stoma = 116 μ ; broadest point of stoma = 5,8 μ ; anterior end to nerve ring = 155 μ ; length of vagina = 30,8 μ ; sphincter = 110 μ

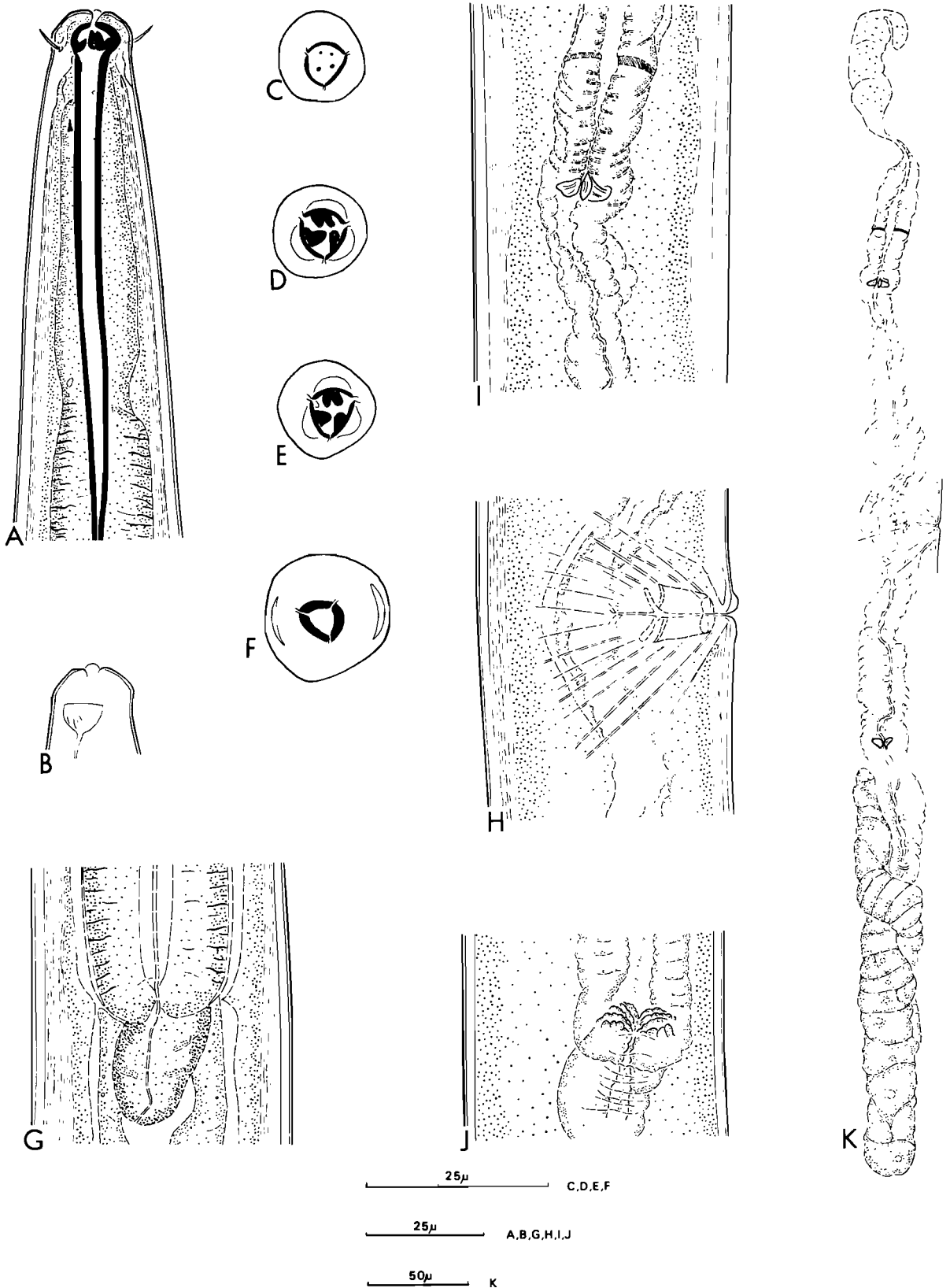


FIG. 3 A - K: *Ironus ernsti* n.sp.

A: Head of female/Kop van wyfie

B: Amphids/Amphiede

C: Face view, showing oral aperture and toothtips/Vooraansig om mondopening en tandpunte te wys

D-F: Cross sections at different levels of the pharynx showing teeth and amphidial openings/Dwarsnitte deur mondholte op verskillende vlakke om die tande en amphiede openinge aan te toon

G: Cardiac region/Kardiawyk

H: Vulva/Vulva

I-J: Sphincter muscles/Sluitpiere

K: Female gonad/Geslagsorgane van wyfie

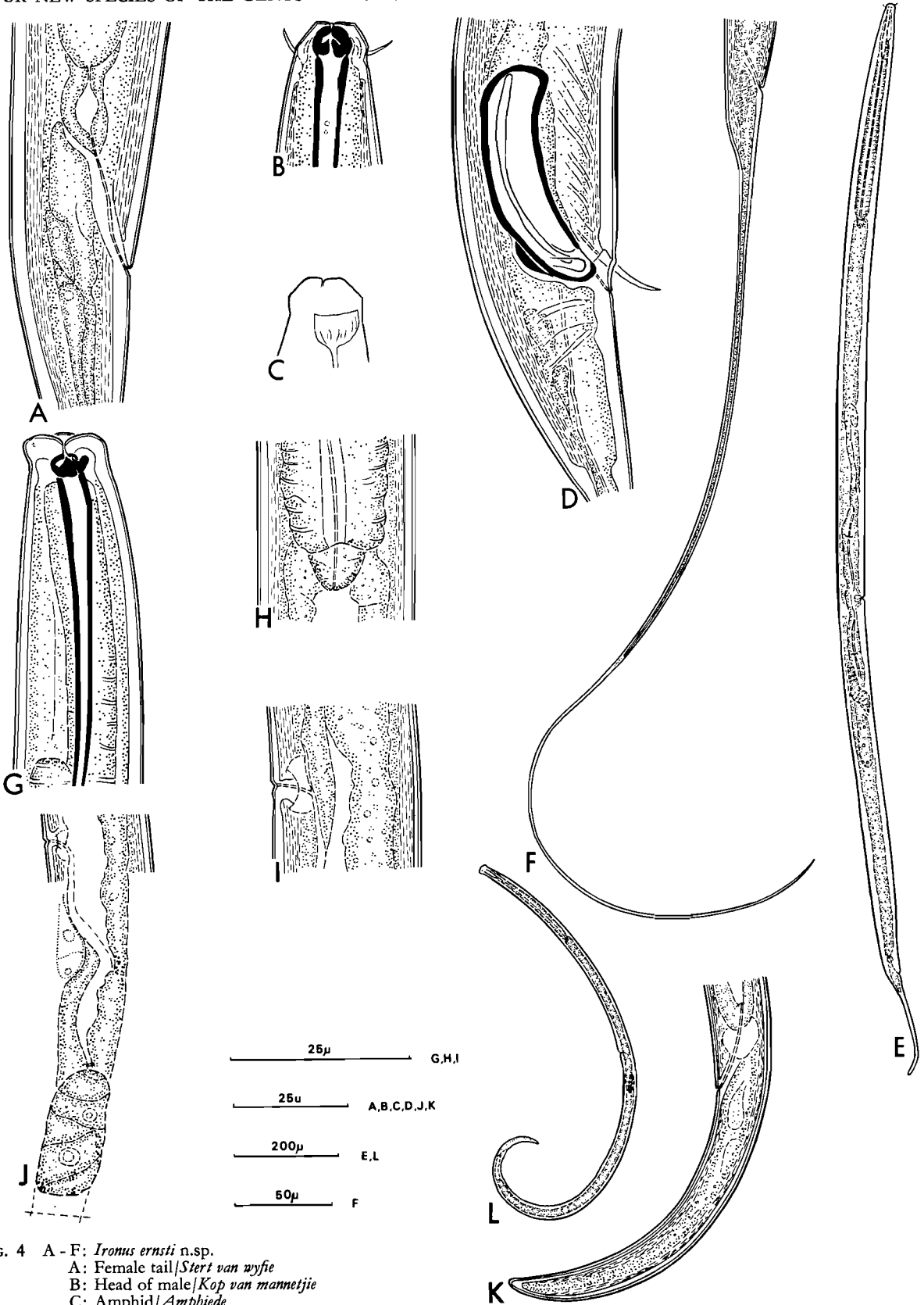


FIG. 4 A - F: *Ironus ernsti* n.sp.
 A: Female tail/*Stert van wyfie*
 B: Head of male/*Kop van mannetjie*
 C: Amphid/*Amphiede*
 D: Male tail/*Stert van mannetjie*
 E: Holotype female, thermal death position/*Holotipe wyfie in natuurlike liggaamshouding wanneer ontspan*
 F: Complete female tail (paratype)/*Volledige stert van paratipe wyfie*

FIG. 4 G - L: *Ironus lautus* n.sp.
 G: Head/*Kop*
 H: Cardiac region/*Kardiawyk*
 I: Vulva/*Vulva*
 J: Portion of female gonad/*Deel van geslagsorgaan van wyfie*
 K: Female tail/*Stert van wyfie*
 L: Holotype female, thermal death position/*Holotipe wyfie in natuurlike liggaamshouding wanneer ontspan*

pre- and postvulvar; rectum = 43,75 μ ; lateral chord = 9,5 μ ; tail = 209 μ

L' = 1,80 mm; a' = 34; b' = 4,2; V' = 59%; ov₁' = 24,34%; ov₂' = 19,39%; pr.' = 2,12%

Male: (n = 3) L = 2,16 (1,87 - 2,63) mm; a = 44 (42 - 46); b = 5,0 (4,7 - 5,5); c = 14,0 (11,0 - 16,2); spicules = 53 (51 - 57) μ ; pre-anal seta = 16,6 (11,7 - 17,6) μ

L' = 1,75 mm - 2,45 mm; a' = 39 - 41; b' = 4,3 - 5,1
Allotype male: L = 1,87 mm; a = 43; b = 5,5; c = 16,2; lip region = 18,4 μ ; anterior end to base of stoma = 81,6 μ ; spicules = 51 μ ; gubernaculum = 22 μ ; pre-anal seta = 17,6 μ ; lateral chord = 14,7 μ
L' = 1,75 mm; a' = 41; b' = 5,1

Female: Body slender, long, cylindroid, except towards the extremities, almost straight when relaxed. Cuticle smooth, 0,73 - 1,4 μ thick on the neck, the middle of the body and the tail. Head slightly offset; lips rounded. Lip region 15,4 - 20,5 μ wide. Amphids stirrup-shaped, half the neck width wide, sensilla pouches barely visible. Head with four slender setae, 5,1 - 7,3 μ long, slightly anteriorly curved. Pharynx, stoma and teeth as in *I. dentifurcatus*. Base of stoma 80 - 141 μ from the anterior end; dorsal stoma plate 1,1 - 1,4 μ thick, the subventral plates 1,1 - 1,8 μ thick. Stoma at its broadest point 3,6 - 5,8 μ wide. Stomatol gland opening at the base of the plate-like structures. Oesophageal musculature begins at about the last fifth of the stoma. Oesophagus cylindroid. Cardia tongue-shaped, about one-third of the corresponding body width. Nerve ring rarely visible. Intestine four cells in circumference. Vulva a longitudinal slit; vagina 18,3 - 30,8 μ long. Uteri very long. Sphincters funnel-shaped, corrugated structures, with their openings directed away from the vulva. Ovaries paired, opposed, reflexed two-thirds their length back towards the vulva. Prerectum indistinct. Rectum 39 - 43 μ long. Tail 177 - 710 μ long, convex-conoid at its base then slightly narrowing into filiform, after an abrupt ending of the somatic muscle layer. Lateral chord 9,5 - 18,3 μ wide, uniformly glandular.

Male: Anterior part similar to female, except lip region, which is 18,3 - 19,8 μ wide and the stoma, which reaches 81,6 - 166,2 μ from the anterior end, and is 4,7 - 5,1 μ at its widest part. Testes single, reflexed. Spicules 51 - 57 μ long, measured along the curved median line. Guiding pieces and gubernaculum present. Ventrally, just anterior to the cloaca, there occurs a single seta, which is 11 - 17 μ long and slightly anteriorly curved. Phasmids and caudal papillae absent. Tail similar in both sexes. Lateral chord 14 - 17 μ wide, uniformly glandular.

Diagnosis: *Ironus ernsti* n.sp. is related to *Ironus crassatus* n.sp. but differs from it in length, in the body posture when relaxed, and in the shape of the head. It further differs from *crassatus* and all other described species in the shape of the vagina and the sphincter muscles.

Holotype female and paratype females on slides 7203 and 7204, collected from soil around fern-roots, Gruisbult, Calitzdorp, Cape Province; allotype male and paratype male on slide 7205, same locality as holotype female. Further localities where this species have been found are on an island in the Vaal River near Parys, Orange Free State, in soil on a pineapple land, East London, Cape Province, and from the bank of a little stream on top of Dwarsberg near Stellenbosch, Cape Province.

Ironus lautus n.sp. (Fig. 4, F - K)

Holotype female: L = 1,15 mm; a = 52; b = 5,3;

c = 15,3; V = 42%; ov = 22,92%; pr. = 1,15%; egg = 166 \times 13 μ

Male: Unknown

Female: Body slender, cylindroid, except towards the extremities; slightly curved ventrally, posterior part strongly curved ventrally when relaxed. Cuticle smooth, 0,73 μ thick on the neck, and 1,1 μ thick on the middle of the body and on the tail. Head not offset, lips rounded, flattened. Lip region 14 μ wide. Amphids stirrup-shaped, about one-third the neck width. Sensilla pouches indistinct. Cephalic setae not observed. Pharynx, stoma and teeth as described for *I. dentifurcatus*, except the pharyngeal shields, which are more curved. Base of stoma 58 μ from the anterior end and 3,6 μ at its widest part. The oesophageal musculature beginning on the dorsal side at about the last fourth of the stoma, on the ventral side about the last fifth of the stoma. Cardia hemispherical, one-third the corresponding body width. Nerve ring 120,5 μ from the anterior part of the body. Intestine four cells in circumference. Vulva a transverse slit; vagina 7,35 μ long, slightly posteriorly curved. Uterus long, ovary single, postvulvar. Egg in uterus 166 \times 13 μ . Prerectum three times the anal body width; rectum 23,5 μ long. Tail short, convex-concave with rounded terminus. Somatic muscle layer ending 14,7 μ anterior to the tail tip.

This description is based on only one female and one juvenile.

Diagnosis: This species is exceptional in the possession of a single ovary and a relatively short and blunt convex-concave tail. The only other monodelphic species is *I. luci* Andr ssy, 1956, which differs in such characters as tail shape and position of the vulva (24% compared with 42% in *lautus*). The only other species with a similar tail is *I. colourus* Steiner, 1919 (Meyl, 1961), from which *lautus* differs in the length of the body (1,15 mm compared with 3,45 mm in *colourus*), the width of the body (a = 52 compared with a = 38 - 39 in *colourus*), the length of the tail (c = 15,3 compared with c = 33 - 39 in *colourus*) and the position of the vulva (42% compared with 50% in *colourus*).

Holotype female and one juvenile on slide 7259, collected from soil around roots of maize, Bothaville, Orange Free State.

Opsomming

VIER NUWE SPESIES VAN DIE GENUS IRONUS BASTIAN, 1865 (NEMATODA: IRONIDAE) UIT SUID-AFRIKA

Van die genus *Ironus* *Bastian, 1865* word vier nuwe spesies beskryf en afgebeeld, naamlik: *Ironus dentifurcatus* n.sp., *Ironus crassatus* n.sp., *Ironus ernsti* n.sp. en *Ironus lautus* n.sp. *Ironus dentifurcatus* n.sp. is naverwant aan *Ironus longicaudatus* *De Man, 1884* en het ook gemeenskaplike kenmerke met *Ironus tenuicaudatus* *De Man, 1876* maar verskil van beide hierdie spesies in lengte, breedte van die kop, posisie van die vulva, vorm van die vagina en lengte van die stert. 'n Verdere kenmerk wat *dentifurcatus* n.sp. van die ander spesies onderskei is die skielike einde, sowat een-en-n-half anale breedtes vanaf die anus, van die lengte-verlopende subkutikulere spiere. *Ironus crassatus* n.sp. is naverwant aan die tipe spesie *Ironus ignavus* *Bastian, 1865* maar verskil ten opsigte van die kopbreedte, lengte van die stoma, vorm en posisie van die setae, posisie van die vulva en vorm van die vagina. *Ironus ernsti* n.sp. is verwant aan *Ironus crassatus* n.sp. Dit verskil egter in die liggaams-houding, kopbreedte, lengte van die stoma, asook die vorm van die vagina. Die voorkoms van 'n goed ontwikkelde sluitspier in die uterus is 'n kenmerk waardeur *Ironus ernsti* van alle

ander tot dusver beskreeve spesies onderskei kan word. Die beskrywing van *Ironus lautus* n.sp. is op net een wyfie en een larwe gebaseer. Hierdie spesie is naverwant aan *Ironus colourus* Steiner, 1919 (Meyl, 1961) maar verskil daarvan in lengte, kopbreedte, stertlengte, posisie van die vulva en die enkele postvulvare ovarium.

Résumé

QUATRE NOUVELLES ESPÈCES DU
GENRE *IRONUS* BASTIAN, 1865, D'AFRIQUE
DU SUD. (NEMATODA: IRONIDAE)

Quatre nouvelles espèces du genre *Ironus* Bastian, 1865, (Nematoda Ironidae) sont décrites, à savoir: *Ironus dentifurcatus* n.sp., *Ironus crassatus* n.sp., *Ironus ernsti* n.sp. et *Ironus lautus* n.sp.

Ironus dentifurcatus n.sp. est apparenté à *Ironus longicaudatus* De Man, 1884, et a aussi une association marquée avec *Ironus tenuicaudatus* De Man, 1876, mais il diffère de ces deux espèces par la longueur et la largeur de la tête, la position de la vulve, la forme vaginale et la longueur de l'aiguillon. De plus, ce qui différencie aussi *dentifurcatus* des autres espèces est la fin abrupte de la couche musculaire somatique de la queue.

Ironus crassatus n.sp. est apparenté aux espèces du type *Ironus ignavus* Bastian, 1865, mais diffère cependant par la largeur de la tête, la longueur du stoma, la forme et la position du setae, la position de la vulve et la forme du vagin.

Ironus ernsti n.sp. est associé à *Ironus crassatus* n.sp. Cependant, il en diffère par la posture, la largeur de la tête, la longueur du stoma aussi bien que par la forme vaginale. L'apparence d'un muscle de fermeture évident dans l'uterus est une marque d'identification par laquelle *Ironus ernsti* peut être distingué de toutes les autres espèces décrites jusqu'à présent.

La description d'*Ironus lautus* n.sp. est uniquement basée sur une femelle et une larve. Cette espèce est apparentée à *Ironus colourus*, Steiner, 1919 (Meyl, 1961), mais diffère de celui-ci par la longueur de la tête et celle du bouclier, ainsi que par la position de la vulve et son unique ovarium post-vulvaire.

REFERENCES

- ANDRÁSSY, I., 1968. Fauna Paraguayensis: 2. Nematoden aus den Galeriewäldern des Acaray - Flusses. *Opusc. Zool. Bpest.* 8, 167-315.
ANDRÁSSY, I., 1970. Nematoden aus einigen Fluss - Systemen Südafrikas. *Opusc. Zool. Bpest.* 10, 179-219.