

THE INFLUENCE OF *PHYSA MARMORATA* (MOLLUSCA; PHYSIDAE) ON THE OVIPOSITION OF SEVERAL PLANORBID HOSTS OF *SCHISTOSOMA MANSONI*

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Several molluscs (*Marisa cornuarietis*, *Helisoma duryi*, *Pomacea haustum*, *Thiara granifera*) have been indicated as predators and/or competitors of planorbid hosts of *Schistosoma mansoni* (C.T. Guimarães, 1978, *Dissertação de Mestrado – Instituto de Ciências Biológicas da Universidade Federal de Minas Gerais – Belo Horizonte, MG., Brasil / 1983, Rev. Saúde públ., São Paulo, 17 :138-147* and F.S. McCullough, 1981, *Acta Tropica, 38 :5-13*). El Hassan (1974, *Proc. Third Internat. Congr. Parasitol., Munchen, 3 :1957*) showed that *Physa acuta* was able to inhibit the oviposition of *Bulinus truncatus* and *Biomphalaria alexandrina*, and suggested the use of this mollusc as a biological control agent for those snails.

To assess the influence of *Physa marmorata*, native of "Córrego Cacique" – Ribeirão das Neves, Minas Gerais, Brazil, on the oviposition of three species of *Biomphalaria* (from colonies maintained at the Centro de Pesquisas René Rachou / FIOCRUZ – Belo Horizonte, MG,

Brazil), a preliminary laboratory experiment was performed in plastic boxes (31,0 X 22,0 X 9,5 cm) containing 3,5 liters of filtered water, continually renewed by a drop-by-drop device. The bottom of the boxes was covered with a mixture of anthill earth and CaCO₃.

Each experimental box contained 10 specimens of a planorbid species (*Biomphalaria glabrata*, *B. straminea* or *B. tenagophila*) together with 10 specimens of *Physa marmorata*. Three boxes, each of which with 10 specimens of each *Biomphalaria* species, were kept as controls under the same conditions.

The specimens of *Physa* ranged from 13 to 15 mm in length and the planorbids from 7 to 12 mm in diameter.

The total numbers and weekly means of planorbid egg clusters laid during a 6 month observation are shown below:

Planorbids	Egg clusters per box		Student's <i>t</i> test
	Without <i>Physa marmorata</i>	With <i>Physa marmorata</i>	
<i>B. glabrata</i>	1.640 (66,4 ± 24,7)	1.023 (42,7 ± 20,6)	**
<i>B. straminea</i>	1.091 (41,6 ± 22,3)	545 (25,8 ± 18,5)	**
<i>B. tenagophila</i>	1.343 (54,9 ± 24,9)	972 (41,3 ± 21,9)	*

* Significant at the 5% level.

** Significant at the 1% level.

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The results suggest that the three tested planorbid populations were sensitive to the presence of *Physa marmorata* as concerns reduction of their oviposition.

An experiment under seminatural conditions is being carried out at the "Estação Experimental Neves" (Ribeirão das Neves, MG, Brazil), in ground pits (1.0 X 1.0 X 0.4 m) filled with natural water.

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