

Parasitic nematodes of birds of the family Icteridae (Passeriformes) in Cuba

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Abstract. Nine species of parasitic nematodes were found in Cuban birds of the family Icteridae. Of these, the three species — *Strongyloides quiscali* sp.n. and *Viktorocara garridoi* sp.n. from the host *Quiscalus niger caribaeus* and *Oxyspirura rodriguezi* sp. n. from the host *Dives atrovioleaceus* are new for science. The species *Geopetitia madagascariensis* and *Acuaria* sp. are new for Cuba. The species *Dispharynx nasuta*, *Tropisurus paucispina*, *Aproctella stoddarti* and *Diplotrichaena thomasi* are recorded from new hosts. Our findings will add to the present knowledge on the nematode fauna in the definitive hosts of the family Icteridae.

Birds of the family Icteridae represent the most numerous component of the Cuban avifauna. In this geographical region the helminths of this group of definitive hosts have not been studied adequately up till now. Therefore, we have systematically studied parasitic worms (Nematoda), collected in the years 1964–1966 from the hosts of the family Icteridae by the workers of the Institute of Parasitology of the Czechoslovak Academy of Sciences, of the Helminthological Institute of the Slovak Academy of Sciences and of the Biological Institute of the Cuban Academy of Sciences.

In autopsy we examined a total of 76 birds, of which 35, i.e. 47.3%, were found helminthologically positive. The most frequently occurring parasites were those of the class Acanthocephala (in 17 hosts), then Nematoda (in 13 hosts), Cestoidea (in 10 hosts) and Trematoda (only in 7 hosts). The individual species of examined hosts and the number of nematode positive hosts is given in the following survey (nominator = number of examined hosts; denominator = number of positive hosts): *Icterus dominicensis melanopsis* (10/1), *Agelaius humeralis* (8/0), *A. phoeniceus assimilis* (3/0), *Quiscalus niger caribaeus* (33/6), *Dives atrovioleaceus* (12/5), *Sturnella magna hippocrepis* (9/1) and *Dolichonyx oryzivorus* (1/0).

RESULTS

Fam. Strongyloididae Chitwood and McIntosh, 1934

1. *Strongyloides quiscali* sp. n.

Fig. 1

Host: *Quiscalus niger caribaeus* (Todd)

Location: small intestine

Locality: Cayo Piedras — Isla de Pinos

Of a total of 33 examined hosts, this species was found in one of them (8 parasitic female worms)

Description (after the syntypes): Small thread-like nematodes of whitish colour. Cuticle with fine transverse striation. Mouth terminal with 6 small, circumoral elevations. Buccal cavity small, cup-shaped. Overall length 1.63—2.02 mm, maximum width 0.042—0.044 mm. Width of forebody ending 0.012—0.015 mm. Esophagus straight, moderately extended in backward direction, length 0.50—0.54 mm, maximum width 0.019 mm. Vulva transversely slit-shaped with rounded, slightly elevated margins, placed at a distance of 1.00—1.27 mm from anterior end of body. Uteri relatively long, the anterior branch extending to esophagus termination or slightly below it (up to 0.046 mm from esophagus end), winding in 2—3 turns round the anterior part of the intestine. The posterior branch extends up to a distance of 0.066—0.206 mm from posterior end of body. Uterus

with 18—24 eggs not containing fully formed larvae. Posterior extremity moderately tapering with distinctly rounded ending. Anus situated at a distance of 0.041—0.044 mm from tail end. Size of eggs 0.045—0.047 mm by 0.031—0.040 mm.

Discussion: Until the present, the genus *Strongyloides* Grassi, 1879 received 49 nematode species, of which the following are known to parasitize birds: *Strongyloides avium* Cram, 1929; *S. oswaldoi* Travassos, 1930; *S. minimum* Travassos, 1930; *S. cubanensis* Pérez Vigueras, 1942; *S. turkmenicus* Kurtieva, 1953 and *S. ardeae*

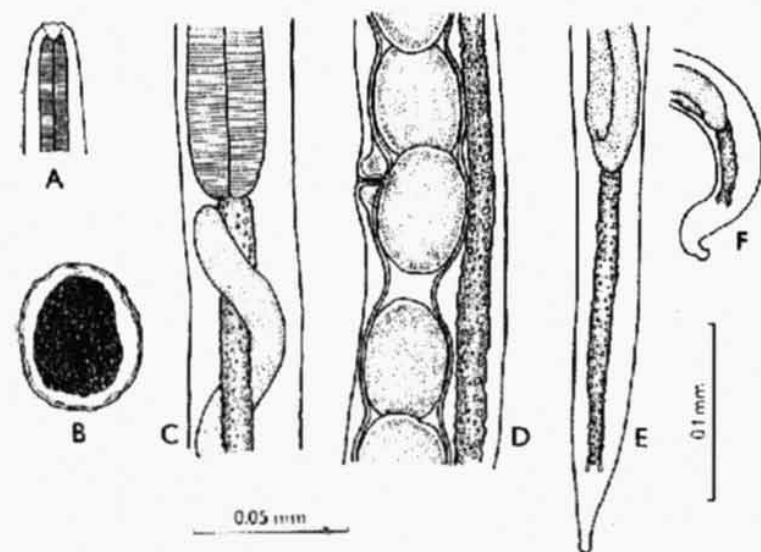


Fig. 1. *Strongyloides quiscali* sp. n. from the host *Quiscalus niger caribaeus*. A — forebody; B — egg; C — esophagus termination; D — vulva; E, F — hindbody.

Little, 1966. The described new nematode species of this genus—*S. quiscali* sp.n. is new for hosts of the order *Passeriformes*. LITTLE (1966), although recording *Strongyloides* sp. from *Agelaius humeralis* (*Passeriformes*, *Icteridae*) added neither a description of the nematode nor its exact systematic position. The species *S. quiscali*

Table 1. Survey of measurement of nematodes of the genus *Strongyloides* Grassi, 1879, parasitic in birds (in mm)

Species	<i>S. avium</i>	<i>S. oswaldi</i>	<i>S. minimum</i>	<i>S. cubensis</i>	<i>S. ardeae</i>	<i>S. turkmenicus</i>	<i>S. quiscalis</i> sp. n.
Authors	CRAM (1929)	TRAVASSOS (1930)	TRAVASSOS (1930)	VIGUERAS (1942)	LITTLE (1966)	KURTIEVA (1953)	Our data
Body length	2.2	3.0	1.12-1.78	2.2-2.35	1.5-2.1	1.74-2.07	1.63-2.02
Maximum body width	0.040-0.045	0.6(?)	0.037-0.040	0.042-0.050	0.033-0.040	0.030-0.045	0.042-0.044
Esophagus length	0.700	0.48	0.512-0.550	0.540-0.560	0.48-0.78	0.381-0.554	0.50-0.54
Maximum esophagus width	?	?	0.023	0.028	?	0.019-0.023	0.019
Distance of vulva from anterior end	1.4	1.8	postequatorial	1.3-1.4	0.92-1.5	?	1.00-1.27
Distance of anus	0.005	0.05-0.07	0.050	0.070-0.076	0.030-0.050	0.042-0.049	0.041-0.044
Distance of ovary from esophagus	0.045	a little behind esophagus ending	0.020-0.059	at the level of esophagus ending	at the level of esophagus ending	?	at the level or below esophagus ending
Distance of ovary from posterior end of body	0.080	0.10-0.11	0.040	0.090-0.095	?	?	0.066-0.206
Size of eggs	0.052-0.056	0.045-0.050	0.050-0.028	0.058-0.076	?	0.035-0.042	0.045-0.047
Hosts	0.036-0.040 <i>G. gallus dom.</i> <i>J. hyemalis</i> <i>F. americana</i>	0.030 <i>G. gallus dom.</i>	<i>D. bahamensis</i>	0.0216-0.023 <i>Butorides virescens maculatus</i>	<i>Nyctanassa violacea</i> <i>B. virescens</i> USA	0.021-0.023 <i>Himantopus candidus</i>	0.031-0.040 <i>Quiscalus niger caribaeus</i>
Locality	USA, Cuba, Puerto Rico	Brazil	Brazil	Cuba	USA	USSR	Cuba
Location	small and blind caecum	small intestine	small and blind caecum	small intestine	small intestine	small intestine	small intestine

sp.n. belongs to the group of smaller species of this genus (*S. minimum*, *S. turkmenica* and *S. ardeae*), distinctly differing from *S. minimum* and *S. turkmenica* in the size of the eggs, from *S. ardeae* principally in the shape of the anterior uterine branch and the number of eggs (in *S. ardeae* 10—14, in *S. quiscali* 18—24). From the species *S. avium*, *S. oswaldoi* and *S. cubanensis*, *S. quiscali* sp.n. differs in the length of the body and the distance of the vulva from the anterior end of the body. A survey of measurements of all species of the genus *Strongyloides*, parasitic in birds, is given in Tab. 1.

The syntypes are partly deposited in the collection of the Institute of Parasitology in Prague, partly in the collection of the Humboldt Museum in Berlin. The species name has been derived from the generic name of its definitive host.

SPIRURIDA

Fam. Acuariidae Seurat, 1913

2. *Dispharynx nasuta* (Rudolphi, 1819)

Fig. 2

Host: *Quiscalus niger caribaeus* (Todd) — a new host

Location: gizzard

Locality: La Vega — Isla de Pinos

Of the 33 examined birds, this species was found in one host (a total of 18 nematodes, 6 male and 12 female worms).

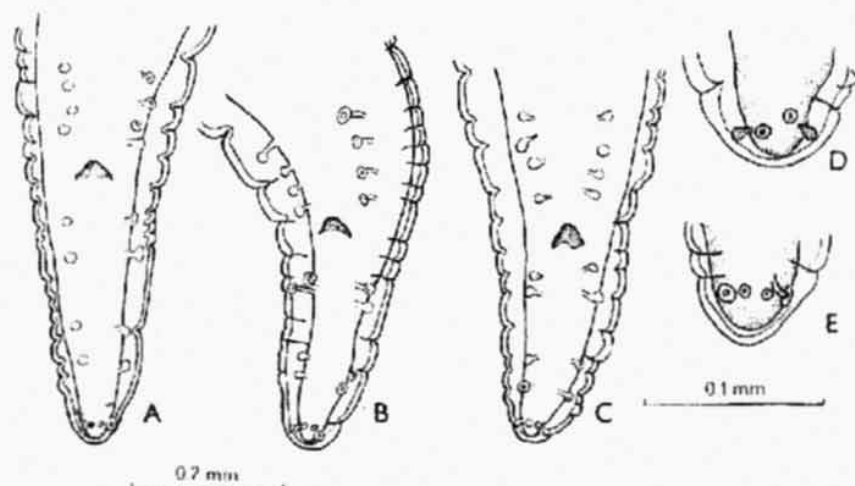


Fig. 2. *Dispharynx nasuta* (Rudolphi, 1819) from the host *Quiscalus niger caribaeus*. A, B, C — hind-body of male (general view); D, E — detail.

Note: This species was first recorded from Cuba by PÉREZ VIGUERAS (1936) from the hosts *Gallus gallus f.dom.* and *Numida meleagris* (Galliformes) and *Columba livia f.dom.* (Columbiformes). Later BARUŠ (1966) found it in the host *Charadrius vociferus ternominatus* (Charadriiformes). Contrary to the redescriptions of OZERSKAYA (1927), SINGH (1948) and RASHEED (1960), who found only 5 pairs of postcloacal papillae in the male nematodes, we observed in the males of our material always 6 pairs of postcloacal papillae, which is fully in accord with the data by FREITAS and SILVA (1960).

3. *Acuaria* sp.

Fig. 3

Host: *Sturnella magna hippocrepis* (Wagler)

Location: under the cuticle of the gizzard

Locality: Rancho el Tesoro — Isla de Pinos

Of the 9 examined birds, one female nematode was found in one of the hosts.

Description: Slender body of yellowish colour, cuticle with distinct transverse striation. Mouth terminal, bearing two laterally situated triangular lips with two lateral cuticular cordons, arising from each side of the lips. Overall length of body 19.58 mm, maximum width 0.20 mm. Length of lips 0.019 mm. Length of pharynx 0.23 mm, maximum width 0.027 mm. Length of muscular esophagus 0.54 mm, maximum width 0.050 mm, of glandular esophagus 1.24 mm, maximum width 0.085 mm. Nerve ring situated at a distance of 0.28 mm, excretory pore of 0.31 mm from anterior extremity. Cuticular cordons extending up to a distance of 1.05 mm from anterior end of body. Vulva transversely slit-shaped (not very distinct), situated at a distance of 10.68 mm from anterior extremity. Posterior extremity moderately attenuated with rounded ending. Anus placed at a distance of 0.23 mm from end of tail. Eggs with relatively thick shells, size 0.034—0.037 by 0.018—0.021 mm.

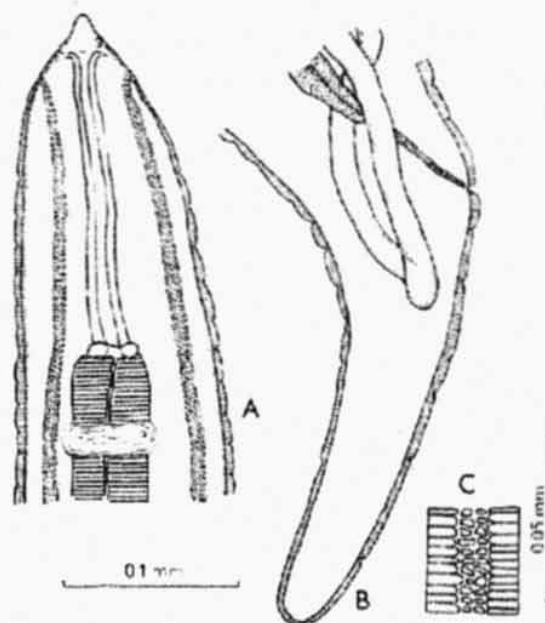


Fig. 3. *Acuaria* sp. from the host *Sturnella magna hippocrepis*. A — forebody; B — hindbody of female; C — cuticular cordon (detail).

Note: WILLIAMS (1929) described from hosts of the family Icteridae (genera *Sturnella* and *Quiscalus*) in the U. S. A. a total of 5 nematode species of the genus *Acuaria* (*A. minor*, *A. pattoni*, *A. minuta*, *A. quiscula* and *A. lina*). Our material is both morphologically and metrically very close to the species *A. quiscula*. An exact determination was not possible in the absence of a male worm.

Fam. Schistorophidae Skrjabin, 1941

4. *Viktorocura garridoi* sp. n.

Fig. 4

Host: *Quiscalus niger caribaeus* (Todd)

Location: under the cuticle of the gizzard

Locality: Cayo Cantiles (province Havana)

Of the 33 examined hosts, this species was found in two of them (one male and 3 females; 7 males and 7 females).

Description: Small nematodes of yellowish colour. Cuticle with distinct transverse striation. Mouth terminal with two small, laterally situated cone-shaped lips. Four

cuticular processes arising from the lips, their anterior half closely adjoining the forebody, the posterior half unattached. Posterior margin of these processes smooth. Pharynx well pseudochitinized. Esophagus divided into anterior muscular and posterior glandular portion.

Holotype (male): Overall length 4.27 mm, maximum width 0.19 mm. Length of cuticular processes on cephalic end 0.027 mm, maximum width 0.054 mm. Length of pharynx 0.078 mm. Length of muscular esophagus 0.48 mm, maximum

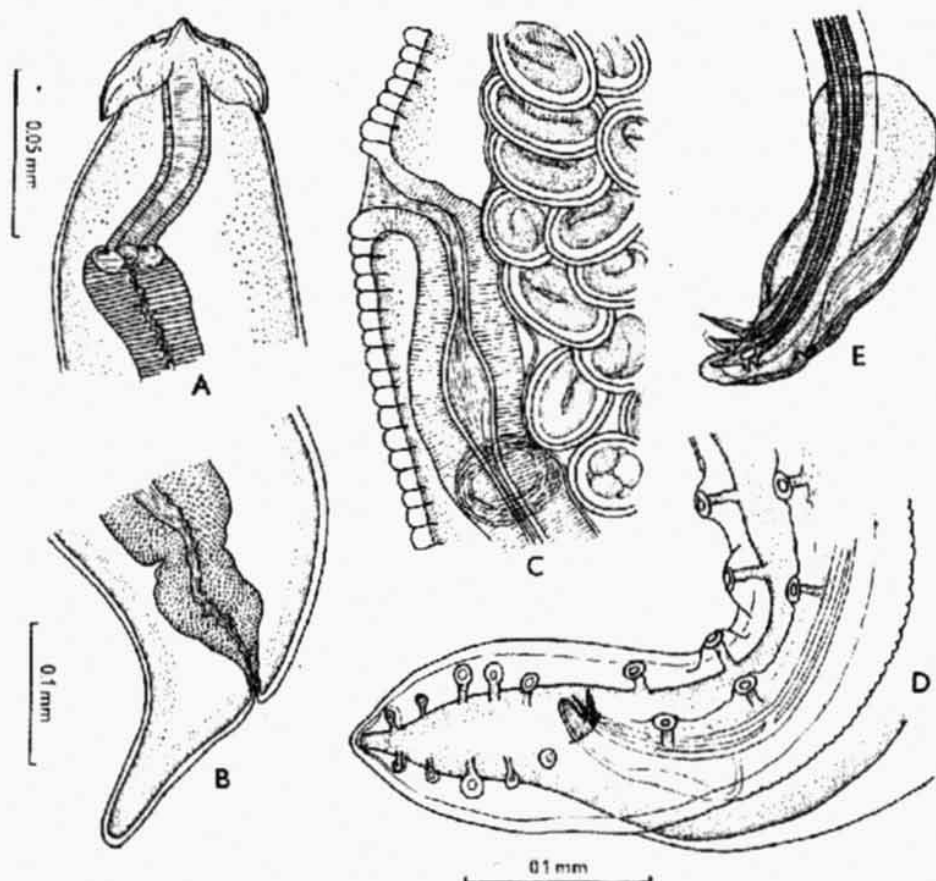


Fig. 4. *Viktorocara garrido* sp. n. from the host *Quiscalus niger caribaeus*. A — forebody; B — hindbody of female; C — vulva; D — hindbody of male; E — short spicule and distal end of long spicule.

width 0.046 mm; glandular esophagus 0.47 mm long, 0.081 mm wide. Nerve ring situated at a distance of 0.132 mm from cephalic end, excretory pore at 0.183 mm. Cervical papillae arising at the level of the nerve ring. Posterior end coiled in two windings, covered with wide caudal alae, supported by 4 pairs of precloacal and 5 pairs of postcloacal papillae. Cloaca opens at a distance of 0.140 mm from posterior end. Spicules distinctly unequal, dissimilar, well pseudochitinized. Length of short, massive spicule 0.113 mm, maximum width 0.042 mm. The distal end of the longer spicule is cleaved into 5 expansions. Width of proximal end of long spicule 0.023 mm, overall length 0.409 mm, covered with a tube-like cuticular sheath.

Allotype (female): Overall length 7.12 mm, maximum width 0.26 mm. Length of

cuticular processes on cephalic end 0.030 mm, width 0.054 mm. Length of pharynx 0.081 mm. Length of muscular esophagus 0.46 mm, maximum width 0.058 mm; of glandular esophagus 0.54 mm, maximum width 0.098 mm. Nerve ring situated at a distance of 0.105 mm from anterior end. Vulva situated at a distance of 3.56 mm from posterior end, anus at 0.156 mm. Measurements of eggs: 0.041—0.045 by 0.023—0.028 mm.

Paratype variability:

Male: Overall length 4.98—5.69 mm, maximum width 0.15—0.20 mm. Length of cuticular processes on cephalic end 0.027—0.031 mm, width 0.042—0.050 mm. Length of pharynx 0.066—0.081 mm. Length of muscular esophagus 0.39—0.46 mm, maximum width 0.042—0.046 mm; length of glandular esophagus 0.39—0.54 mm, maximum width 0.081—0.085 mm. Length of caudal alae 0.33—0.36 mm. Number of caudal papillae constant; 4 pairs situated precloacally, 5 pairs postcloacally. Cloaca placed at a distance of 0.11—0.14 mm from posterior end. Length of shorter spicule 0.105—0.124 mm, maximum width 0.042—0.050 mm. Length of longer spicule 0.319—0.404 mm, width of its proximal end 0.023—0.027 mm. Gubernaculum absent.

Female: Overall length 5.69—7.76 mm, maximum width 0.17—0.30 mm. Length of cuticular processes on cephalic end 0.020—0.030 mm, width 0.050—0.054 mm long. Length of pharynx 0.074—0.086 mm. Length of muscular esophagus 0.46—0.55 mm, maximum width 0.042—0.062 mm; length of glandular esophagus 0.42—0.62 mm, maximum width 0.062—0.101 mm. Nerve ring situated at a distance of 0.100—0.136 mm from an anterior end. Cervical papillae arising at the level of the nerve ring or closely behind it. Vulva transversely slit-shaped with smooth margins, situated at a distance of 2.84—3.90 mm from posterior end. Posterior end moderately attenuated, rounded. Anus situated at a distance of 0.129—0.160 mm from posterior end. Eggs with a coiled larva inside and with relatively thick shells. Size 0.041—0.045 by 0.023—0.028 mm.

Discussion: In view of its morphology, we have listed the new nematode species *V. garridoi* sp. n. to the genus *Viktorocara* Guschanskaja, 1950, subfamily *Ancyracanthopsinae* Sobolev, 1949. Until the present, the genus *Viktorocara* received the following 7 species: *V. schejkini* Guschanskaja, 1950; *V. charadrii* Belopolskaja, 1963; *V. cucullatus* (Wehr, 1934); *V. guschanskoi* Lennov, 1958; *V. halcyoni* Ryjikov and Hohlova, 1964; *V. petrovi* (Guschanskaja, 1950); *V. tenuis* (Maplestone, 1932). From these species and also from the species *S. umbellifera* (Molin, 1860) of the genus *Sciadiocara* Skrjabin, 1915, which is closely related to the genus *Viktorocara*, *V. garridoi* sp.n. differs distinctly in the number of precloacal papillae (in *V. garridoi* sp.n. we observed only 4 pairs of precloacal papillae, while in *S. umbellifera* and in all other species of the genus *Viktorocara* the number of precloacal papillae is 6 and more pairs), in the shape of the distal end of the long spicule and in the shape and size of the short spicule. *V. garridoi* sp. n. is the first

species of the genus *Viktorocara* recorded from the neotropic region and also the first finding in the definitive host of the order Passeriformes. The species is named in honour of Dr Orlando H. Garrido, scientific officer of the Cuban Academy of Sciences in Havana, to whom my thanks are due for his extensive help in collecting the material and for the exact identification of all definitive hosts.

The type, allotypes and paratypes (1 male and 2 female worms) are deposited in the collection of the Humboldt Museum in Berlin, the remaining paratypes are in the collection of the Institute of Parasitology of the Czechoslovak Academy of Sciences, Prague and in the collection of the Biological Institute of the Cuban Academy of Sciences in Havana.

Fam. Tropisuridae Yamaguti, 1961

5. *Tropisurus paucispina* (Sandground, 1928)

Host: *Quiscalus niger caribaeus* (Todd) and *Dives atroviolaceus* (d'Orbigny) — a new host

Location: gizzard

Localities: La Palma, Soroa and La Güira (province Pinar del Río)

Of the 33 examined *Q. n. caribaeus*, this species was found in one host (3 male and 4 female worms). Of the 12 examined *D. atroviolaceus* 4 were positive (1—12 nematodes in one host).

Description of the male (material from the host *D. atroviolaceus*): Body whitish, cuticle with distinct transverse striation. Width of anterior end at the level of the buccal cavity 0.027—0.031 mm. Buccal cavity with strongly pseudochitinized walls, anteriorly thinner, posteriorly thicker. Esophagus distinctly divided into two

Table 2. Measurements (in mm) of males of the species *Tropisurus paucispina* Sandground, 1928 after our material and the data by SANDGROUND (1928)

Host	<i>Dives atroviolaceus</i>	<i>Quiscalus niger caribaeus</i>	<i>Amblyramphus holosericeus</i>
Authors	Our material		After SANDGROUND (1928)
Body length	3.56—4.27	3.31—3.34	3.1—4.5
Maximum body width	0.16—0.20	0.15—0.16	0.185
Depth of buccal cavity	0.010—0.011	0.008—0.009	0.009
External width of buccal cavity	0.015—0.019	0.019	—
Length of muscular esophagus	0.19—0.23	0.19—0.20	0.12
Length of glandular esophagus	0.39—0.51	0.37—0.39	0.37
Nerve ring	0.15—0.17	0.15	—
Distance of cloaca from body end	0.15—0.21	0.156—0.160	—
Length of short spicule	0.124—0.179	0.114—0.160	0.154
Width of proximal end	0.005	0.008	0.012
Length of long spicule	0.331—0.397	0.342—0.371	0.328—0.371
Width of proximal end	0.008	0.008—0.011	0.009
Number of adanal papillae (pairs)	1	1	—
Number of precloacal papillae	17—24	more numerous	22 or less
Number of postcloacal papillae	5	5—6	3

portions (anterior muscular and posterior glandular portion). Small cervical papillae arising at nerve ring level are closely followed by two longitudinal submedian rows of small translucent papillae (0.003 mm), extending caudally. Two unequal, dissimilar spicules present. (For measurements see Tab. 2.)

6. *Geopetitia madagascariensis* Chabaud, 1960

Fig. 5

Host: *Dives atrovioleaceus* (d'Orbigny) — a new host

Location: in cysts on the external gizzard wall

Locality: Soroa (province Pinar del Río)

This species was found in two of the totally examined 12 hosts (in one of them we found a complete male specimen and fragments of 10 male and 3 female nematodes; in the other, fragments of two males and one female).

Description: Body of whitish colour, cuticle with distinct transverse striation. Width of body at the level of lip basis 0.027—0.039 mm. Mouth terminal with three-lobed lateral pseudolabia. Buccal cavity cylindrical, walls of light colour, slightly pseudochitinized. Esophagus distinctly divided into muscular and glandular portion. The bodies of the male and the female worms are in full accord with the generic diagnosis.

Male: Overall length 18.90 mm, maximum width 0.73 mm, width at esophagus level 0.38—0.70 mm. Depth of buccal capsule 0.011 mm, width 0.009—0.011 mm. Length of muscular esophagus 0.26—0.30 mm, maximum width 0.035 mm, length of glandular portion 0.66—0.78 mm, maximum width 0.066—0.113 mm. Nerve ring situated at a distance of 0.171—0.210 mm, excretory pore at 0.261—0.273 mm from anterior end. Cloaca placed at a distance of 0.085—0.136 mm from posterior end, length of the finger-shaped process at the posterior end 0.011—0.019 mm. Cloaca surrounded by a distinct cuticular swelling, width 0.039—0.066 mm, height 0.015—0.019 mm. Two moderately pseudochitinized spicules of slightly different length present. Length of right spicule 0.070—0.078 mm, width of its proximal end 0.005—0.008 mm. Length of left spicule 0.070—0.089 mm, width of proximal end 0.005—0.007 mm. Gubernaculum absent, caudal alae not developed. Eight pairs of small caudal papillae (3 pairs precloacal, 5 pairs postcloacal) arranged in two subventral lines at posterior end of body. One odd papilla situated at anterior lip of cloaca.

Female: Overall length not measured. Width of body at the level of esophagus 1.38 mm. Length of buccal capsule 0.015 mm, width 0.012 mm. Length of muscular esophagus 0.35 mm, maximum width 0.060 mm. Length of glandular esophagus 1.17 mm, maximum width 0.117 mm. Nerve ring situated at a distance of 0.273 mm from anterior end of body, excretory pore at a distance of 0.331 mm. Anus placed at a distance of 0.081—0.114 mm from tail end, vulva with slightly elevated margins

at a distance of 0.347 mm. Length of finger-shaped process at posterior end of body 0.011 mm. Eggs symmetrical with relatively thick shells contain a coiled larva. Size of eggs 0.042—0.048 mm by 0.019—0.027 mm.

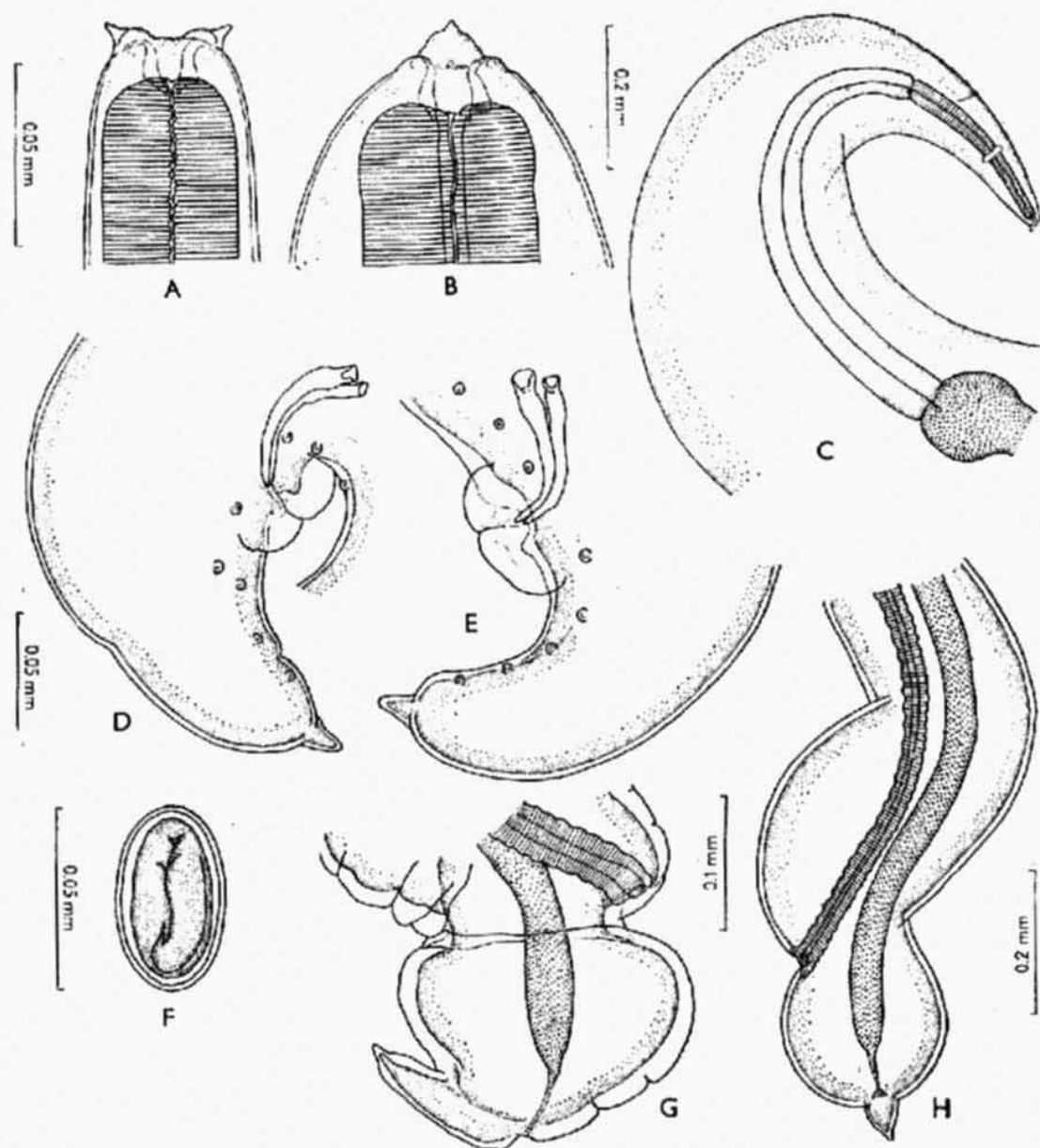


Fig. 5. *Geopetitia madagascariensis* Chabaud, 1960 from the host *Dives atrovioleaceus*. A, B — forebody (detail); C — general view; D, E — hindbody male; F — egg; G — hindbody female (detail); H — general view.

Note: The species *G. madagascariensis* was described by CHABAUD (1960) from the host *Nectarinia souimanga* (Passeriformes, Nectarinidae) from Madagascar (only one specimen was found and described). In spite of the zoogeographical distance and systematic dissimilarity of the definitive host, our nematode material of this species differs morphologically only slightly in the situation of the 4th pair of caudal papillae (in nematodes from Madagascar, the fourth pair of caudal papillae is situated adanally, while in the material from Cuba, this pair lies clearly postcloacally). In comparing the measurements with the original description, we found no substantial differences.

7. *Oxyspirura rodriguesi* sp. n.

Fig. 6

Host: *Dives atrovioleaceus* (d'Orbigny)

Location: under nictitating membrane

Locality: Soroa (province Pinar del Río)

Of the 12 examined hosts, this species was found in 3 birds (1 male; 1 female and 1 male; 1 male).

Description: Body of viable nematode of yellowish colour, cuticle with distinct transverse striation. Mouth terminal, surrounded by 2 pairs of submedian and one pair of lateral papillae. Buccal capsule with well chitinized walls and without transverse division into upper and lower half. Depth 0.015—0.019 mm, width 0.011—0.015 mm (internal diameter). Esophagus distinctly divided into anterior muscular and posterior glandular portion. Cervical alae, situated at the level of the nerve ring, are distinctly developed, extending over a distance of 0.31—0.36 mm from anterior end. They have a fine transverse striation, their maximum width is 0.015—0.017 mm.

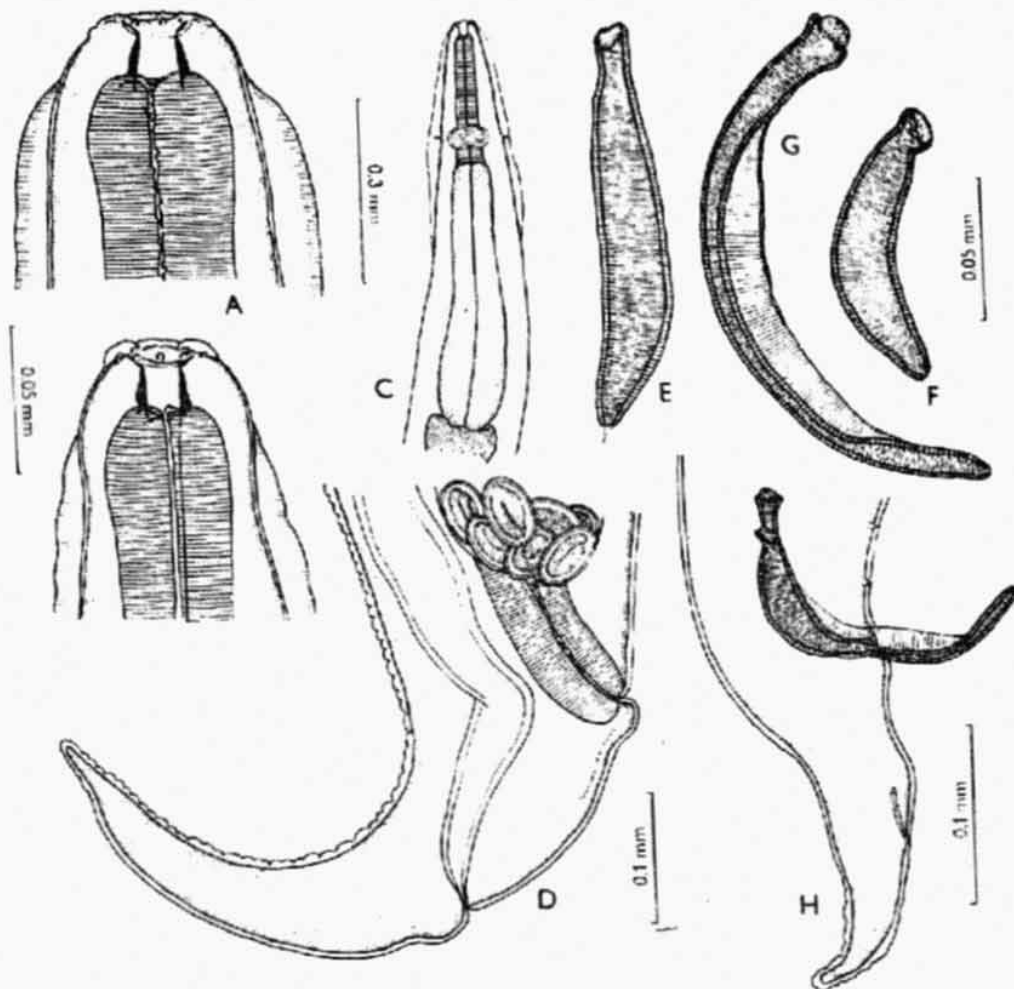


Fig. 6. *Oxyspirura rodriguesi* sp. n. from the host *Dives atrovioleaceus*. A, B — forebody of female and male (detail); C — general view; D — hindbody of female; E, F — short spicule; G — long spicule; H — hindbody of male.

Holotype (female): Overall length 8.01 mm, maximum width 0.76 mm. Width of anterior end 0.062 mm, width of body at the level of esophagus ending 0.34 mm. Overall length of esophagus 0.74 mm, length of muscular portion 0.21 mm, maximum width of esophagus 0.10 mm. Nerve ring situated at a distance of 0.20 mm from anterior end, excretory pore at 0.33 mm. Vulva transversely slit-shaped, situated close to the anus. Its rounded margins are clearly elevated. Anus situated at a distance of 0.32 mm from end of tail, vulva at 0.50 mm. Vagina with a distinctly muscular wall is 0.15 mm long. Mature eggs contain a coiled larva and measure 0.045—0.047 mm by 0.026—0.028 mm.

Allotype (male): Overall length 5.34 mm, maximum width 0.26 mm. Width of anterior end of body 0.050 mm, width at esophagus level 0.19 mm. Overall esophagus length 0.68 mm, length of muscular portion 0.21 mm, maximum width of esophagus 0.089 mm. Nerve ring situated at a distance of 0.18 mm from anterior end of body, excretory pore at 0.31 mm. Spicules very unequal, dissimilar. Right spicule compact with a characteristic transverse structure, length 0.101 mm, width at its proximal end 0.010 mm. Left spicule 0.198 mm long with longitudinal cuticular alae in its central portion. Width of its proximal end 0.015 mm. Cloaca situated at a distance of 0.21 mm from end of tail. We found 4 pairs of small precloacal papillae, but were not able to determine the exact number of postcloacal papillae. (For measurements of the paratypes see Tabs. 3, 4.)

Discussion: Until the present, the genus *Oxyspirura* Drasche in Stossich, 1897 received a total of 65 species. Our species *O. rodriguezi* sp.n. belongs to morphological group which is characterized by an undivided buccal capsule and by the presence of cervical alae. This group comprises the species: *O. cassici* Rodrigues, 1963; *O. buccosulcata* Singh, 1948; *O. brevisubulata* (Molin, 1860); *O. alauda* Ali, 1960; *O. egretta* Sultana, 1964; *O. fulica* Sultana, 1964; *O. singhai* Rasheed, 1960; *O. hyderabadensis* Rasheed, 1960; *O. otocompsa* Rasheed, 1960; *O. chabaudi* Baruš, 1965; *O. lobipluvia* Ali, 1960; *O. kaitingensis* Hsü, 1933; *O. bassiri* Siddiqi et Jairajpuri, 1964; *O. suraiyae* Sultana, 1964; *O. prinia* Ali, 1960; *O. cisticola* Sultana, 1964; *O. anacanthura* (Molin, 1860) and *O. ophthalmica* (Linstow, 1903).

The species *O. rodriguezi* sp.n. differs in the shape of the buccal capsule (with the exception of *O. otocompsa*, *O. hyderabadensis* and *O. fulica*) from all other mentioned species. The metrical differences between *O. rodriguezi* sp.n. and the mentioned species are shown in Tab. 3 and 4. Metrically, *O. rodriguezi* sp.n. is very close to *O. otocompsa*, but the males of our species differ in the number of precloacal papillae and in the shape of the spicules, the females in the size of the eggs (the eggs of *O. otocompsa* measure 0.036 to 0.039 by 0.022—0.027 mm) and both sexes of *O. rodriguezi* sp.n. differ distinctly from *O. otocompsa* in the length of the cervical alae, ending in *O. rodriguezi* at one half of the esophagus length; in *O. otocompsa* they extend along the whole body. The species is named in honour of Dr H. de Oliveira Rodrigues (Instituto Oswaldo Cruz, Rio de Janeiro) whose work on the taxonomy of species of the genus *Oxyspirura* from the neotropic region has greatly enriched the knowledge of this genus.

Table 3. The most important measurements (in mm) of the male nematodes of the genus *Oxyuris* (group of species with cuticular lateral alae and undivided buccal cavity)

Species	Data by	Body length	Esophagus length	Spicule length		Number of caudal papillae (pairs)			Spicule length ratio
				1.	2.	Precloacal	Adanal	Postcloacal	
<i>O. cassici</i>	RODRIGUES (1963)	6.27	0.72	0.216	0.280	4	—	3	1:1.3
<i>O. buccosulcata</i>	SULTANA (1964)	8.89—9.12	0.54—0.57	0.15—0.17	0.32—0.34	4	—	3	1:2
<i>O. brevisubulata</i>	RANSOM (1904)	15.0	—	—	—	4	—	8(?)	1:2
<i>O. alauda</i>	ALI (1960)	5.04	0.32	0.09	0.28	4	—	2	1:3
<i>O. agretta</i>	SULTANA (1964)	6.66	—	0.15	0.31	4	—	1	1:2
<i>O. fulica</i>	SULTANA (1964)	9.18	0.50	0.18	0.42	4	1	3	1:2.8
<i>O. rodriguezi</i>	our data	5.2—5.3	0.61—0.68	0.09—0.13	0.19—0.25	4	—	?	1:2—1:2.5
<i>O. singhai</i>	RASHEED (1960)	6.5	0.64	0.12	0.28	3	—	2	1:2.3
<i>O. hydebaradensis</i>	RASHEED (1960)	4.27	0.45	0.13	0.29	3	—	5	1:2
<i>O. otocompsa</i>	RASHEED (1960)	6.45—7.6	0.52—0.63	0.121—0.124	0.257—0.274	3	—	4	1:2
<i>O. chabaudi</i>	BARUS (1965)	5.8—6.0	0.57—0.67	0.185—0.206	0.38—0.42	3	—	2	1:1.8—1:2.3
<i>O. lobipluvia</i>	ALI (1960)	10.0	—	0.26	0.57	3	—	2 + 1 odd	1:2
<i>O. kaitingensis</i>	HSU (1933)	5.89—6.19	0.57—0.59	0.140—0.148	0.300—0.410	3	—	4	1:2.1—1:2.8
<i>O. bassiri</i>	SINDI et al.	10.6—12.2	0.76—0.81	0.206—0.220	0.480—0.564	3	—	4	1:2.5
	JAIRAJPURI (1964)	6.7—6.91	0.55—0.623	0.137—0.145	0.274—0.283	3	—	2	1:2.9—1:2
<i>O. suraiyae</i>	SULTANA (1964)	7.21	0.24	0.11	0.17	2	—	3	1:1.5
<i>O. prinia</i>	ALI (1960)	6.68	0.41	0.15	0.30	2	—	2	1:2
<i>O. cisticola</i>	SULTANA (1964)	8—10	—	—	—	2(?)	—	4 + 1 odd	1:5
<i>O. anacanthura</i>	RANSOM (1904)	14.4	—	0.18	0.29	1(?)	—	26(?)	1:1.6
<i>O. ophthalmica</i>	RANSOM (1904)	—	—	—	—	—	—	—	—

Table 4. The most important measurements (in mm) of the female nematodes of the genus *Oxyuris* (group of species with cuticular lateral alae and undivided buccal cavity)

Species	Body length	Esophagus length	Vulva distance	Anus distance	Size of eggs
<i>O. cussiei</i>	7.9-8.1	0.72-0.74	0.30-0.36	0.20	0.036 × 0.024
<i>O. buccosulcata</i>	11.53-12.12	0.56-0.60	0.40-0.42	0.14-0.15	0.31 × 0.21
<i>O. brevisubulata</i>	21	—	—	—	—
<i>O. fulica</i>	11.40	0.56	0.490	0.194	0.032 × 0.024
<i>O. rodriguezi</i>	8.01	0.74	0.50	0.32	0.045-0.047
<i>O. singhai</i>	11.9	0.78	0.41	0.27	0.026-0.028
<i>O. hyderabadensis</i>	4.6	0.460	0.41	0.24	0.036 × 0.027
<i>O. otocompsa</i>	6.86-10.49	0.61-0.74	0.56-0.60	0.27-0.31	0.032 × 0.023
<i>O. chabaudi</i>	8.8-8.9	0.65-0.76	0.53-0.61	0.26-0.28	0.036-0.039
<i>O. kaitingensis</i>	7.43	—	0.32-0.38	0.17-0.20	0.022-0.027
<i>O. bassiri</i>	13.6	0.730	—	0.55	0.042-0.044
<i>O. suraiyae</i>	7.14-8.11	0.648-0.674	0.40-0.49	0.26-0.28	0.022 × 0.019-0.022
<i>O. prinia</i>	11.2	0.29	0.31	0.13	0.040-0.043
<i>O. cisticola</i>	8.98-9.12	0.5-0.51	0.42-0.44	0.24-0.28	0.028-0.029
<i>O. anacanthura</i>	11-13	—	—	—	0.036 × 0.021
<i>O. ophthalmica</i>	21	—	—	—	0.031 × 0.022
					0.022 × 0.013
					0.039 × 0.026

The type and allotype of the species *O. rodriguezi* sp.n. are deposited in the collection of the Humboldt Museum in Berlin, the paratypes (2 males) in the collection of the Institute of Parasitology, Czechoslovak Academy of Sciences, Prague.

Fam. Oswaldofilariidae Sonin, 1966

8. *Aproctella stoddarti* Cram, 1931

Host: *Icterus dominicensis melanopsis* (Wagler) — a new host

Location: abdominal cavity

Locality: Mandinga-Baracoa (province Oriente)

Of the 10 examined birds this species was found in one host (one female worm only).

Fam. Diplotriaenidae Anderson, 1958

9. *Diplotriaena thomasi* Seibert, 1944

Host: *Quiscalus niger caribaeus* (Todd), *Dives atrovioleaceus* (d'Orbigny) — new host

Location: pulmonary cavity

Locality: Cayo Piedras (Isla de Pinos) and Finca la Güira (province Pinar del Río)

This nematode species was found in one *Q. niger caribaeus* (a total of 11 nematodes) and in one *D. atrovioleaceus* (2 nematodes). The morphological and metrical evaluation of both latter species (*A. stoddarti* and *D. thomasi*) has been published in a paper by SONIN and BARUŠ (1967).

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