

**FIRST RECORD OF *ASPICULURIS TETRAPTERA* (NITZSCH, 1821)
(Nematoda : Oxyuroidea)
and *Dollfusentis chandleri* (GOLVAN, 1969)
(Acanthocephala : Illiosentidae)
in *Haemulon sciurus* (SHAW 1803) (Pisces : Pomadasyidae)**

A. KOHN* and B. MACEDO**

SUMMARY. Forty specimens of *Haemulon sciurus* were examined for endoparasites and this paper refers to the recovered Nematodes and Acanthocephalans. *Aspiculuris tetraptera* is for the first time referred in fish and *Dollfusentis chandleri* is recorded in Brazil and in a new host.

Première occurrence de *Aspiculuris tetraptera* (Nitzsch, 1821) (Nematoda : Oxyuroidea) et *Dollfusentis chandleri* Golvan, 1969 (Acanthocephala : Illiosentidae) chez *Haemulon sciurus* (Shaw, 1803) (Poissons : Pomadasyidae)

RÉSUMÉ. Des endoparasites ont été étudiés chez le poisson *Haemulon sciurus*. *Aspiculuris tetraptera*, un Nématode cosmopolite parasite des rongeurs, a été trouvé pour la première fois chez les poissons et *Dollfusentis chandleri* (Acanthocephala) a été signalée au Brésil et chez un nouvel hôte

Introduction

From September, 1980 to August, 1981, forty specimens of *Haemulon sciurus* from "Praia da Ribeira", Rio de Janeiro State, Brazil, were examined for the presence of helminths. *H. sciurus* (cocoroca) is a very common species of fish in Brazil. It inhabits coastal waters and feeds on crustaceans and occasionally on small fishes (Fischer, 1978). The collected specimens were always parasited by one or more classes of helminths : digenetic trematodes, monogeneans, nematodes, acanthocephalans and larval forms of cestodes. The results concerning the digenetic trematodes have already been published (Kohn *et al.*, 1982) and the ones referring to the monogeneans are in press (Kohn *et al.*).

* Departamento de Helminologia, Instituto Oswaldo Cruz, C.P. 926, Rio de Janeiro, RJ, Brasil; Research Fellow CNPq.

** Training Researcher CNPq.

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Of the forty fish examined, fifteen (37.5%) were parasited by nematodes : nine harboured an adult form, five a very early stage larvae not identifiable and one both of them. Twenty-five fish out of the forty examined (62.5%) were parasited by acanthocephala belonging to only one species : *Dollfusentis chandleri*.

The employed methodology was described in our previous papers. Measurements are in millimeters with means in parentheses. The figures are original and were made with the aid of a drawing tube.

Results

Forty-two adult oxyurids were collected in one specimen of *Haemulon sciurus* ; lately one to three specimens of the same nematode were collected on other nine fish in a total of fifty-eight specimens. After studying this material, we concluded that it represents *Aspiculuris tetraptera* (Nitzsch, 1821), a cosmopolitan parasite of rodents. The great differences in habitat and host may represent an accidental parasitism, although this species was recovered alive from ten fish specimens captured in different occasions.

We also compared our material with specimens of *A. tetraptera* from *Mus musculus* collected and determined by Teixeira de Freitas in 1939 from Rio de Janeiro and by Travassos in 1952 from Salvador, Bahia, deposited in the Helm. Coll. of the Oswaldo Cruz Institute and no significant differences could be detected.

Aspiculuris tetraptera (Nitzsch, 1821)

Host : *Haemulon sciurus* (Shaw, 1803) (cocoroca)

Location : intestine

Locality : Praia da Ribeira, Ilha do Governador, Rio de Janeiro, Brasil.

Material : Specimens deposited in the Helminthological Collection of the Oswaldo Cruz Institute.

The description presented is based on sixteen males and twenty-nine females and the measurements on ten males and ten females.

Body small, cylindrical, males shorter than females. Cephalic vesicle present. Three lips, one pair of lateral epaulettes with amphids and four large submedian cephalic papillae. Anterior esophagus clubshaped followed by well-developed bulb. Cervical alae arising from vesicular expansion of head cuticle, ends in a recurved margin at level of esophageal bulb, continuing or not with the narrow lateral alae. Gubernaculum and spicules absent.

Male : Length 2.90-3.60 (3.22), greatest width 0.15-0.20 (0.17) at middle of body. Cuticular cephalic vesicle 0.07-0.10 (0.08) long by 0.07-0.09 (0.08) wide. Cervical alae 0.24-0.31 (0.27) long with recurved terminal ends. Distance from anterior end

to beginning of cervical alae is 0.018-0.019 (0.019). Anterior esophagus 0.18-0.27 (0.23) long ; posterior bulb is 0.10-0.12 (0.11) long by 0.06-0.08 (0.07) wide. Nerve ring 0.11-0.13 (0.12) from anterior extremity.

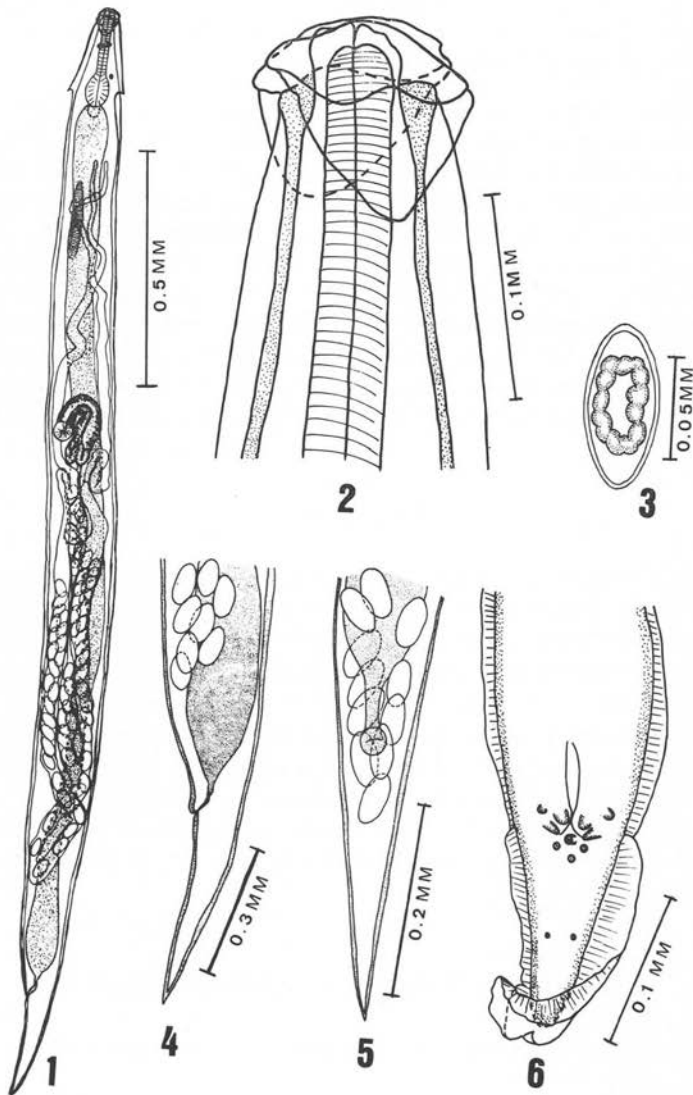


FIG. 1-6. — *Aspicularis tetraptera* (Nitzsch, 1821). 1. Total view of female. 2. Cephalic end showing cuticular expansion of the head. 3. Egg. 4. Posterior extremity of female, lateral view. 5. Posterior extremity of female, ventral view. 6. Posterior extremity of male, ventral view. Original figures.

Excretory cell present; excretory pore 0.69-0.78 (0.73) from anterior end. Narrow lateral alae of body end at beginning of caudal alae. Caudal alae extends from the cloaca level and surrounds the entire end of the body bending ventrally at its tip as a vesicular swelling of the cuticle. Anus 0.10-0.12 (0.11) from posterior extremity. There are twelve anal papillae: one pair preanal, two pairs adanal, one pair postanal, two median papillae postanal, one behind the other and one more posterior pair. Spicules and gubernaculum absent.

Female: Length 3.60-4.61 (4.18) long, greatest width 0.20-0.30 (0.27) at middle of body. Diameter of cuticular cephalic vesicle 0.08-0.10 (0.10). Cervical alae with recurved terminal end, 0.29-0.34 (0.31) long. Distance from anterior end to beginning of cervical alae is 0.024-0.028 (0.025). Anterior esophagus 0.25-0.29 (0.27) long; posterior bulb measures 0.12-0.15 (0.13) long by 0.08-0.12 (0.10) wide. Nerve ring situated at 0.15 from anterior end. Excretory cell present; excretory pore 0.81-0.89 (0.86) from anterior end. Vulva situated at 1.54-2.36 (1.76) from anterior extremity, muscular vagina proceeds forward for a short distance then turns backwards joining uterus. Two ovaries run backwards almost parallel to each other. Gravid uterus may extend posteriorly beyond anus. Eggs are 0.075-0.090 (0.084) long by 0.038-0.051 (0.045) wide. Anal pore lies 0.36-0.40 (0.39) from posterior end of body.

Discussion

Aspiculuris tetraoptera, a cosmopolitan rodent nematode was described by Hall in 1916. Recently Hugot (1980) redescribed the mature and immature adults as well the young worms and made a revision of the genus demonstrating its evolution. Although it may represent an accidental parasitism, this is the first occurrence of a representative form of the genus *Aspiculuris* in fish.

The other species from the genus described in Brazil are *A. artigasi* Araujo, 1965 from *Mus musculus* and *A. butantanensis* Artigas & Araujo, 1967 from *Rattus norvegicus*. In 1980 Hugot considered *A. artigasi* a synonym of *A. tetraoptera* but not mentioned *A. butantanensis*. We examined paratypes of both species gently loaned by the authors and we agree with Hugot and consider also *A. butantanensis* synonym of *A. tetraoptera*.

Dolffusentis chandleri (Golvan, 1969)

Host: *Haemulon sciurus* (Shaw, 1803) (cocoroca) — New host record.

Location: stomach.

Locality: Praia da Ribeira, Ilha do Governador, Rio de Janeiro, Brasil.

Material: Specimens deposited in the Helminthological Collection of the Oswaldo Cruz Institute.

From one hundred and eighty-seven specimens collected, we examined thirty-four males and thirty-three females. The measurements are based on ten males and ten females.

Body elongated and cylindrical with its anterior part covered with irregularly disposed spines which measure 0.056 to 0.077 (0.064) long. Proboscis terminal, cylindrical, 0.79 to 1.1 (0.94) long by 0.09 to 0.13 (0.10) maximum width armed with 12 rows of 16 hooks each of two different sizes (the larger measures 0.031 to 0.058 (0.044) long and the smaller 0.010 to 0.016 (0.013) long and with 8 large hooks situated at its base (0.039 to 0.058 (0.048) long) (*fig. 7*).

Females larger than the males, measuring 6.59 to 12.45 (9.52) long by 0.51 to 0.72 (0.61) wide. Eggs elongated with 0.058 to 0.078 (0.068) long by 0.010 to 0.016 (0.013) wide.

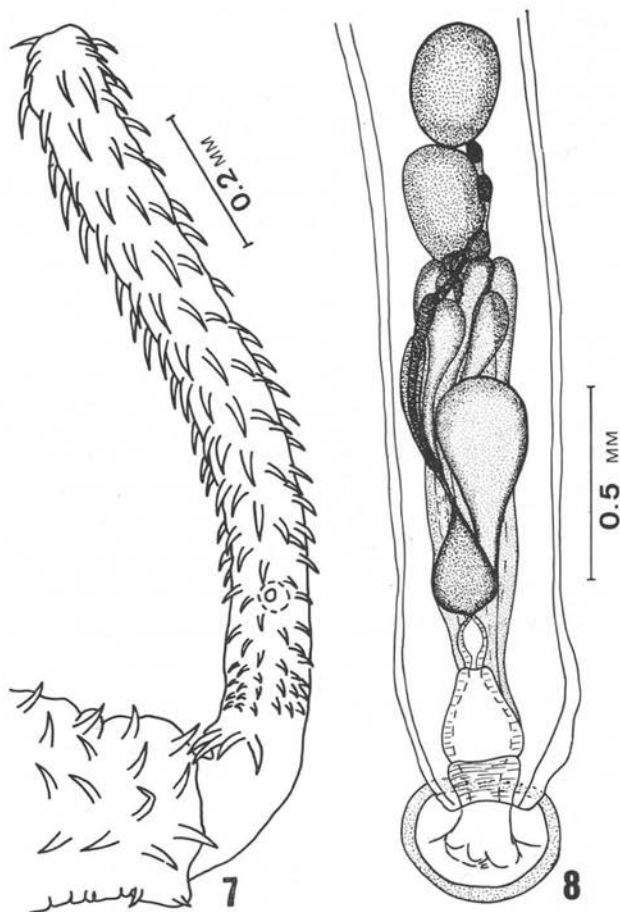


FIG. 7-8. — *Dollfusentis chandleri* (Golvan, 1969).
1. Proboscis. 2. Posterior extremity of male. Original figures.

Males with 4.53 to 6.15 (5.34) long by 0.48 to 0.75 (0.61) maximum width. Two testis, 0.27 to 0.35 (0.31) long lie tandem at the posterior third of body. From each testes arises a duct uniting posteriorly joining the seminal vesicle. Eight cement glands lie just behind the testis opening directly at the cirrus. The copulatory bursa is bellshaped when everted (*fig. 8*).

Discussion

Dollfusentis chandleri is a well known parasite described in a large number of fishes in United States, Mexico and Curaçao. Salgado-Maldonado (1976) gave an account of this species, redescribing it very well from *Haemulon melanorum*. In this paper reference to this parasite is made for the first time in Brazil and in a new host.

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