

# Dunkard Creek Mussel Restoration

## 1a. Brooding Strategy

**Short-term** brooders typically have the period from egg fertilization to larval infestation occurring over a short period; females are generally gravid over a period of less than a month. Typically requires multiple trips to the stream to collect.

**Long-term** brooders typically have the period from egg fertilization to larval infestation occurring over several months including over the winter. Gravid females can be found over a period of several months. Typically can be collected easily if animals are available. Can be easily held in captivity.



## 1. Broodstock Collection

Adult gravid mussels must first be collected. All species do not breed at the same time and spawning is primarily driven by water temperature.

## 4. Hosts are then transported to stream for stocking.



In the best of worlds, < 1% of newly transformed juveniles will not survive to reproduce.



## 3. Hosts are then infested with collected glochidia.

This is done by placing glochidia into an aerated container of water and then adding the appropriate host. The hosts are monitored to ensure adequate infestation.



## 6. Relocation

of a limited number of adults will be conducted, however this is robbing Peter to pay Paul.



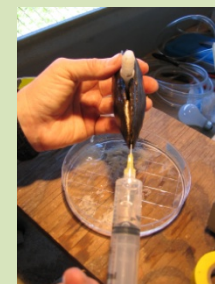
**1b. Broodstock** should be collected from streams closest to Dunkard Creek to help maintain genetic integrity.

## 2. Extracting Glochidia

from long-term brooders is relatively easy as the gills are typically very swollen and can be pierced, and then flushed with a syringe. Glochidia from short-term brooders are better if individuals are collected when nearly ready to release, allow them to release in captivity and then collect the packets or loose larvae for infestation onto fish.



Swollen gill of long-term brooder



Larvae being extracted from a long-term brooder.