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Two new species of *Paurodontella* Husain & Khan, 1968 (Nematoda: Sphaerulariidae) associated with wheat and a diagnostic compendium to the genus

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Summary – An identification key to ten valid species of *Paurodontella* is given. A compendium of the most important diagnostic characters with illustrations of each species is included as a practical alternative and supplement to the key. The diagnosis of *Paurodontella* is emended and a list of all valid species of the genus is given. Two new species (*Paurodontella myceliophaga* n. sp. and *P. balochistanica* n. sp.) collected around the roots of wheat (*Triticum aestivum* L.) from North-West Frontier Province and Balochistan, Pakistan, are described and illustrated. *Paurodontella myceliophaga* n. sp. is characterised by having a short post-uterine sac, lateral field with four incisures, excretory pore at the base of the pharynx and fusiform median bulb, whereas *P. balochistanica* n. sp. has a longer and very slender body with posterior vulva, lateral field with four incisures and short mucronate tail. Because these species are limited in distribution, their importance is not known.

Keywords – Balochistan, diagnosis, identification, key, morphology, morphometrics, new species, North-West Frontier Province, *Paurodontella balochistanica* n. sp., *Paurodontella myceliophaga* n. sp., taxonomy.

The genus *Paurodontella* Husain & Khan, 1968 was established for the new species *P. minuta* Husain & Khan, 1968 based on its short and robust body, short, convex-conoid, ditylenchoid tail and stem-like extension of the basal pharyngeal bulb projecting into the intestine. Anderson (1985), emending the diagnosis of *Paurodontella*, found few generic characters separating *Paurodontus* Thorne, 1941 and *Paurodontella*. Constant differences were the length of the post-uterine sac (at least one body diam. in length *vs* shorter in *Paurodontella*), slenderness of the body (a = >30 *vs* less) and vulva-anus distance > 50 μm *vs* shorter). All other characters in the emended diagnosis for *Paurodontella* were found in one or more species in either genus. These differences at the generic level were not accepted by Fortuner and Raski (1987) and they synonymised the genus with *Paurodontus*. Siddiqi (2000) gave a detailed diagnosis and again validated the genus based on the following main diagnostic characters: cephalic region continuous, lateral sectors narrower than submedians, lateral field with four, six or seven incisures, opening of dorsal pharyngeal gland orifice just posterior to stylet base, basal bulb with long stem like extension, projecting into the intestine, post-vulval uterine sac rudimentary or absent, uterus often with an offset diverticulum, tail of both sexes similar, conoid-pointed, and bursa adanal, ditylenchoid. Earlier, the same criteria were proposed by Husain and Khan (1968) when they transferred three species of the genus *Paurodontus*, *viz*., *P. apiticus* Thorne, 1941, *P. densus* Thorne, 1941 and *P. niger* Thorne, 1941 to *Paurodontella*. In addition, Sumenkova (1975) transferred *Paurodontus aberrans* Kumar & Khera, 1969 and *Neopaurodontus asymmetricus* Tikyani & Khera, 1968 to *Paurodontella.*

According to the classification by Siddiqi (2000), *Paurodontella* belongs to the subfamily Paurodontinae Thorne, 1941, family Paurodontidae Thorne, 1941 (= *familia dubia*), superfamily Sphaerularioidea Lubbock, 1861, suborder Hexatylina Siddiqi, 1980 of the order Tylenchida Thorne, 1949. However, Siddiqi (2000) questioned the validity of the family Paurodontidae with the following note: "Most probably, this family is a junior synonym of Sphaerulariidae since the type genus

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and other genera included in it are morphologically similar and are suspected of having similar life cycles to members of the later group." Andrássy (2007) accepted Siddiqi's (2000) insertion of both the parasitic and the free-living forms (taxa) into the well characterised suborder Hexatylina. Chizhov (2004) accepted Siddiqi's (2000) scheme with slight modifications. Andrássy (2007) followed the classification of Siddiqi and Chizhov and accepted Siddiqi's (2000) opinion of Paurodontidae as a synonym of Sphaerulariidae, thereby placing *Paurodontella* in the Sphaerulariidae and Sphaerularioidea. The present authors agree with Andrássy (2007), Siddiqi (2000) and Husain and Khan (1968) because their action makes it easier to handle this complex group of nematodes. At present, *Paurodontella* contains ten valid species of world-wide distribution that parasitise a wide variety of plants.

The objectives of this study were: *i*) to describe two new species of *Paurodontella* collected from soil around the roots of wheat (*Triticum aestivum* L.) plants in Ternab Agriculture Research Institute, North-West Frontier Province and Hub, Balochistan, Pakistan; *ii*) to examine in detail representative specimens and published data on *Paurodontella* species; *iii*) to determine the interrelationships of the species and to define the valid and most significant differentiating characters; and *iv*) to prepare a new key and compendium containing morphometric and related details to facilitate easy identification of the ten valid *Paurodontella* species, including illustrations (Fig. 1) redrawn from the original drawings.

Materials and methods

Paratype specimens of three species of *Paurodontella*, *viz*., *P. apitica* (Thorne, 1941) Husain & Khan, 1968, *P. densa* (Thorne, 1941) Husain & Khan, 1968 and *P. niger* (Thorne, 1941) Husain & Khan, 1968, from the USDA Nematode Collection at Beltsville, MD, USA, and one species, *P. sohailai* Maqbool, 1982, from the National Nematode Collection at the National Nematological Research Center, University of Karachi, Pakistan, were examined. These specimens had been either mounted in glycerin or were preserved in 3% formaldehyde and 2% glycerin solution in vials, which ranged in number from 1 to 20 and were accompanied by pertinent records. Examinations were made with a compound microscope, usually at the highest magnification available, and morphometric data were obtained with an eyepiece micrometer. In evaluating the species, our own data and the original descriptions of most species, as well as any subsequent redescription or other related data, were utilised for the compendium included in Table 1.

Specimens of the new species of *Paurodontella* were extracted from soil by Cobb's (1918) wet sieving technique followed by a modified Baermann (1917) funnel method. Extracted nematodes were killed by gradual heat, fixed in triethanolamine formalin (TAF) and mounted in dehydrated glycerin (Siddiqi, 1986). Illustrations were made by using a drawing tube attached to a Nikon Eclipse E400 compound microscope and photographs taken with a Nikon DS-Fi-1 camera attached to the same microscope.

Genus *Paurodontella* Husain & Khan, 1968

= *Neopaurodontus* Tikyani & Khera, 1968

EMENDED DIAGNOSIS (AFTER SIDDIQI, 2000)

Paurodontinae. Body short, slender to robust (L = 0.29-0.75 mm; a = 14-34). Lateral fields usually distinct except for *P. apitica* (mostly obscure), each with four, six or seven incisures. Cephalic region continuous, truncate to round with prominent depression at oral opening; lateral sectors narrower than submedians. Stylet 7-14 μm long, basal knobs symmetrical or nearly so, rounded, flattened posteriorly. Orifice of dorsal pharyngeal gland just posterior to stylet base. Corpus cylindrical, slightly swollen posteriorly; isthmus long, slender; basal bulb with long stem-like extension, usually projecting into intestine or reaching to intestine. Excretory pore opposite base of pharyngeal bulb or opposite nerve ring. Vulva-anus distance *ca* one tail length or less; vulval lips not prominent or modified. Vagina less than half body diam. long, usually at right angle to body axis. Post-vulval uterine sac present or absent, uterus often with an offset diverticulum. Ovary anteriorly outstretched, with oocytes mostly in one row and reaching pharynx, some species with a prominent small anterior projection attached to oviduct branching to form a uterine diverticulum. Tails of both sexes similar, almost straight, short, conoid-pointed, up to five anal body diam. long, with or without a mucro on tail terminus. Bursa adanal. Spicules moderately robust, cephalate, 15-22 μm long. Gubernaculum simple 6-10 μm long.

TYPE SPECIES

Paurodontella minuta Husain & Khan, 1968
= *Paurodontus minutus* (Husain & Khan, 1968) Fortuner & Raski, 1987

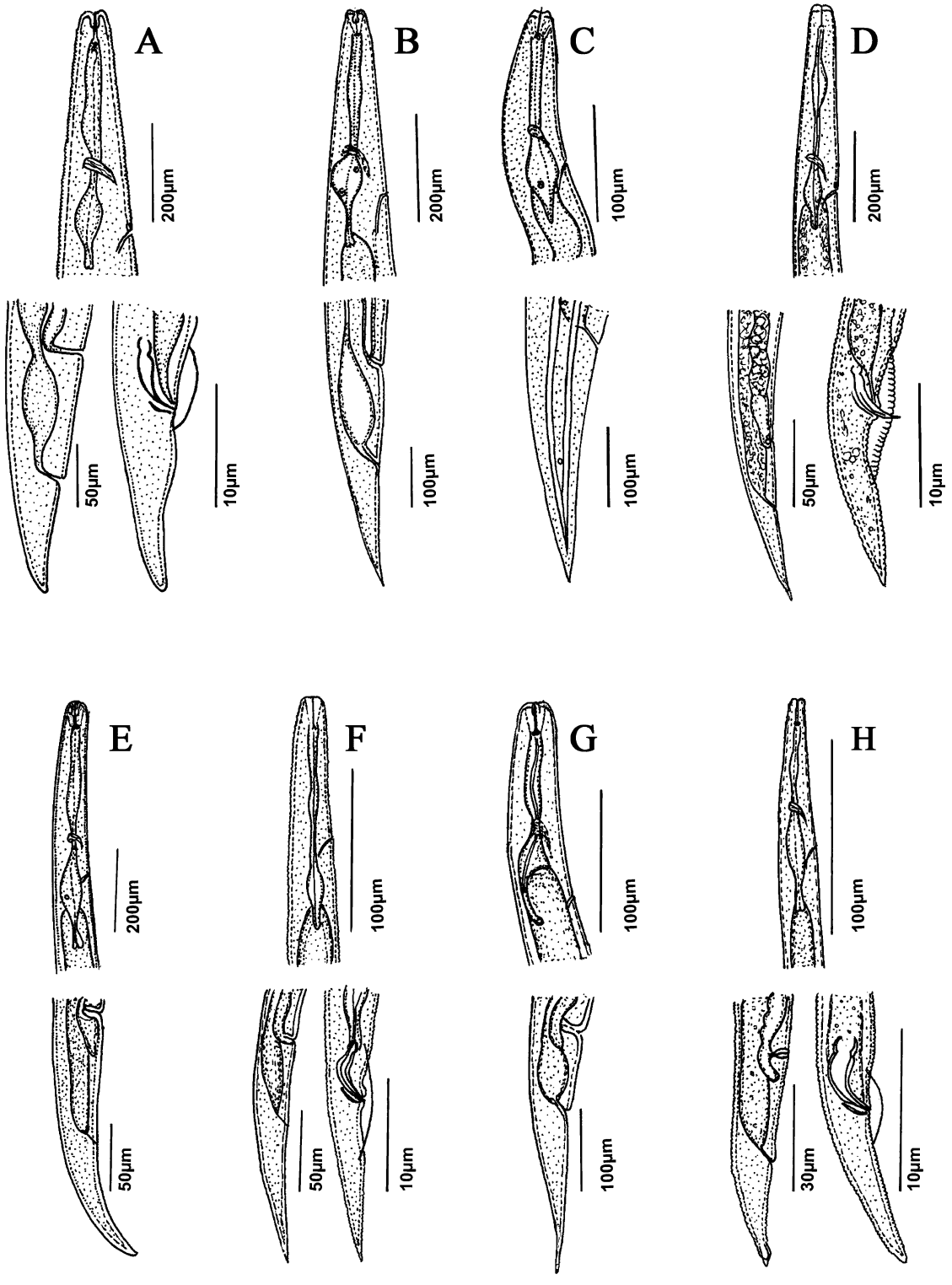

Fig. 1. *Anterior and posterior end of* Paurodontella *species (redrawn from original descriptions or redescriptions). A:* P. aberrans*; B:* P. apitica*; C:* P. asymmetrica*; D:* P. auriculata*; E:* P. densa*; F:* P. minuta*; G:* P. niger*; H:* P. sohailai.

Table 1. *Morphometrics of* Paurodontella *species. All measurements are in μm except L, in mm.*

Character/ species	*P. aberrans*	*P. apitica*	*P. asymmetrica*	*P. auriculata*	*P. densa*	*P. minuta*	*P. niger*	*P. sohailai*	*P. myceliophaga* n. sp.	*P. balochistanica* n. sp.
L	0.36-0.40	0.40-0.70	0.33-0.38	0.39-0.52	0.40	0.29-0.40	0.40	0.40-0.50	0.43-0.51	0.72-0.75
a	14-17	16-22	16-19	19-25	25	17-23	24	22-28	18.7-21.8	32.7-34.0
b	4.5-5.3	4.0-7.0	5.8-5.9	5.1-5.9	5.7	4.6-5.2	6.3	4.0-5.8	5.3-7.3	5.7-6.0
c	10.7-12.7	8.2-12.0	9.7-10.8	8.0-10.8	12	8-13	8	13.6-15.4	7.6-9.3	16.8-17.8
c′	–	–	–	2.0-5.1	–	–	–	–	3.5-4.7	3.0-3.2
V	81-83	80-85	81-83	80-85	82	78-90	80	83-86	80-86	88-89
Spicule	16-17	–	–	15-19	–	15-20	–	18-20	21-22	–
Gubernaculum	6-7	–	–	6-7	–	5-8	–	6.2-6.8	9.6	–
Stylet	9-10	7-8	13-14	7-8	–	8-10	–	9-10	8.0-8.8	10-11
Lateral lines	obscure	obscure, 6-7	4	5-6	6	4	6	7	4	4

Other species

P. aberrans (Nandakumar & Khera, 1969) Sumenkova, 1975
= *Paurodontus aberrans* Nandakumar & Khera, 1969
P. apitica (Thorne, 1941) Husain & Khan, 1968
= *Paurodontus apiticus* Thorne, 1941
P. asymmetrica (Tikyani & Khera, 1968) Sumenkova, 1975
= *Neopaurodontus asymmetricus* Tikyani & Khera, 1968
P. auriculata Anderson, 1985
= *Paurodontus auriculatus* (Anderson, 1985) Fortuner & Raski, 1987
P. balochistanica n. sp.
P. densa (Thorne, 1941) Hussain & Khan, 1968
= *Paurodontus densus* Thorne, 1941
P. myceliophaga n. sp.
P. niger (Thorne, 1941) Husain & Khan, 1968
= *Paurodontus niger* Thorne, 1941
P. sohailai Maqbool, 1982
= *Paurodontus sohailai* (Maqbool, 1982) Fortuner & Raski, 1987

Identification of *Paurodontella* species

The key is based on the overall morphology of females and males. In the present paper, ten species (including two new species) are included in *Paurodontella* on the basis of commonly shared characters. The measurements of most of the examined specimens closely fit the original description and any subsequent redescription of species. Some of the variations noted in certain populations of species were incorporated into the morphometric compendium (Table 1). This key is significant because it provides an all-inclusive guide to species identifications and works well with all the valid ten *Paurodontella* spp., including specimens of this genus that are deposited in the USDA Nematode Collection (Handoo *et al*., 1998).

In many *Paurodontella* species the known range of variation is limited to observation of specimens in single populations from the type locality. Further morphological studies, including SEM, of specimens from a broader spectrum of habitats are needed to clarify further the relationships and identities of many species.

Key to *Paurodontella* species

1 – Oviduct branching to form a uterine diverticulum . 2
– Oviduct not branching to form a uterine diverticulum 7
2 – Post-uterine sac rudimentary or absent 3
– Post-uterine sac present 6
3 – Stylet delicate, indistinct, knobs rod-shaped, irregular . . . . . *auriculata*
– Stylet distinct, with posteriorly sloping basal knobs 4
4 – Excretory pore at level of nerve ring . . . . . *minuta*
– Excretory pore at base of basal bulb 5
5 – Tail sharply pointed, vulva-anus distance shorter than tail, lateral lines 6-7 . . . . . *apitica*
– Tail subacute, bluntly pointed, vulva-anus distance greater than tail, lateral lines obscure . . . . . *aberrans*
6 – Seven lateral lines, c = >10, spicule and gubernaculum short (18-20 and 6-7 μm, respectively) *sohailai*

– Four lateral lines, c = <10, spicule and gubernaculum long (21-22 and 10 μm, respectively) ..... *myceliophaga* n. sp.

7 – Post-uterine sac absent ..... *densa*
– Post-uterine sac present 8

8 – Six lateral lines, V = ⩽80% ..... *niger*
– Four lateral lines, V = >80 9

9 – Body length short, stout (L = 0.33-0.38 mm; a = 16-19), vulva at 81-83%, stylet 13-14 μm long ..... *asymmetrica*
– Body length longer, slender (L = 0.72-0.75 mm; a = 33-34), vulva at 88%, stylet 10-11 μm long ..... *balochistanica* n. sp.

Paurodontella myceliophaga [*] **n. sp.**
(Figs 2, 3)

MEASUREMENTS

See Table 2.

DESCRIPTION

Female

Body cylindrical, robust, markedly tapering at both ends. Body almost straight to slightly ventrally curved when killed by gentle heat, occasionally arcuate. Cuticle with transverse striae averaging *ca* 1 μm apart. Lateral field marked by four incisures, outer incisures crenate and inner smooth, occupying *ca* one-third of body diam. at mid-body. Lip region high, narrow, truncate, annulated and continuous with body contour. Depression at oral opening prominent. Lip region 7.2-8.0 μm broad and 2.4-3.2 μm high. Amphidial aperture slit-like, located on lateral lips. Stylet length almost equal to head diam., basal knobs rounded, 1.6 μm in cross-section. Dorsal gland orifice (DGO) 3-4 μm posterior to stylet knobs. Pharyngeal corpus a cylindrical tube, median bulb fusiform. Isthmus cylindrical, encircled by nerve ring *ca* 40-56 μm from anterior end. Excretory duct prominent with cuticularised pore, situated 56-86 μm from anterior end and opposite base of pharynx. Basal bulb spindle-shaped bearing a posterior extension *ca* 10-15 μm projecting into intestine. Vulva a transverse slit, 78-86% from anterior end. Vagina angled obliquely forward, 5.6-7.0 μm long, extending inward *ca* one-third of body diam. Spermatheca not seen. Oocytes arranged in single file except at proximal end. Prominent, small, anterior projection attached to oviduct forming a uterine diverticulum. Quadricolumella of *ca* 8-9 cells. Uterus broad, thin walled, post-uterine sac short, *ca* 4-8 μm long. Vulva-anus distance *ca* 60-67% of tail length. Tail short, straight, 3.5-4.7 anal body diam. long, ending in an acute terminus with a mucro at terminus. Phasmids located *ca* one anal body diam. posterior to anus.

Male

Similar to female in general morphology except for sexual characters and cuticle with fine annulation. Testis single, outstretched. Spermatocytes arranged serially. Spicule arcuate and cephalate, 20-21.5 μm long. Gubernaculum simple, 9.6 μm in length. Bursa adanal or ditylenchoid, bursal margins strongly annulated.

TYPE HOST AND LOCALITY

Soil around roots of wheat (*Triticum aestivum* L.) from Ternab Agriculture Research Institute (34°2.33′N and 71°41.92′E), North-West Frontier Province, Pakistan.

TYPE MATERIAL

Holotype female on slide PA-102, 15 paratype females on slides PA-103-110 and three paratype males on slide PA-111 deposited in the Nematode Collection at National Nematological Research Centre, University of Karachi, Karachi, Pakistan. An additional nine female paratypes and one paratype juvenile on slide number T-5808p deposited in the US Department of Agriculture Nematode Collection, Beltsville, MD, USA.

DIAGNOSIS AND RELATIONSHIPS

Paurodontella myceliophaga n. sp. is distinctive because of the short post-uterine sac, lateral field with four incisures, excretory pore located at the base of the pharynx and the fusiform median bulb.

Paurodontella myceliophaga n. sp. comes close to *P. apitica* and *P. minuta*, since they share common characters such as the presence of a uterine diverticulum in the oviduct, a, b and c ratios and vulva position. Differences from *P. apitica* include the shape of the anterior body, being slender *vs* obese, stem-like extension of the basal pharyngeal bulb projecting into intestine *vs* reaching to, but not into, the intestine, presence *vs* absence of post-uterine sac, presence of four lateral lines *vs* obscure

[*] The species epithet refers to the fungal feeding habits of the genus.

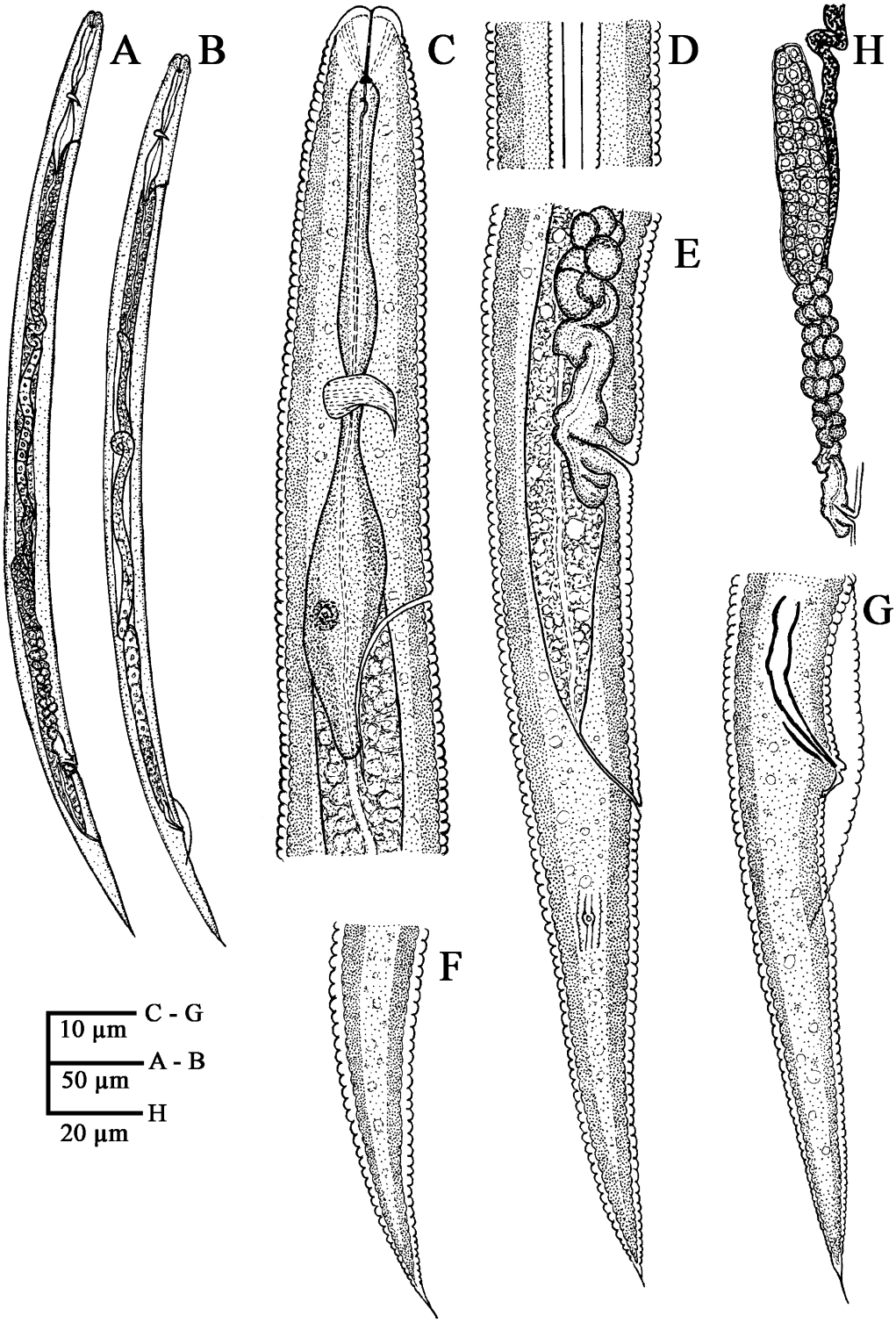

Fig. 2. Paurodontella myceliophaga *n. sp. A: Entire female; B: Entire male; C: Pharyngeal region of female; D: Lateral field of female; E: Vulval and anal regions of female; F: Female tail; G: Male tail; H: Uterine diverticulum of female oviduct.*

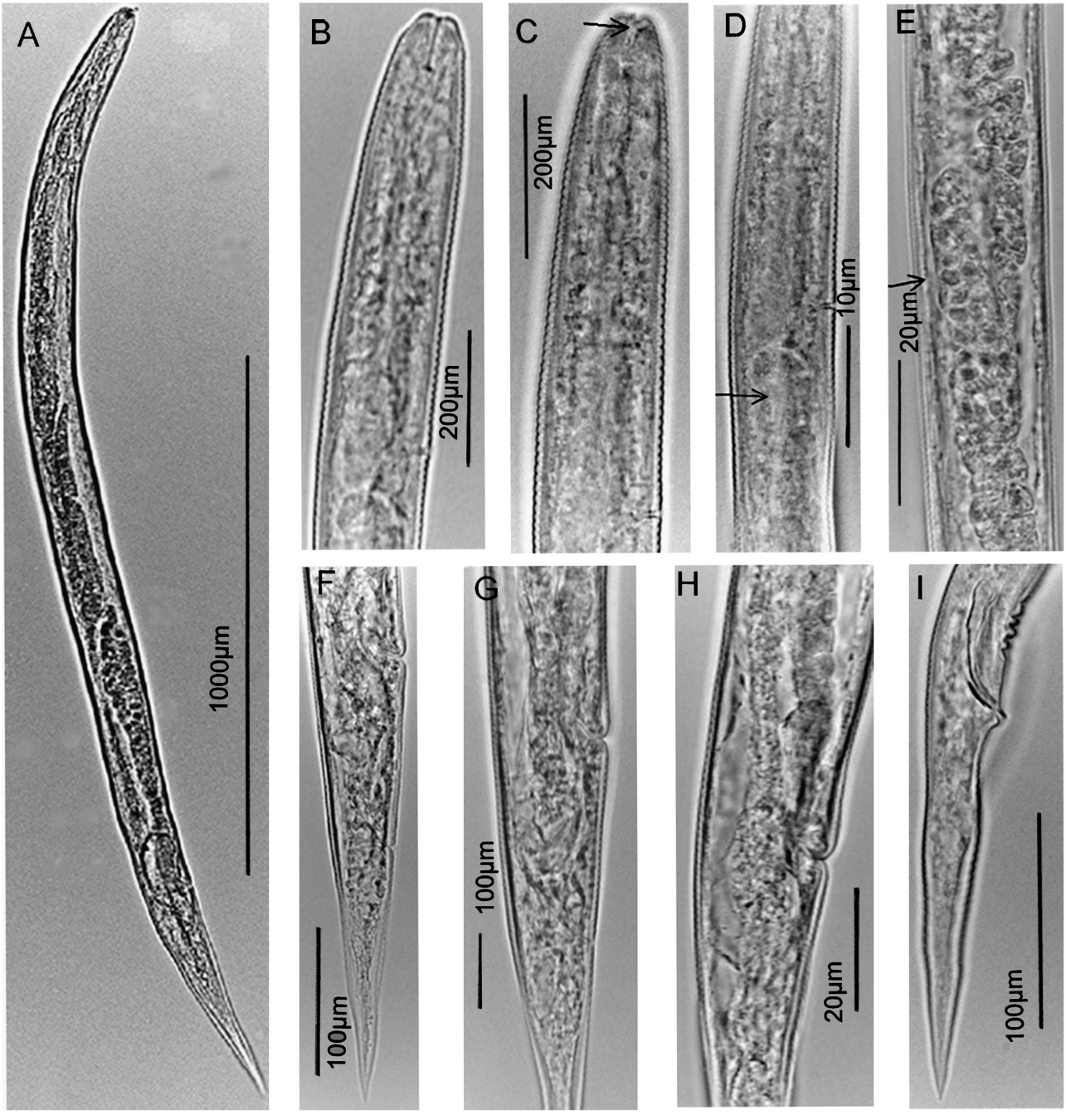

Fig. 3. Paurodontella myceliophaga *n. sp. A: Entire female; B: Pharyngeal region of female; C: Female amphid on lateral lip (arrow); D: Basal bulb with extension (arrow); E: Uterine diverticulum of female oviduct (arrow); F: Vulval and tail regions of female; G, H: Female post-uterine sac; I: Male tail.*

lateral lines (but were faintly observed in a few specimens as having six to seven lines in the type material deposited in the USDA Nematode Collection), tail tapering to a pronounced ventral projection terminating into a long pointed mucro *vs* straight, pointed, without mucro, and males present *vs* males not known. *Paurodontella*

Table 2. *Morphometrics of* Paurodontella myceliophaga *n. sp. and* P. balochistanica *n. sp. All measurements are in μm and in the form: mean ± s.d. (range).*

Character	*P. myceliophaga* n. sp.			*P. balochistanica* n. sp.	
	Female		Male	Female	
	Holotype	Paratypes	Paratypes	Holotype	Paratypes
n	–	14	3	–	2
L	460	469 ± 24 (432-512)	498 ± 17 (485-518)	740	735 ± 21 (720-750)
a	19.2	19.8 ± 1.0 (18.7-21.8)	23.0 ± 2.6 (20.0-24.6)	33.1	33.4 ± 0.9 (32.7-34.0)
b	6.1	6.1 ± 0.6 (5.4-7.3)	6.0 ± 0.8 (5.3-6.8)	5.7	5.9 ± 0.1 (5.8-6.0)
c	7.9	8.4 ± 0.5 (7.6-9.3)	8.3 ± 0.4 (8.0-8.8)	16.8	17.5 ± 0.5 (17.1-17.8)
c′	3.8	4.0 ± 0.4 (3.5-4.7)	4.2 ± 0.4 (3.7-4.5)	3.1	3.1 ± 0.2 (3.0-3.2)
V	80	81.0 ± 2.3 (77.9-85.9)	–	88.1	88.3 ± 0.4 (88.0-88.6)
Vulva to anus distance (VAD)	34.4	35 ± 5.0 (30-44)	–	44	45.5 ± 0.7 (45-46)
Stylet length	8.8	8.4 ± 0.4 (8.0-8.8)	8.0 ± 0.0 (8.0)	11	10.5 ± 0.7 (10-11)
DGO	3	3.5 ± 0.5 (3.0-4.0)	3.5 ± 0.5 (3.0-4.0)	2	2.0 ± 0.0 (2.0)
Nerve ring from anterior end	52	48 ± 4.5 (40-56)	42 ± 2.1 (40-44)	80	76 ± 2.1 (75-78)
Excretory pore	64	67 ± 8.1 (56-86)	71 ± 1.2 (70-72)	104	101 ± 1.4 (100-102)
Pharynx length	76	77 ± 8.0 (64-92)	83 ± 9.9 (72-90)	130	125 ± 1 (124-125)
Max. body diam.	24	24 ± 1.5 (22-28)	25 ± 4.6 (20-28)	22.4	22 ± 0.3 (22)
Tail length	58.4	56 ± 3.7 (48-64)	60 ± 4.6 (56-65)	44	42 ± 0 (42)
Anal body diam	15.2	14 ± 1.3 (12-17)	14 ± 1.2 (13-15)	14.4	13 ± 0.7 (13-14)
Vagina diam.	6.4	6.2 ± 0.4 (5.6-7.0)	–	8.0	9.0 ± 1.4 (8.0-10.0)
Head diam.	8.0	7.6 ± 0.4 (7.2-8.0)	7.5 ± 0.5 (7.2-8.0)	–	–
Head height	3.2	3.0 ± 0.4 (2.4-3.2)	2.9 ± 0.5 (2.4-3.4)	–	–
Median bulb length	34.4	32 ± 3.1 (28-36)	31 ± 3.5 (29-35)	–	–
Post-uterine sac (PUS) length	8.0	5.9 ± 1.0 (4.0-8.0)	–	16.0	8.0 ± 2.8 (6.0-10.0)
Body diam. at vulva (VBD)	19	19 ± 3.0 (13-22)	–	22	22 ± 0 (22)
Vulva to anterior end	368	381 ± 29 (344-440)	–	652	649 ± 16 (638-660)

Table 2. *(Continued).*

Character	*P. myceliophaga* n. sp.			*P. balochistanica* n. sp.	
	Female		Male	Female	
	Holotype	Paratypes	Paratypes	Holotype	Paratypes
Spicule length	–	–	21.1 ± 0.4 (20.8-21.5)	–	–
Gubernaculum length	–	–	9.6 ± 0.0 (9.6)	–	–
PUS/VBD	0.4	0.3 ± 0.1 (0.2-0.5)	–	0.7	0.4 ± 0.1 (0.3-0.5)
PUS/VAD	23.3	17.1 ± 3.6 (10.0-21.4)	–	36.4	17.6 ± 6.5 (13.0-22.2)
Bursa (% of tail)	–	–	27.7 ± 0.8 (27.0-28.5)	–	–

myceliophaga n. sp. differs from *P. minuta* by longer body length (L = 0.43-0.51 *vs* 0.29-0.40 mm), presence *vs* absence of post-uterine sac, excretory pore opposite base of pharyngeal bulb *vs* opposite nerve ring, slightly higher b ratio (5.3-7.3 *vs* 4.6-5.2), slightly lower c ratio (7.6-9.3 *vs* 8-13), and longer spicule and gubernaculum (20.8-21.5 and 9.6 *vs* 15-20 and 5-8 μm, respectively).

Discussion

The uterine diverticulum found in *P. myceliophaga* n. sp. has been previously seen by Nandakumar and Khera (1969), who refer to this diverticular structure in their description of *Paurodontus aberrans* as a "special branch in the oviduct", an "anomalous structure [that] is easily discernible and non-variable", and that "this character may form the basis of a new separate genus" distinct from *Paurodontus*. The present authors agree with Nandakumar and Khera (1969) that this special branch of the oviduct is quite unique and that more about its reproductive function must be determined.

Paurodontella balochistanica[*] **n. sp.**

(Figs 4, 5)

Measurements

See Table 2.

[*] The species epithet refers to the type locality of Balochistan.

Description

Female

Body slender, becoming ventrally curved when killed, cuticle with fine transverse striae throughout body, *ca* 1 μm apart. Lateral field measuring one-third of body diam. at mid-body, marked by four smooth incisures. Lip region flat, rounded with prominent depression at oral opening, continuous with body contour. Stylet longer than head diam., *ca* 10-11 μm in length. Amphidial apertures slit-like, dividing lateral lips to base of head. Corpus a cylindrical uniform tube *ca* one-third as wide as neck, median bulb non-muscular with nerve ring located at 75-80 μm from anterior end, then expanding to form spindle-shaped muscular bulb 28-30 μm long with its large, posterior, extension projecting 19-20 μm into intestine and forming another isthmus-like structure ending in a shape similar to stylet knobs. Excretory pore 100-104 μm from anterior end. Hemizonid located just anterior to excretory pore. Vulva a transverse slit, well posterior, pronounced, vagina muscular, directed anteriorly to body axis, extending inwards by 8 μm to join uterus. Ovary single, outstretched sometimes reaching to spindle-shaped basal bulb. Oocytes in multiple rows. Post-uterine sac present, 6-16 μm long, vulva-anus distance equal to tail length. Rectum somewhat shorter than anal body diam. Phasmids 8-10 μm posterior to anus. Tail short, almost straight, conoid, *ca* 3-3.2 anal body diam. long. Mucro present at tail terminus.

Male

Not found.

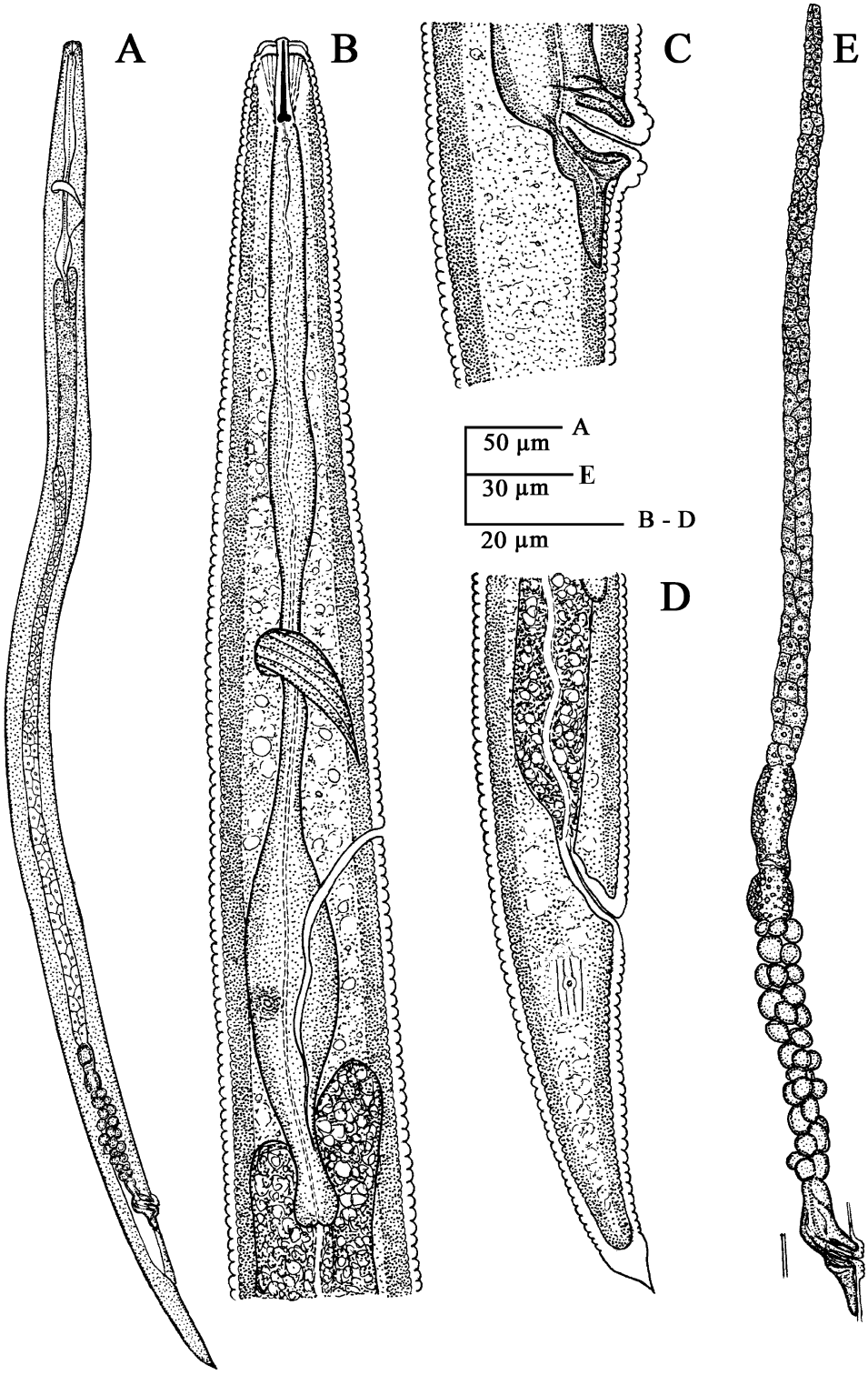

Fig. 4. Paurodontella balochistanica *n. sp. females. A: Entire; B: Pharyngeal region; C: Vulval region; D: Tail; E: Reproductive system.*

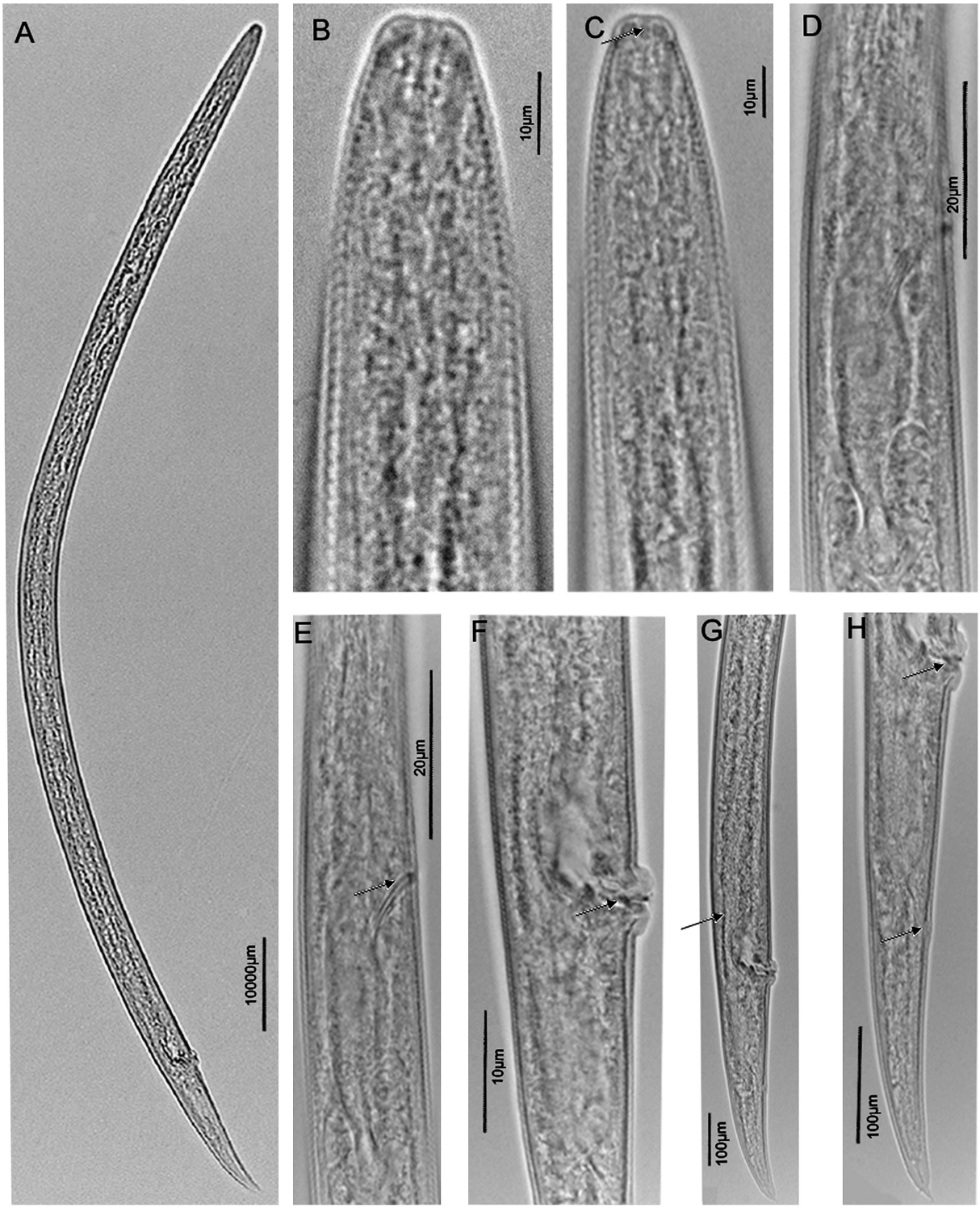

Fig. 5. Paurodontella balochistanica *n. sp. A: Entire female; B: Head region; C: Amphid (arrow); D: Pharynx; E: Excretory pore (arrow); F: Vulva (arrow); G: Reproductive system (arrow); H: Vulva (upper arrow) and anus (lower arrow).*

Type host and locality

Soil around roots of wheat (*Triticum aestivum* L.) from Hub (25°1.42′N and 66°53.32′E), Balochistan, Pakistan.

Type material

Holotype female (slide T-635t) deposited in the USDA Nematode Collection (USDANC) at Beltsville, MD, USA. Three female paratypes on slide PA115 deposited in the Nematode Collection of the National Nematological Research Centre, University of Karachi, Karachi, Pakistan.

Diagnosis and relationships

Paurodontella balochistanica n. sp., is characterised by having a long and slender body, lateral field with four lines, well developed, long, post-uterine sac, posteriorly located vulva and a short, straight to conoid, tail with a mucronate terminus.

The new species shares similarities with *P. apitica* and *P. densa*. From *P. apitica* it differs by the longer and more slender body (L = 0.72-0.75 *vs* 0.42-0.70 mm; a = 33-34 *vs* 16-22), tail short, conoid with a terminal mucro *vs* long, straight, pointed tail without a mucro (c = 17-18 *vs* 8-12), and more posteriorly located vulva (V = 88-88.6 *vs* 80-85). It differs from *P. densa* by the longer and more slender body (L = 0.72-0.75 *vs* 0.40 mm; a = 33-34 *vs* 25), head flat and truncate *vs* rounded, lateral field with four *vs* six incisures, post-uterine sac present *vs* absent, more posteriorly located vulva (V = 88-88.6 *vs* 82) and tail terminus mucronate *vs* subacute.

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