

SOP #14: Visual Shrimp 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 conducting a visual shrimp survey using a quadrat sampling design for the Pacific Island Network Anchialine Pool Monitoring Protocol.

Overview of Sampling Procedure

Square quadrats 20cm to a side are used to delineate survey areas. Surveys will be done from shore. A maximum of six quadrats per pool will be surveyed. The number of quadrats will vary depending on the estimated surface area of the pool (Table 14.1). Quadrat locations are dispersed evenly around the perimeter.

Table 14.1. Number of observations made for visual shrimp surveys.

Surface Area (m ²)	Survey Quadrats	Number of observers
0-5	2	1
5-10	3	1
10-20	4	2
>20	6	2

Conducting a Visual Survey for Shrimp

Once the number of quadrats to be surveyed is determined, observation sites are dispersed haphazardly around the perimeter of the pool 0.5m from the edge. When three observations are taken one observer does all three observations, repositioning between observations. When six observations are taken, two observers reposition three times. Observation locations are dispersed evenly around the perimeter. Observers should position themselves so that they can reposition themselves to the right each time a reposition is necessary, without overlapping sites observed by others.

The observer will then approach the location for the quadrat and sit on the ground at the perimeter. The observer will gently place the quadrat down. The observer will wait for one minute. The observer will then count the number of each crustacean species in the quadrat. Observations will be made for three minutes, during which time the number of predatory shrimp moving in the quadrat are recorded. Care should be taken to not recount moving shrimp. The observer will then move to the next location and repeat.