

PIPEFISH CARE

PURPOSE: To describe methods of care for pipefishes.

POLICY: To provide optimum care for all animals.

RESPONSIBILITY: Collector and user of the animals. If these are not the same person, the user takes over responsibility of the animals as soon as the animals have arrived on station.

PROCEDURE: There is one species of pipefish used at the BMSC.

Species: Bay pipefish *Syngnathus leptorhynchus*

Identification: Refer to Lamb and Edgell's book, "Coastal fishes of the Pacific Northwest" for in depth descriptions of individual specimens.

Syngnathus griseolineatus: These fish have very long inflexible bodies covered with abutting bony plates. They have tiny mouths and tails, and no pelvic fins. They can reach 33cm in length. These fish move forward upright by vibrating a single transparent dorsal fin.

Sites: Pipefish are often hidden among marine plants, especially eelgrass, growing in shallow bays or around pilings.

Methods: Pipefish are easily caught by dip net, but can also be caught by a beach seine.

Transport: Please follow transport and handling of fish SOP.

Holding: These fish need to be held in continually flowing seawater. Lids are necessary, as the slender bodies of the pipefish tend to easily slide over and out of the top of the tank. It is very stressful for pipefish to feel exposed so they should always be provided with habitat including eelgrass and sediment.

Feeding: Feed pipefish tiny shrimp-like prey, and zooplankton, they can also eat cultured artemia but need supplemental nutrition. Pipefish generally only eat live and moving prey.

Tank Cleaning: Once a month the fish should be removed from the tank and placed into a holding bucket. The tanks should be drained and the sides and bottom should be scrubbed and rinsed with warm freshwater. The tanks should then be rinsed with cold seawater and allowed to refill, and the fish replaced.

Anesthetic: Anesthetizing these animals is size, species, and density dependent; approximately 0.2mg/L of MS-222. Always wear gloves when using MS-222 (TMS). Clove oil is most effective as an anesthetic at concentrations of 40-60 mg/L, and should be dissolved in ethanol (e.g., 1:9) before mixing into the water. Clove oil has a slightly faster induction time and a longer recovery time than similar concentrations of TMS. Clove oil has a wide margin of safety between effective and lethal doses, and fish do not show signs of distress when being anaesthetized.

Euthanasia: Euthanasia is size, species, and density dependent; inhalant anesthetic overdose of 0.4 - 2.0 g/L of MS-222.

Animal Return: Animals should be returned to the site of their collection. Be sure to have well oxygenated water in bucket that they are being returned in. If any anesthetic chemical has been used on the fish during it's holding at BMSC, the animal must not be released before the drug withdrawal time. Withdrawal time should be on the label of an anesthetic in degree-days (degree-days are the accumulated thermal units for a given day. One day at 10C is 10 degree-days).

Note: MS-222 has a 5 -day withdrawal time for salmon above 10C.

DAILY ACTIVITIES:

1. Ensure water is flowing into the tank at a reasonable rate.
2. Ensure the standpipe is in place and not blocked.
3. Check for and remove and dead animals.
4. Check for and remove any uneaten prey organisms.
5. Check for and remove and foreign organisms.