

RESEARCH NOTE

***Phyllocaulis variegatus*
(Mollusca: Veronicellidae), a
New Intermediate Host for
Brachylaima sp. (Digenea:
Brachylaimatidae)**

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During a search for the natural intermediate hosts of *Angiostrongylus costaricensis* Morera & Céspedes, 1971 in Brazil, terrestrial molluscs were collected nocturnally and diurnally from three localities near the dwellings of people reportedly suffering from abdominal angiostrongylosis: (1) Caiçara (RS) (27.16S 53.26W), (2) Crissiumal (RS) (27.30S 54.07W) and (3) Uberlândia (MG) (18.56S 48.18W). The field work was performed in localities 1 and 2 during autumn and spring of 1991, and in locality 3 during spring and autumn of 1993 and 1994.

The cephalopodal mass of shelled molluscs, and the eviscerated body of the slugs were individually minced and digested with pepsin (4 mg%) in a 0.7% HCL solution, for 2 hr at 37°C. The digested samples were placed in a Baermann apparatus and allowed to sediment for 6 hr, prior to examination. The viscera of the molluscs were placed separately in small Petri dishes with Ringer solution, and as well as the sediment collected from the bottom of the Baermann funnels, were examined under the stereomicroscope for helminth larvae. The latter were fixed and processed according to JFR Amato (1985 *Manual de Técnicas para Preparação de Coleções Zoológicas*, São Paulo, SP, 11pp.).

Specimens of the veronicellid *Phyllocaulis variegatus* (Semper, 1885) were found harbouring metacercariae of a digenetic trematode identified as belonging to the genus *Brachylaima* Dujardin, 1843 in the pericardial sac (Fig. 1). Metacercariae

of another brachylaimatid, *Postharmostomum* Winterberg, 1923 (Fig. 2) were also observed in specimens of *Bradybaena similaris* (Férussac, 1821), *Subulina octona* (Bruguière, 1792) and of *Bulimulus tenuissimus* (Orbigny, 1835). The metacercariae were mainly found in the pericardial sac, although many dead specimens were also collected in the sediment of Baermann funnels. Table shows the prevalence of *Brachylaima* sp. in *P. variegatus* and *Postharmostomum* sp. in other mollusc hosts for each locality surveyed.

Veronicellid slugs occur in large number in South and Central America, where they are considered agricultural pests and the most important intermediate hosts of *A. costaricensis* (P Morera et al. 1988 *Rev Biol Trop (Costa Rica)* 36: 575-576). *P. variegatus* occurs in Argentina, Paraguay, Uruguay and in South and Southeast Brazil (JW Thomé 1993 *Biociências* 1: 61-75).

The genus *Brachylaima* is included in the subfamily Brachylaimatinae, family Brachylaimatidae. Although S Yamaguti (1971 *Synopsis of Digenetic Trematodes of Vertebrates*, Keigakyo Publishing Co., Tokyo 1074 pp.) uses the name Brachylaimidae (Joyeux et Foley, 1930) Miller, 1936, he calls attention to the grammatical correction made by MJ Ulmer (1951 *Trans Am Microsc Soc* 70: 189-238), who named this family Brachylaimatidae because *Brachylaima* is a neutral gender, and not feminine as believed by Miller.



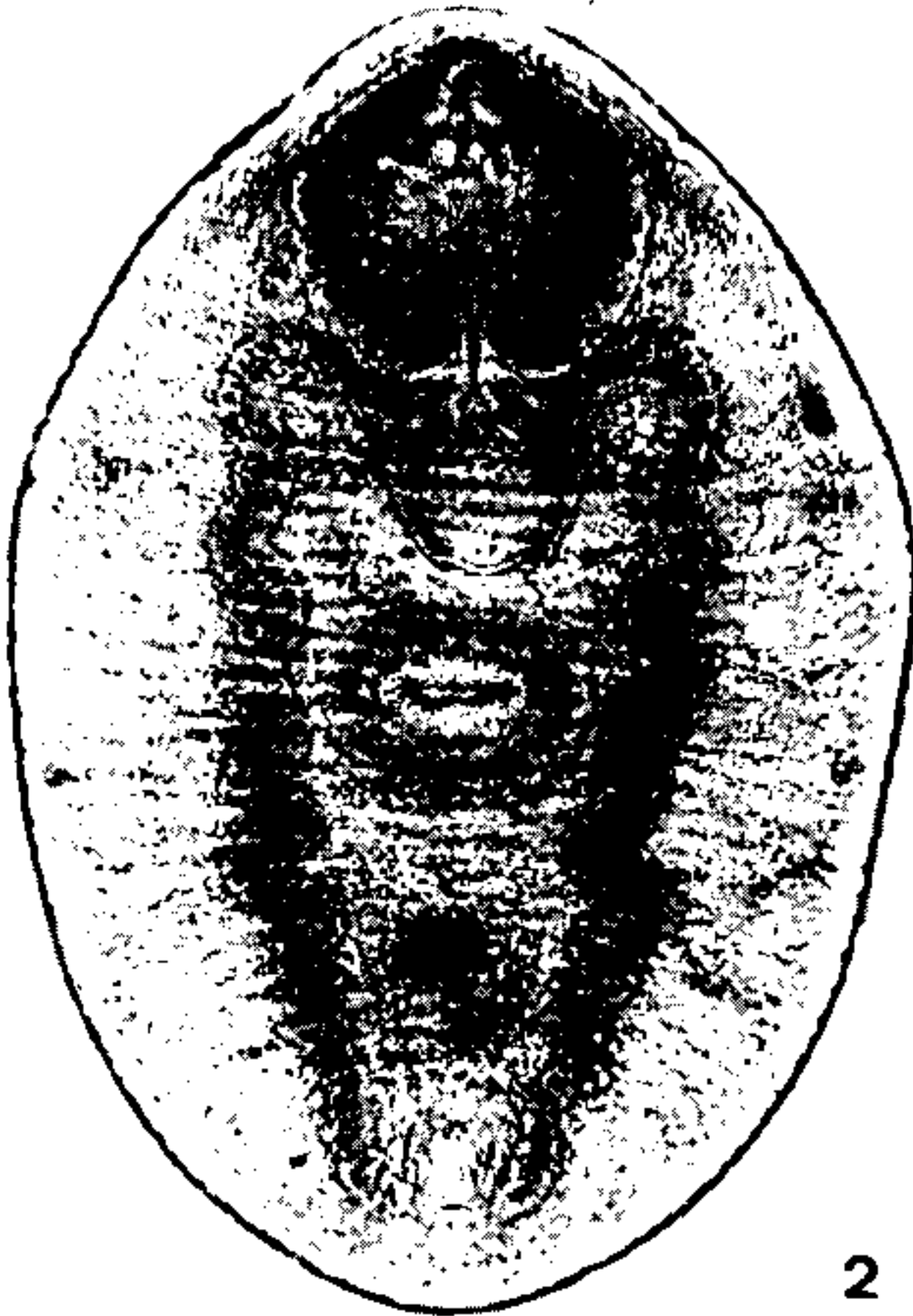
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Fig. 1: metacercaria of *Brachylaima* sp. X64.

TABLE

Prevalence of *Brachylaima* sp. in *Phyllocaulis variegatus* and *Postharmostomum* sp. in other mollusc hosts for locality surveyed

Mollusc host	Caiçara, RS	Crissiumal, RS	Uberlândia, MG
<i>Bradybaena similis</i>		3/92=3.26%	136/284=47.9%
<i>Phyllocaulis variegatus</i>	9/37=24.32%	10/212=4.72%	
<i>Bulimulus tenuissimus</i>	-	-	4/139=2.9%
<i>Subulina octona</i>	-	-	3/35=8.57%

Fig. 2: metacercaria of *Postharmostomum* sp. X112.

Metacercariae of *Postharmostomum* and *Brachylaima* are commonly found in the pericardial sac of terrestrial gastropods. They differ in body shape, the metacercariae of *Brachylaima* being more elongated than those of *Postharmostomum*. In *Brachylaima* the caeca are straight and somewhat sinuous and the acetabulum is at the level of the first third of the body length whereas in *Postharmostomum* the caeca are winding and serpentine and the acetabulum is closer to midbody.

Species of *Brachylaima* have been reported to use several species of molluscs as intermediate host (Yamaguti *loc. cit.*), but none of them have been so far collected in *P. variegatus*.

Whole mount specimens were deposited in the Helminthological Collection of the Instituto Oswaldo Cruz, No. 33.219 a-b.

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