THE DEVELOPMENT OF THREE SPECIES OF *ANGIOSTRONGYLUS* IN THE INTERMEDIATE HOSTS

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The development of three species of the genus *Angiostrongylus*, *A. siamensis* OHBAYASHI, KAMIYA et BHAIBULAYA, 1979, *A. costaricensis* MORERA et CÉSPEDES, 1971 and *A. cantonensis* (CHEN, 1935), in the intermediate host, *Biomphalaria glabrata*, was examined. The development of *A. cantonensis* in the tadpoles of *Rana chensinensis* and *Xenopus laevis*, and in the earthworm, *Eisenia foetida*, was also studied.

From *B. glabrata*, 89% of the 3rd stage larvae of *A. costaricensis* and 96% of the those of *A. cantonensis* were recovered by 4 weeks after exposure at 25±2°C. And 34% of the 3rd stage larvae of *A. siamensis* by 4 weeks and 85% of them by 7 weeks were recovered from *B. glabrata* after exposure at 25±2°C. When the temperature was raised to 30±2°C from 4 weeks after exposure, 92% of *A. siamensis* larvae developed to the 3rd stage within 2 weeks.

The infection route of the 1st stage larvae of the three species into *B. glabrata* was mainly via the wall of the digestive tracts and some larvae via the epidermis. The larvae of *A. costaricensis* and *A. cantonensis* were encapsulated by amoebocytes and fibroblasts mainly at the head-food of the snail by 24～48 hours after exposure. However, in *A. siamensis*, the larvae were encapsulated mainly at the rectal ridge and the serosa of the stomach or the intestine of the snail by 6 hours after exposure.

The 1st stage larvae of *A. cantonensis* could develop in the tadpoles of *Rana chensinensis* and *Xenopus laevis*, but not in the earthworm, *Eisenia foetida*. Especially in the tadpole of *Xenopus laevis*, the larvae developed to the 3rd stage. Therefore, it is considered that the tadpole can act as an intermediate host for *A. cantonensis*.