

Protocol: Seagrass Mobile Fauna (Seines)

V 0.0.1

Last updated: 09 November 2018

1. 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 ([link](#)).*

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.

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: <https://marinegeo.github.io/seagrass-habitat>.

2. Measured Parameters

- Mobile fauna abundance (individuals) and length (mm)

3. Requirements

Personnel: 3 persons

Time:

Preparation: 1 persons \times 0.5 hr.

Field work: 3 persons \times 0.5 days.

Post processing: None.

Data processing: 1 persons \times 1 hr.

Replication: 1 tow \times 3 transects = 3 replicates

Materials Checklist:



Smithsonian

Tennenbaum Marine Observatories Network and MarineGEO program

647 Contees Wharf Road, Edgewater, MD 21037

marinegeo@si.edu

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

4. Methods

Fully review this and any additional protocols necessary for the sampling excursion. Address any questions or concerns to marinegeo@si.edu before beginning this protocol.

4.1 Preparation

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

4.2 Fieldwork

1. Sampling locations should align with the three 50-m transect locations as determined in the Seagrass Quadrats Protocol ([link](#)).
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 1). 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.

4.3 Sample Processing

There is no post-processing necessary for seine samples.

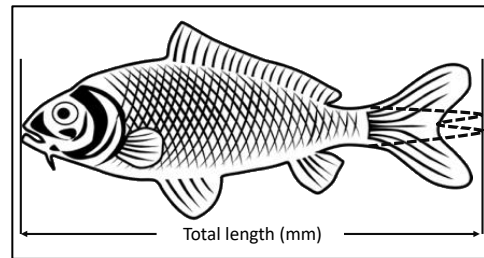


Figure 1: Length measurement for fish taxa. Note that the tail should be constricted if naturally fanned (as shown by dashed line).

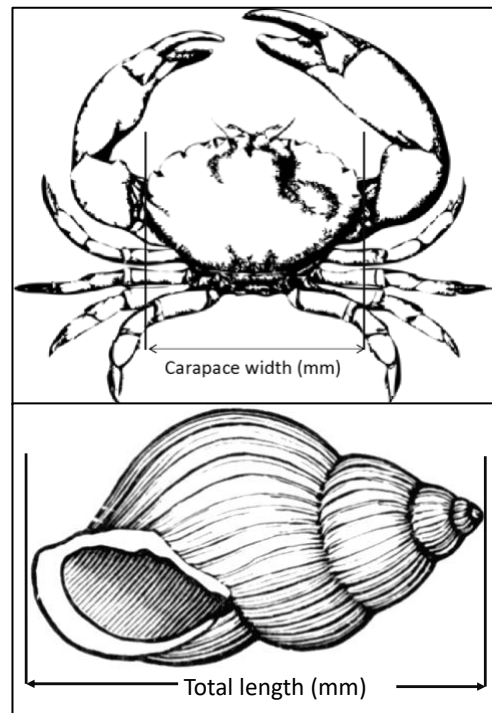


Figure 2: Length measurement for select invertebrate groups.

4.4 Data Submission

1. Enter data into provided data entry templates. *Be sure to note the dimensions of the seine net!*
2. Scan field data sheets.
3. E-mail data entry file and scanned field data sheets to: marinegeo-data@si.edu