



Apr 14th, 2:35 PM - 3:35 PM

Variation In Metabolic Cost of Embryonic Development of the Freshwater Snail, Physa SP.

Andrew Hall, '07
Illinois Wesleyan University

William Jaeckle, Faculty Advisor
Illinois Wesleyan University

Follow this and additional works at: <https://digitalcommons.iwu.edu/jwprc>

Hall, '07, Andrew and Jaeckle, Faculty Advisor, William, "Variation In Metabolic Cost of Embryonic Development of the Freshwater Snail, Physa SP." (2007). *John Wesley Powell Student Research Conference*. 39.

<https://digitalcommons.iwu.edu/jwprc/2007/posters2/39>

This Event is protected by copyright and/or related rights. It has been brought to you by Digital Commons @ IWU with permission from the rights-holder(s). You are free to use this material in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s) directly, unless additional rights are indicated by a Creative Commons license in the record and/ or on the work itself. This material has been accepted for inclusion by faculty at Illinois Wesleyan University. For more information, please contact digitalcommons@iwu.edu.

©Copyright is owned by the author of this document.

Poster Presentation P38

**VARIATION IN METABOLIC COST OF EMBRYONIC DEVELOPMENT
OF THE FRESHWATER SNAIL, *Physa* sp.**

Andrew Hall and William Jaeckle*

Biology Department, Illinois Wesleyan University

Embryos of the freshwater snail *Physa* sp. complete their development within an egg capsule and hatch as juveniles. To estimate the energetic cost of development, oxygen consumption rates of egg masses were monitored from deposition to hatching. Oxygen consumption increased during development ($r^2=0.173$, $p<0.01$), but there was no consistent pattern. A negative correlation existed ($r=-0.984$, $p<0.01$) between hatching time and oxygen consumption, and a positive correlation existed ($r=0.903$, $p<0.05$) between the rate of oxygen consumption and total energy expended. Masses with longer times to hatching utilize less energy than masses with shorter times to hatching. If egg capsules are initially identical, then embryos with higher metabolic rates and shorter development times will be smaller at hatching than individuals with lower rates of energy consumption. If capsule size varies, then differences in metabolism may result in different hatching times, but a common juvenile size. The effects of these differences on juvenile survivorship in the field are unknown.