

Growth of immature *Biomphalaria glabrata*

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Introduction

The growth rate of *B. glabrata* is highly dependent on the ambient temperature at which the snails are maintained. Newly-hatched *B. glabrata* can grow to about 5 mm (shell diameter) in 3-4 weeks (or sooner) if the temperature is maintained at 26°C, providing other growth conditions are also optimal.

Equipment

Shallow plastic pans

Materials and reagents

Food sources such as:

Nostoc (cyanobacteria)

Wilted lettuce

Dried fish food/fish flake

Artificial Pond Water

Procedure

- Maintain newly hatched snails in shallow containers, separate from the adult snails.
- Feed small amounts of lettuce wilted by heat (never fresh), in combination with another nutritious food source, such as *Nostoc* or dried fish food.
- Change the water if it becomes cloudy or foul-smelling.

Recommendations

Numerous sources of food have been used for the maintenance of juvenile *B. glabrata*. Lettuce leaves are widely used to feed mature *B. glabrata*, but snails 1-3 mm in diameter do not typically eat fresh lettuce. Juvenile snails will eat lettuce that has been wilted by heat, but lettuce should be supplemented with *Nostoc* or dried fish food. Be sure not to over-feed the snails, and clean the containers regularly, since bacterial growth (as evidenced by cloudy and foul-smelling water) can quickly become a problem if food is not consumed in a reasonable period of time.

References

Lewis, F.A., Stirewalt, M.A., Souza, C.P., and Gazzinelli, G. 1986. Large-scale laboratory maintenance of *Schistosoma mansoni*, with observations on three schistosome/snail host combinations. *Journal of Parasitology* 72: 813-829.

Tucker, M. S., Karunaratne, L. B., Lewis, F. A., Frietas, T. C., and Liang, Y-S. 2013. Schistosomiasis, in *Current Protocols in Immunology* 19.1.1-19.1.57, John Wiley and Sons, Inc., (R. Coico, Ed). Published online November 2013 in Wiley Online Library (wileyonlinelibrary.com). doi: 10.1002/0471142735.im1901s103.
