

***Micrurus frontalis AS A NEW HOST RECORDED FOR Haplometrodes odhneri
(TREMATODA, DIGENEA, PLAGIORCHIIDAE)****

***Micrurus frontalis como novo hospedeiro de Haplometrodes odhneri (Trematoda,
Digenea, Plagiorchiidae)****

SILVA R.J.¹& BARRELLA T.H.²

(1) Departamento de Parasitologia, Instituto de Biociências, UNESP, Distrito de Rubião Júnior, Botucatu, São Paulo, Brazil,

CEP 18618-000, Tel.: +55-14-68026239, Fax: +55-14-68213744, e-mail: reinaldo@ibb.unesp.br

(2) Centro de Estudos de Venenos e Animais Peçonhentos, UNESP, Botucatu, São Paulo, Brazil.

SUMMARY: *Haplometrodes odhneri* (Trematoda, Digenea, Plagiorchiidae) is reported from the mouth of *Micrurus frontalis* Duméril, Bibron and Duméril 1854 (Serpentes, Elapidae) from the Botucatu region, State of São Paulo, Brazil. This is the first description of *Micrurus frontalis* as host for *H. odhneri*.

KEY WORDS: *Haplometrodes odhneri*, Trematoda, *Micrurus frontalis*, Serpentes, Elapidae.

The *Haplometrodes* genus belongs the subfamily Styphlodoridae, family Plagiorchiidae (TRAVASSOS et al., 1969, YAMAGUTI, 1971). Three trematode species are included in this genus: 1) *H. buccicola*, parasite of *Micrurus* sp. (ODHNER, 1911), *Epicrates crassus*, *Amphisbaena alba* (RUIZ & PEREZ, 1959), 2) *H. odhneri*, parasite of *Micrurus lemniscatus* (RUIZ & PEREZ, 1959), and *H. rappiae*, parasite of *Rappia concolor* (SZIDAT, 1932).

The occurrence of trematodes as parasites of snakes of the *Micrurus* genus is rare. Besides, few hosts for species of *Haplometrodes* are known. Thus, the objective of this work is report *Micrurus frontalis* (Serpentes, Elapidae) from the Botucatu region, State of São Paulo, Brazil, as a new host for *Haplometrodes odhneri* (Trematoda, Digenea, Plagiorchiidae).

The host snake was donated to The Center for the Study of Venoms and Venomous Animals of São Paulo State University. Four specimens of trematodes were collected from the mouth of this snake (Figures 1). Helminthes were fixed in Railliet & Henry solution without flattening. Those trematodes were stained with carmine and mounted in Permount resin. Morphometrical analysis was made with Leica Qwin Lite 2.5

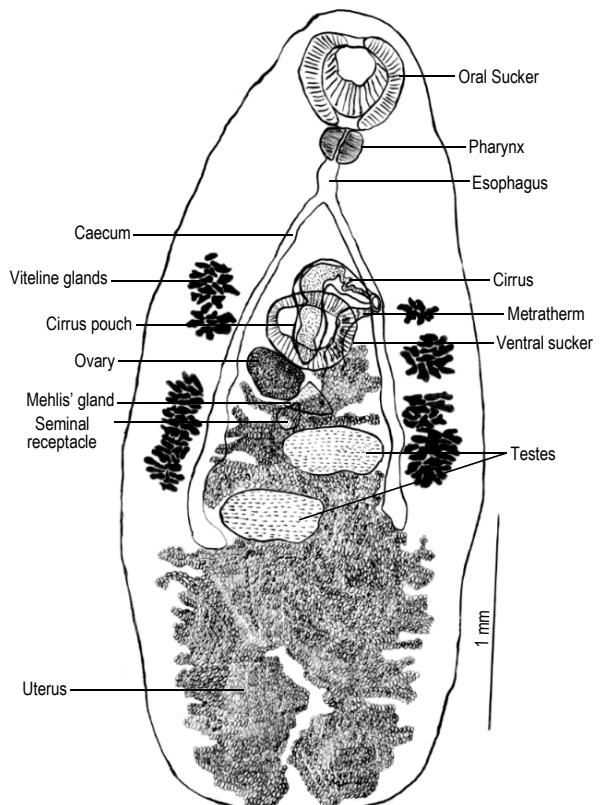


Figure 1. Drawing of *Haplometrodes odhneri* (Trematoda, Digenea, Plagiorchiidae) from mouth of *Micrurus frontalis* (Serpentes, Elapidae) (Drawing prepared by Silva, R. J.).

* Financial Support: Fundação de Amparo à Pesquisa do Estado de São Paulo (Fapesp) e Fundação para o Desenvolvimento da Unesp (Fundunesp).

computerized system. All measurements refer to mean (minimum-maximum values) of the measures obtained to four specimens.

The characteristics of the trematodes were: body elongated, spined, flattened, with 3675 (3080-4040) µm length and 1468 (1340-1630) µm width, with maximum breadth at about the equatorial region. Anterior extremity was round and posterior was flat. Oral sucker subterminal, with 435 (400-470) µm length and 473 (390-500) µm width. Prepharynx was not observed. Muscular pharynx, with 188 (150-220) µm length and 198 (190-200) µm width. Esophagus with 275 (110-600) µm length and 100 (92-108) µm width. Intestinal ceca not very sinuous, lightly unequal, with smooth walls, being distributed until the testicular region. Acetabulum pre-equatorial, with 358 (340-390) µm length and 400 (370-420) µm width. Genital pore pre-acetabular, postbifurcal, submedian, opening up on the right cecal branch. Cirrus pouch relatively small, presenting 683 (621-741) µm length and 148 (133-179) µm width, with elongated cirrus, located below the acetabulum, with curvature opposed beside the ovary. Testes ovoid, with irregular contours, in diagonal position, postacetabular, intercecal. Anterior testis with 283 (270-290) µm length and 393 (350-440) µm width and the posterior, with 287 (220-360) µm length and 463 (430-510) µm width. Ovary just behind acetabulum, ovoid, with regular contour, pre-testicular, lateral, intercecal, measuring 198 (190-210) µm length and 265 (200-310) µm width. Mehlis' gland located below and to the right of the ovary. Seminal receptacle, presenting 131 (85-196) µm length and 88 (74-113) µm width, located below the Mehlis' gland. Vitellaria constituted by developed follicles and not very numerous, in bunch form, in lateral position, extracecal, distributed from the zone of the genital pore to the testicular zone. Uterus well developed, occupying most of posttesticular region and presenting branches that reach the medium zone. Vagina long and narrow, with 386 (352-416) µm length and 49 (38-62) µm width. Eggs with 39.8 (37-42) µm length and 24.4 (23-26) µm width. Excretory pore terminal.

The occurrence of trematodes in *Micrurus* spp. snakes is rare. Only two reports exist in literature about this (ODHNER, 1911; RUIZ & PEREZ, 1959). In Brazil, this is the second report of *Micrurus* sp. as host for trematode and the first description of *Micrurus frontalis* as host for *H. odhneri*.

H. buccicola and *H. odhneri* were only the trematode species described in snakes. ODHNER (1911) reported the occurrence of *H. buccicola* in the oral cavity of *Micrurus* sp. (mentioned by the author as *Elaps* sp.), in Paraguay and *H. odhneri* was described in oral cavity of *Micrurus lemniscatus* (RUIZ & PEREZ, 1959). Our trematodes was found in the

mouth of *Micrurus frontalis* and we noted that these species are more close related to *H. odhneri* than *H. buccicola*.

In Paraguay, two species of *Micrurus* only exist: *M. corallinus* and *M. frontalis* (CAMPBELL & LAMAR, 1990). On the other hand, in Brazil, neighboring country to Paraguay, 17 species of *Micrurus* exist, among them, the *M. frontalis* and *M. corallinus* (SILVA, 2000). So, it is possible that the host of *H. buccicola* are the same snake, *M. frontalis*. However, the host cited by ODHNER (1911) was not preserved to confirm this.

RESUMO

No presente trabalho descreve-se a ocorrência de *Haplometroides odhneri* (Trematoda, Digenea, Plagiorchiidae), na boca de um exemplar de *Micrurus frontalis* Duméril, Bibron and Duméril 1854 (Serpentes, Elapidae) proveniente da região de Botucatu Estado de São Paulo, Brazil. Este é o primeiro relato sobre a ocorrência de *H. odhneri* nessa espécie de serpente.

PALAVRAS-CHAVE: *Haplometroides odhneri*, Trematoda, *Micrurus frontalis*, Serpentes, Elapidae.

REFERENCES

- CAMPBELL, J.A. & LAMAR, W.W. (1989). *The Venomous Reptiles of Latin America*. Cornell University Press, New York. 425p.
- ODHNER, T. (1911). Nordostafrikanische trematoden gösstenteils von Weissen Nil (von der Schwedischen Zoologischen Expedition gesammelt). *Res. Swed. Zool. Exp. Egypt. & White Nile*, 4:1-166.
- RUIZ, J.M. & PEREZ, M.D. (1959). Gênero *Haplometroides*. Redescrição da espécie-tipo e descrição de *H. odhneri* sp. n. (Trematoda: Plagiorchiidae). *An. Fac. Farm. Odontol. Univ. S. Paulo*, 16:87-91.
- SILVA, R.J. (2000). *As Serpentes*. Funep, Jaboticabal. 141p.
- SZYDAT, L. (1932). Parasiten aus Liberia und Französisch-Guinea. II. Teil: Trematoden. *Zeits. Parasitenk.*, 4(3):506-521.
- TRAVASSOS, L., FREITAS J.F.T. & KOHN, A. (1969). Trematódeos do Brasil. *Mem. Inst. Oswaldo Cruz*, 67:1-886.
- YAMAGUTI, S. (1971). *Synopsis of digenetic trematodes of vertebrates*, V.I-II., Keigaku Publishing, Tokyo, Japan, 1555 pp.