

*Mysis diluviana* is a common macroinvertebrate throughout North American glacial lakes. Recent research supports the hypothesis of two divergent populations of *Mysis*, one that migrates daily from the benthic to the pelagic region of the lake to feed, and the other feeding benthically throughout its life. I present a study assessing the respiration rates of benthic and pelagic caught *Mysis* at varying temperatures to assess the hypothesis that benthic caught *Mysis* react differently to temperature change than pelagic caught *Mysis*. We predict that benthic *Mysis* will have a proportionally higher respiration rates when exposed to temperatures normally only encountered by migrating *Mysis* (8-20°C).