

Evaluating macroinvertebrate communities to determine stream flow duration in small headwater streams

Myciah Ritchea-Yoho, Gregory Pond and James Wood

Small headwater streams are important habitats for macroinvertebrate communities but because of their small size they rarely get the protection they need. Determining stream flow duration can help determine which streams are most important to preserve. The macroinvertebrate community is not only a good indicator of water quality but can also indicate stream flow duration. Six small headwater streams were sampled using the Alternative Macroinvertebrate Sampling Method for High Gradient, Headwater Step/Pool Dominated Streams. Water quality data was also collected using a YSI Quatro Meter. All macroinvertebrates captured were identified down to family level and logged. The headwater macroinvertebrate field evaluation index was used to determine stream flow duration. Water chemistry showed that these streams are impaired and could be affecting the macroinvertebrate community. The HMFEI showed that four out of the six streams were class III PHWH streams and two out of the six were class II PHWH streams. Although these sites are small, they are still important habitats for many macroinvertebrate species and more care needs to be taken to push for the protection of small headwater streams.