FIRST RECORD OF THE COSMOCERCID NEMATODE
RAILLETNEMA SYNODONTISI VASSILIADES, 1973 FROM
THE AQUARIUM-READED UPSIDE-DOWN CATFISH SYNODONTIS
EUPTERUS BOULENGER

In autumn 1985, heavy infections (150—200 specimens per fish) of the cosmocercid nematode R ailletnema synodontisi Vassiliades, 1973 (Cosmocercidae, Oxyurata) were found during dissection of several specimens of the upside-down catfish, Synodontis eupterus Boulenger, bred in an aquarium in Ostrava, Czechoslovakia. Since this is the first record of this parasite in exotic aquarium fishes in Europe, a brief description is provided.

Description (Pfle, I, III): Small nematodes with almost smooth cuticle. Mouth surrounded by three small lips provided with membranous rings; dorsal lip bearing two distinct papillae, whereas each of two ventrolateral lips are provided with one papilla and one amphid. Oesophagus consisting of short pharynx without distinct musculature, strongly muscular cylindrical corpus, isthmus and bulb; bulb provided with sclerotized valves. Intestine straight, usually slightly expanded at its anterior end. Nerve ring encircling oesophagus approximately at mid-length of corpus; conspicuous excretory pore situated at level of isthmus. Tail of both sexes conical, relatively long, ending in sharp point.

Male (3 specimens): Length of body 1.70—2.06, maximum width 0.095—0.108. Length of entire oesophagus 0.425—0.517, length of pharynx 0.027—0.030, width 0.021—0.024; length of corpus 0.390—0.402, its maximum width 0.027—0.030; length of isthmus and bulb 0.075—0.084, maximum width of bulb 0.060—0.063. Distance of nerve ring from anterior extremity 0.218—0.231, of excretory pore 0.394—0.422. Two well sclerotized spicules present, their length 0.084—0.093, width 0.006—0.009; spicules distinctly bent in lateral view, their proximal ends being obtuse, distal ends pointed, with distinct cuticular aia; spicules show distinct fine transverse structure. Well sclerotized gubernaculum present, length 0.045—0.061, maximum width 0.007—0.009 in lateral view. Premanal papillae: five pairs of subventral papillae; in addition to them, three pairs of minute ventral papillae and one unpaired papilla present on anterior lip of cloaca, though not clearly visible. Adanal papillae: one pair of lateral papillae. Postanal papillae: altogether four pairs of subventral papillae, of which first two pairs situated closely a small distance below cloacal opening level; two remaining pairs located at mid-length of tail. Cloacal opening somewhat depressed, cuticle in region of cloacal opening provided with fine oblique bands. Tail conical, 0.162—0.174 long, sharply pointed.

Female (10 specimens): Body length of females containing developing eggs in uterus 2.31—2.50, maximum length of pharynx 0.030, width 0.024; length of corpus 0.360—0.405, maximum width 0.030; length of isthmus and bulb 0.081—0.102, maximum width of bulb 0.060—0.068. Distance of nerve ring from anterior end 0.218—0.245, of excretory pore 0.242—0.294. Vulva post- equatorial, 0.68—0.80 from posterior end of body; vulvar lips distinctly elevating in females with immature eggs and not elevating in less developed females. Relatively long vagina pointing backwards. Uterus opposed, both ovaries situated in front of cloaca. Coil of posterior branch of uterus reaching posteriorly to level of vulva. Only small number (at most 4) of developing, uncleaved eggs, hitherto without egg shells, present in uterus; maximum size of these immature eggs in individual females ranging within 0.075—0.168 × 0.086—0.096. Tail conical 0.243—0.249 long, ending in sharp point. Intestine opening through short, colourless rectum; small unciuncular rectal glands present.

with its host, to aquaria in Europe; but it is probable that *S. syndontis* was imported to Europe along with other members of *Syndontis*, because Frank (Frank S., 1984: Aquaristic. Publ. House Prago. Praha, 263 pp.) reports that some 15 *Syndontis* species have been imported from Africa. Accordingly, this parasite may be expected to occur in other aquarium-reared species of *Syndontis*.

Even though the life cycle of nematodes of the genus *Rosiliotrema* is not known as yet, it is probable that it is direct (homoxenous), without participation of an intermediate host, as in most nematodes of the suborder Oxyurata. This probably permits the reproduction and transmission of this parasite in the conditions of aquarium tanks.

From aquarium-reared exotic fishes in Europe, there have so far been recorded only nematodes of the families Capillariidae (*Capillaria, Pseudocapillaria, Capillolostongylidae*) and *Camallanidae* (*Camallanus*) both of which are highly pathogenic parasites frequently causing death. The question of the pathogenicity of *Rosiliotrema syndontis* is not yet elucidated; in contrast to the above nematodes of the Capillariidae and Camallanidae, which feed directly on cells of intestinal tissue or by sucking the blood of host fishes, the nematodes of the suborder Oxyurata probably feed mainly on the contents of the host’s intestine. Nevertheless, the specimen of *S. exopterus* examined, which harboured some 200 specimens of *R. syndontis*, did not feed for a long period, was emaciated, and its intestine and stomach exhibited signs of atrophy.

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Fig. 1. *Reililotrema synodontisi* Vasiliadis, 1973 from *Synodontis capensis*. A—head end of female, B—posterior end of male, C—ventral and lateral views, D—distal tip of spicule, E—posterior end of female.