

SOP Dredging

Purpose:

Describes the procedure used to catch and transport invertebrates and fish from a dredge site to BMSC with as little mortality as possible.

Policy:

This method is recommended for the collection and transport of benthic fish and invertebrates from a dredge site to BMSC.

Responsibility:

Public education assistants, animal care specialist, researchers, university programs students, university programs coordinator, Alta skipper.

Materials:

Dredge net
Buckets
Flowing sea water

Procedures:

Note: Dredges generally capture invertebrates, however, some small species of bottom fish (flatfish, sculpins, midshipman, etc) are also caught. Dredges do cause disruption of the bottom sediments as well as injury to many animals living on the bottom. The following method is used to minimize the impact on the animals.

1. A small dredge size is used to minimize bottom destruction. The length of time dredging should not exceed 5 minutes from the time the dredge is on the bottom to the time that the net is to be pulled up. Shorter dredge time prevents animals being crushed or suffocating in dredge.
2. Once the dredge net is brought on board, the contents are dumped into a large sea tray with flowing seawater. The animals should be spread out and sorted through immediately in order to prevent continued crushing and suffocation. It is useful to have a bucket of clean cold water in the sorting table in which to place fragile organisms.
3. Animals that are not targeted should be immediately returned to the water at the same site they were collected. Releasing animals in a clump increases their chances of survival as opposed to being released individually (a lone animal

dropping to the ocean floor is much more likely to be predated upon). The skipper of the Alta will maneuver the boat to the dredge site if the boat has drifted.

4. If fish have suffered air bladder expansion they should not be released, as they will not be able to swim down to safety. This makes them vulnerable to predation. These fish should be brought back to BMSC to recuperate. Recuperation tanks are available on site and animal care staff can return fish if investigator is unable to. Even severe damage (i.e. extension of intestines out of anus or mouth) can be reabsorbed and corrected within a couple of day's recovery.
5. Fish that are to be brought back to BMSC must be contained in Alta sea tray with flowing seawater, or in buckets. Buckets must have their water refreshed every 15 minutes with flowing seawater until they reach BMSC.
6. Once at BMSC, the animals should immediately be transferred to aquariums with substrate, seaweed for cover and flowing seawater. These animals should be provided with at least 24 hours recovery time before the commencement of any experimental procedure.
7. Collection records must be entered into the BMSC online collection record database.
8. Upon termination of research at BMSC the surviving animals must be returned to the site they were collected.