**FELLICOLA LONGISPICULUS GEN. NOV., SP. NOV.
(NEMATODA, RHABDOCHONIDAE) FROM THE GALL BLADDER
OF THE MARINE FISH CORYPHAENOIDES RUPESTRIS**

A. J. PETTER*, M. KØIE**

SUMMARY

Fellicola longispiculus gen. nov., sp. nov., parasite of the gall bladder of the fish *Coryphaenoides rupestris* from off the Faroes (North Atlantic), is described. The new genus belongs to the family Rhabdochoniidae. It is close to the genera *Johnstonmawsonia*, *Vasorhabdochona* and *Pancreatonema* but differs from these genera in having longitudinal thickenings in the anterior dilated part of the pharynx.

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RÉSUMÉ : *Fellicola longispiculus* n. g., n. sp., (Nematoda, Rhabdochoniidae), parasite de la vésicule biliaire du Poisson marin *Coryphaenoides rupestris*.

Description de *Fellicola longispiculus* n. g., n. sp., parasite de la vésicule biliaire du Poisson *Coryphaenoides rupestris* récolté au large des îles Féroé (Atlantique Nord). Le nouveau genre appartient à la famille des Rhabdochoniidae. Il est proche des genres

Johnstonmawsonia, *Vasorhabdochona* et *Pancreatonema*, mais en diffère par la présence d'épaississements longitudinaux sur la paroi interne de la partie antérieure dilatée du pharynx.

INTRODUCTION

One female and two males of a new nematode species and genus of the family Rhabdochoniidae were found in the gall bladder of a *Coryphaenoides rupestris* collected in North Atlantic off the Faroes.

MATERIALS AND METHODS

Nematods were fixed in Berland's fluid (glacial acetic acid: 19 parts, formaldehyd: 1 part) and cleared in lactic acid. The apical view was examined under light microscope by cutting the anterior extremity of one male.

All measurements are in microns unless otherwise stated.

DESCRIPTION

Fellicola longispiculus gen. nov., sp. nov. (Fig. 1).

Host: *Coryphaenoides rupestris* Gunnerus, 1765 (Macrouridae).

Site in host: gall bladder.

Locality: off the Faroes, North Atlantic: 727 m dpth., 60°59' N, 10°50'W. (April 6, 1992).

Male holotype, female allotype and male paratype deposited in the collections of the « Laboratoire de Biologie Parasitaire, Protistologie, Helminthologie, Museum National d'Histoire Naturelle de Paris, number 64 BF.

Body very long and slender, tapered anteriorly. Mouth opening large, oval. Outer circle of four cephalic papillae and two amphids, inner circle of four submedian papillae and two pairs of sublateral papillae situated slightly in front of the amphids. Pharynx very long, dilated anteriorly; internal wall of the anterior dilated part provided with six longitudinal thickenings (four lateral simple and two median bilobed). Posterior end of pharynx surrounded by a collar. Oesophagus clearly divided in two parts. Muscular oesophagus shorter than the pharynx. Glandular oesophagus three to four times as long as the muscular one. Deirids not seen. Nerve ring surrounding the pharynx near its posterior extremity. Excretory pore shortly anterior or shortly posterior to the junction pharynx-muscular oesophagus.

Male: Posterior extremity coiled in a tight spiral. One pair of double precloacal papillae and three pairs of post-

* Laboratoire de Biologie Parasitaire, Protistologie, Helminthologie, associé au CNRS, 61, rue Buffon, F 75231 Paris Cedex 05.

** Marine Biological Laboratory, University of Copenhagen, Strandpromenaden 5, DK-3000 Helsingør, Denmark.

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FIG. 1. — *Fellicola longispiculus* gen. nov., sp. nov. A. male, anterior end, median view; B. male, posterior part of pharynx and muscular oesophagus, lateral view; C. male, *en face* view; D. male, optical section through the anterior part of the pharynx; E. female, head end, median view; F. vulva region; G. egg; H. female tail, ventral view; I. male, posterior part showing the length of the left spicule; J, K. male, posterior ends, lateral views; L. male, posterior end, ventral view. A, H, K, F: 200 µm; C, D, E, G: 30 µm; B, J, L: 100 µm; I: 500 µm.

cloacal papillae; papillae of the second postcloacal pair double. Cloaca and caudal papillae surrounded by cuticular swellings. Caudal alae absent, except two small semi-circular ones at level of the last pair of postcloacal papillae. A papillarlike projection of parenchyme is visible beneath the cuticle on the anterior lip of the cloaca but it does not reach the cuticle. Spicules unequal, larger spicule slender and exceedingly long, measuring 11 to 14 % of the body length; smaller spicule short and thick. Gubernaculum present. Tail long with rounded tip.

Female: Vulva pre-equatorial, dividing body in proportion of 1:8.5. Long ovejector directed posteriorly, giving rise to two amphidelphic uteri. Distal end of the posterior ovary situated slightly in front of the rectum. Most anterior loops of the anterior ovary situated at 1 500 µm of the end of the oesophagus. Eggs small, oval, thick-walled, without filaments; advanced eggs containing larvae. Tail long and slender.

Body dimensions (male holotype — male paratype — female allotype): length (mm) 36.7-33.4-49.5; maximum width 130-100-220; pharynx 450-400-440; muscular oesophagus 260-250-350; glandular oesophagus 1,000-850-1,000; anterior end to nerve-ring 520-500-550; anterior end to excretory pore 420-430-475; tail 380-320-490; large spicule 5,200-4,000; small spicule 130-120; gubernaculum 40-50; anterior end to vulva 5,100; ovejector 4900; eggs 50/20.

DISCUSSION

By the structures of its cephalic end and male caudal extremity, the species belongs to the family Rhabdochoniidae. By the pharynx dilated anteriorly, relatively long and the small number of precloacal papillae, it is close to the genera *Johnstonmawsonia* Campana-Rouget, 1955, *Vasorhabdochona* Martin and Zam, 1967 and *Pancreatonema* McVicar and Gibson, 1975, but it differs from these three genera by the longitudinal thickenings present in the anterior dilated part of the pharynx. This character seems sufficient to erect for the species a new genus *Fellicola* gen. nov. Further, it differs from *Vasorhabdochona* by having two uteri, a gubernaculum and an oesophagus distinctly divided into two parts, and from *Johnstonmawsonia* and *Pancreatonema* by the anterior position of the vulva.

Fellicola gen. nov.

Generic diagnosis: Rhabdochoniidae. Body long and slender, tapered anteriorly. Mouth oval. Outer circle of four cephalic papillae and two amphids; inner circle of four submedian papillae and two pairs of sublateral papillae in front of the amphids. Pharynx long and dilated anteriorly; six longitudinal thickenings present on the internal wall of its dilated anterior part. Oesophagus clearly divided into muscular and glandular portions. Nerve-ring at level of pharynx. Male: spicules unequal and dissimilar. Gubernaculum present. One pair of precloacal and three pairs of postcloacal papillae. Caudal alae lacking except small ones at the level of the last pair of postcloacal papillae. Female: vulva pre-equatorial. Uterus didelphic, amphidelphic. Eggs thick-walled, without filaments. Parasite of gall bladder of marine fishes.

Type and only species: *F. longispiculus* n. sp.

Etymology: after the habitat of the type-species (latin *vesica fellis* = gall bladder).

The new genus belongs to the evolutionary line outlined by Chabaud and Krishnasamy (1975), derived from the genus *Rhabdochona* parasite of the intestine of freshwater Fishes, and adapted to new habitats and new hosts (marine Fishes, Reptiles and Mammals); it shows the principal characteristics of the line: lengthening of the pharynx, reduction of the number of precloacal papillae and anterior or posterior migration of the vulva, but it retained the longitudinal thickenings of the anterior part of the pharynx and thus makes the link between *Rhabdochona* and the other genera of the evolutionary line.

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