

SOP #19: Snail Survey

Version 1.0 (November 7, 2018)

Revision History Log: Only changes in this specific SOP will be logged here. For minor changes, version numbers increase incrementally by hundredths (e.g., version 1.01, version 1.02). Major revisions should be designated with the next whole number (e.g., version 2.0, 3.0, 4.0). Record the previous version number, new version number, date of revision, author of the revision; identify paragraphs and pages where changes are made, the reason for making the changes, and the person who approved the revision.

Previous Version Number	New Version Number	Revision Date	Author	Changes Made	Reasons for Change	Network Regional Reviewer Approval

Purpose

This Standard Operating Procedure (SOP) describes methods for surveying native snails in anchialine pools for the Pacific Island Network Anchialine Pool Monitoring Protocol.

Overview of Sampling Procedure

Snails are sampled along the same transect that habitat measurements are recorded. The native neritid snails pīpīwai (*Neripteron cariosum*) and hapawai (*Neripteron vespertinum*) are collected and measured. The presence of pipipi (*Nerita picea*) and introduced thiarid snails (such as *Melanoides tuberculata* and *Tarebia granifera*) will be noted, but they will not be measured or counted. Each target snail encountered along the transect is collected, measured, and then returned to the pool in the approximate location from which it was collected. See Figure 19.1 for photo guide to the snail species.



Figure 19.1. Anchialine pool mollusks identification guide.

Conducting a Survey for Snails

All snails (pīpīwai and hapawai) within 0.25m on each side along the length of the transect line will be collected and measured. The observer collects each snail (visible or located between and beneath rocks or within the detrital layer) within the section, confirms identification, and then measures the shell length using calipers. As illustrated in Figure 19.2, shell lengths are measured to the nearest millimeter, as the longest distance between the apex (origin of whorl) and the anterior margin (Ford 1979). Snails are returned to the pool after being measured. Place the snail so that it can reattach to the substrate; you may have to hold it in place for a short time, don't just toss it back in or it may be eaten.



Figure 19.2. Snail measurements. Measure the snail as the longest distance from the apex of the shell to the anterior margin.

References

Ford, J. I. 1979. Biology of a Hawaiian fluvial gastropod *Neritina granosa* Sowerby (Prosobranchia: Neritidae). MSc. Thesis. University of Hawaii at Manoa, Honolulu, Hawaii.