

## A NOTE ON BIOMPHALARIA STRAMINEA (DUNKER, 1848) FROM MANAUS, STATE OF AMAZONAS, BRAZIL

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*Biomphalaria straminea* (= *centimetricalis*), an important intermediate host of Schistosomiasis in Brazil, has large geographical distribution. It is known from Venezuela, Guianas and Brazil, reaching south to about 20° latitude.

In Northeastern Brazil *B. straminea* is a most important vector of the disease. It is the only vector known in the State of Ceará as well as in most of the territories of the State of Pernambuco, Paraíba and Rio Grande do Norte.

*B. straminea* is also known from Northern Brazil. It occurs in several areas of the carboniferous formation of the Amazon basin (Sioli, 4). This species was incriminated as the vector of Schistosomiasis in a limited focus localized in Belterra, Fordlandia, State of Pará.

The material used in the current paper was received from Dr. Mario Moraes of the "Instituto Nacional de Pesquisas da Amazonia" in September 1965. It consisted of 56 snails from which 42 were alive. Collected outside the town of Manaus, State of Amazonas, Brazil, the snails, were found in lake Rei in center of Careiro and in a small "Igarapé" affluent of the "Igarapé" Cachoeirinha.

The snails, kept in tanks, were used for observations on morphology, crossing experiments and exposition to the infection with a Northeastern strain of *Schistosoma mansoni*.

Prior to the experiments all the snails were exposed to sun light during few hours

for several days and none of them shed cercariae of the *mansoni* type.

Six snails were preserved and the animals dissected. The morphology of the animals dissected, particularly genitals, kidney and radula, was the same as compared with typical specimens of *B. straminea* from several places in Brazil.

Crossing experiments were performed between pigmented snails from Manaus and an albino strain of *B. straminea* from Quixeramobim (State of Ceará, Northeastern Brazil) according to techniques previously described (Barbosa et al., 1). Two couples were used. Each couple (Manaus x Quixeramobim) was put to mate in a small glass container for 30 days. After that period the albino snails were isolated from its partners and followed during another 30 days. Results of those experiments show that the two snails are conspecific. In both experiments pigmented snails were produced exclusively. Couple 1 produced 69 pigmented F1 snails while couple 2 produced 94 snails of the same type. No albino snails were obtained during the 30 days of observation. Hybrids obtained were fertile and produced prosperous colonies.

Snails from Manaus were exposed to miracidia of a Northeastern strain of *S. mansoni*. Each snail was exposed to 5 miracidia, and examined daily for cercariae after the 20 th day of the infection. Negative results were obtained of the

exposition of 15 snails originally collected in Manaus plus 86 snails of a laboratory reared progeny. A highly susceptible strain of the known intermediate host of *S. mansoni*, *Biomphalaria glabrata*, was used as control in the above experiment.

Other snail specimen from Manaus was exposed to high unrecorded number of miracidia of *S. mansoni*. The snail was fixed in Boun's fluid after 24 hours of the exposition and the anterior part of the animal sectioned and stained with haematoxylin-eosin. Tissue reactions were observed around all the penetrating miracidia denotating the well known process of destruction of the parasite in resistant snails (Barbosa et al., 1).

The possibility of introduction of Schis-

tosomiasis in Amazon region has been fully discussed by Sioli (1953). He found *B. straminea* (= *Tropicorbis pararyensis*) only in areas of the carboniferous formation where the surface water is almost neutral. He concluded that there is little danger of the introduction of Schistosomiasis in the rest of the great area of the Amazon basin where waters are acid and the snails were not found.

Negative attempts to infect the specimens of *B. straminea* from Manaus do not exclude the possibility of those snails to become adapted to other strain of *S. mansoni*. Evidence of local adaptation of a snail of *S. mansoni* was recently produced by Paraense & Correa (2) in Southern Brazil.

#### BIBLIOGRAPHY

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