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Research Note

A Survey on *Paragonimus rudis* in the Rio Guapore, Brazil

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In 1928, the lung fluke was found in the pulmonary parenchyma of the lung of a giant otter (*Lutra brasiliensis*) by Natterer, who dissected this animal at Vila Bela De Santissima Trindade (previously named Mato Grosso) in Mato Grosso State. This lung fluke was described by Diesing (1850) and named *Distomum rude* by him. Later, Braun (1901) redescribed this fluke as *Paragonimus rudis*. However, both descriptions did not allow complete identification with the present *Paragonimus* species. In 1980, Voelker *et al.* (1981) performed a field study to discover the lung fluke at Vila Bela De SS. Trindade which is located near the upper tributary stream of the Rio Guapore. But no *Paragonimus* metacercaria was found in these areas. They suggested that the *Paragonimus* habitats has been interrupted by the burning down of the rain forest. Moreover, they got the impression that the areas which they studied seemed to be somewhat unsuitable for the life cycle of *Paragonimus* worms in comparison to natural foci in other American countries. Presently, we can not correctly understand which *Paragonimus* species that *P. rudis* belongs to because of the lack of detailed information. The present study was undertaken to confirm the habitat of *Paragonimus* and to describe the taxonomic characters of *P. rudis* in the areas near the type locality.

We searched for freshwater crabs in 6 localities along the Rio Guapore river from Pimenteiras to Costa Marques (Fig. 1), Londonia State in August 1991. Only 30 crabs (*Trichodactylus* sp.) were collected at Rolin De Moura and Pau De Oleo. In these areas, the crab population density was extremely low. The viscera and muscles of these crabs were observed under a dissecting microscope for metacercariae. But *Paragonimus* metacercaria was not found in any of the crabs. Two crabs did serve as a host for only 5 metacercariae which significantly differed from *Paragonimus* metacercaria.

Three kinds of mammals: an opossum (*Didelphis* sp.) and a mouse (*Rattus* sp.) from Petras Negras and a paca (*Agouti* sp.) from Pau De Oleo were inspected their lungs and feces for the *Paragonimus* adult or egg. But *Paragonimus* was unable to be found in these hosts. Furthermore, we attempted to look for the first intermediate host of snails. The snails belong to the genus *Aroapyrgus* or *Potamopyrgus* in other Latin American countries. Such a small snail was not found from Pimenteiras to Costa Marques along the Rio Guapore except *Malisa* sp. and *Pila* sp.

Nobody has found the *Paragonimus* worm in Brazil after Natterer in 1828. In the present study,

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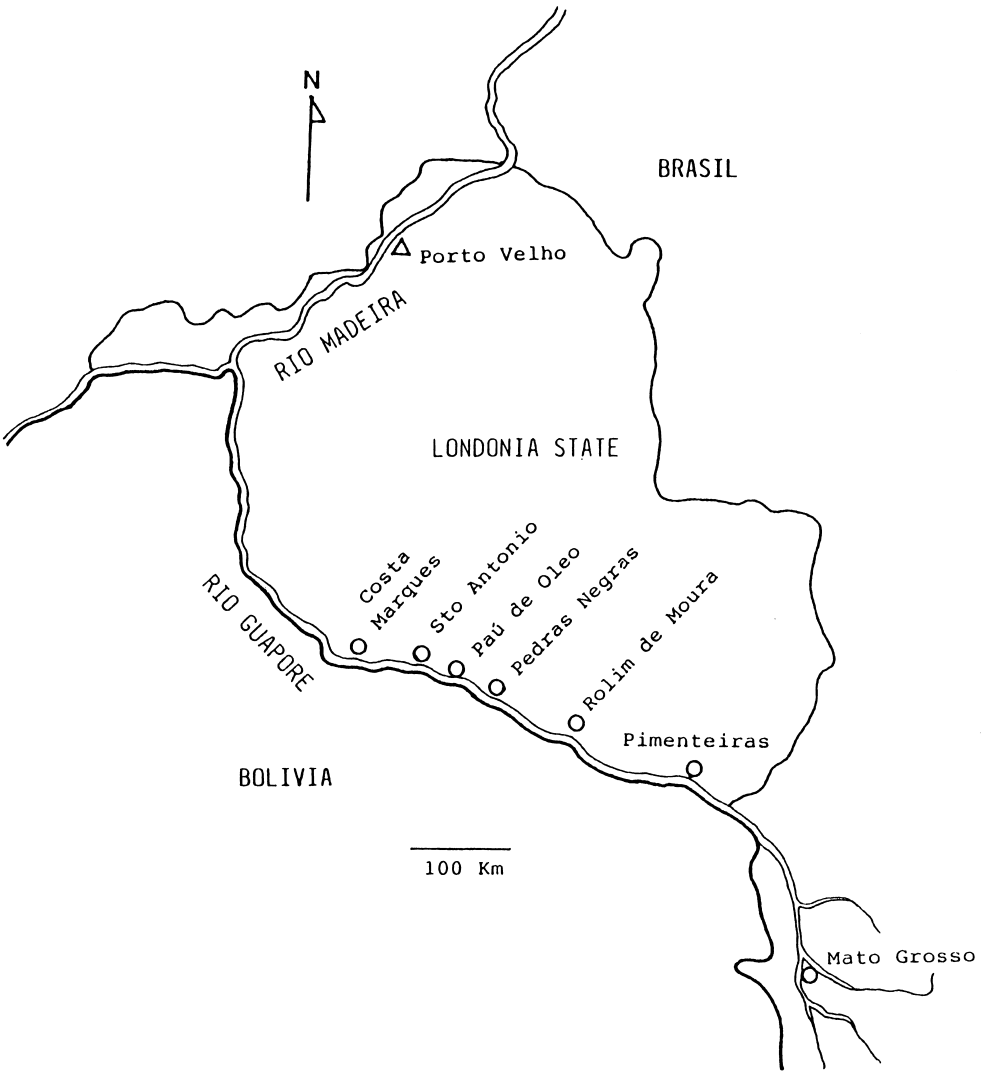

Fig. 1 Map of Londonia State showing the localities surveyed.

we were unable to get any information for the existence of *Paragonimus*. It seems that these localities were unsuitable habitats for the *Paragonimus* life cycle similar to the impression of Voelker *et al.* (1981). In the future, we need to do further field studies near Mato Grosso, in particular in the Bolivian area in order to know what *P. rudis* is.

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