MarineGEO

Seagrass Seines

v 0.1

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Introduction

This protocol provides standardized data on mobile fish and invertebrate communities associated with shallow subtidal seagrass beds. These measures will help characterize the seagrass food web and top-down impacts on smaller fauna and the primary producers.

Note: Seines can only be taken at shallow subtidal or intertidal sites. Deeper sites with good visibility should instead use diver visual surveys.

Additional copies of this protocol, field datasheets, data entry templates, instructional videos, literature, and more can be found on the Seagrass section of the MarineGEO protocol website.

Measured Parameters

This protocol provides data on the mobile fish and invertebrate communities, measured as:

- Mobile fauna abundance and length (mm)

Requirements

Personnel: 3 persons

Time: Preparation: 1 person x 0.5 hours
Field work: 3 persons x 0.5 days
Post processing: None
Data processing: 1 person x 1 hours

Replication: One (1) tow using a beach seine along a three (3) 50-m transects in the shallow, middle, and deep edges of the seagrass bed.

Materials Checklist:

- ☐ 1 beach seine (record dimensions including height, width, and mesh size)
- ☐ Waterproof paper
- ☐ Pencil
- ☐ Clipboard
- ☐ Ruler (mm)

Methods

Preparation

1. Assemble field gear (see Materials checklist).
2. Print field data sheets on waterproof paper.

Fieldwork

1. Sampling locations should align with the three 50-m transect locations as determined in the Seagrass Quadrats Protocol.
2. Before conducting any other surveys/collections, deploy the beach seine and pull it along the full length of the transect.
3. When finished, bring the ends together rapidly to prevent any organisms from escaping.
4. Work your way through the net, removing and recording the identity of all organisms >5 cm in length. For the first 20 individuals of each species, also record their length (in mm). For fishes, measure total length (tip of the snout to tip of the caudal fin; Figure 2). For invertebrates, measure carapace width or total length (Figure 2).
5. Repeat steps 2-3 for the remaining two transects for a total of three tows.

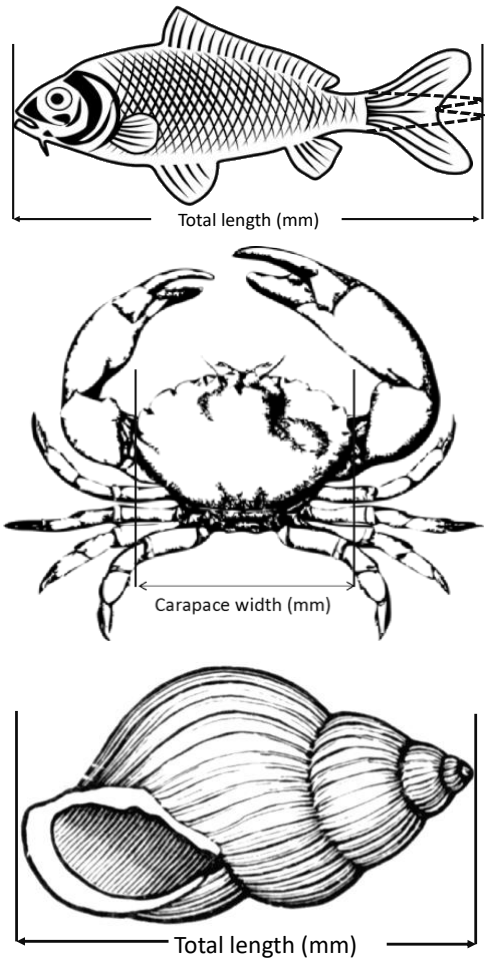

Figure 1: Length measurement for select groups.

Data Submission

1. Enter data into provided data entry template. Be sure to note the dimensions of the seine net!
2. Scan the completed lab data sheets and save both paper and electronic versions.
3. E-mail data entry file and scanned field data sheets to: marinegeo-data@si.edu