

Santa Cruz Island Resource Collection Protocol

General Notes

The purpose of resource collection is to determine the abundance of benthic organisms along the Santa Cruz Island transects. Substrate scrapings are conducted at three different sites on the north shore of Santa Cruz Island (35°5'N: 119°45'W) annually between the months of August and January. Each site has 50 m transects at 10, 20, and 30 ft, characterized by different habitat zones, for a total of three transects per site. On each transect substrate scrapings are taken from 10 different random quadrats, for a total of 30 samples per site. Note that sites and sampling were variable prior to 1991.

Substrate Scraping

Before sampling, a diver runs a 50 m transect tape parallel to shore at one of the three depth intervals. As the diver swims the length of the transect, he/she randomly places a 0.1m² quadrat on the substrate. Within each of the 10 quadrats per transect, algal substrate is removed and sealed in plastic bags underwater. Upon returning to the boat, divers carefully transfer sealed bags to individual buckets labeled by depth.

Materials Needed:

- Transect tape
- 0.1m² quadrat
- Scraping tools
- Large game bag
- 30 Plastic Ziploc bags (1 gallon size), labeled by depth
- 30 buckets, labeled by depth

Sample Processing

Scraping samples are brought back to the laboratory and processed immediately. Contents of each plastic bag are emptied and rinsed out into a sieve(<0.5mm). For each sample, algae is identified to species level, weighed, and disposed of. Invertebrates are first removed from algae by thoroughly rinsing. All remaining organisms are then preserved in a 10% formalin solution until they can be sorted taxonomically, counted, and measured.

Materials Needed:

- Sieves (<0.50 mm mesh size)
- Scale
- Glass jars
- 10% formalin