

GREENLING CARE

PURPOSE: To describe methods of care for greenlings.

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: At present there are two greenling species found around BMS.

Species:	Kelp greenling	<i>Hexagrammos decagramme</i>
	Lingcod	<i>Ophiodon elongatus</i>

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

Hexagrammos decagrammus: There are two pairs of small, thread-like projections behind the eyes. These fish can reach 61cm in length. Adult males and females look quite different - the males have white markings outlined in dark all over the body, the females have just one at the very rear of the second dorsal fin. Thrives at depths of less than 15m.

Ophiodon elongatus: Lingcod have a single, long, moderately notched dorsal fin. They have a very large mouth with large teeth. These fish can reach 152cm in length. They live in rocky bottoms at depths of over 2000m.

Sites: These are found in the channels and open ocean.

Methods: Greenling are easy to catch with longlines. Lingcod are caught in trawl nets, as well as by longline and handline.

Transport: Please follow transport and handling of fish SOP.

Holding: These fish should be held in continually flowing seawater in large tanks. Habitat should be provided in the way of bottom sediment of shell or sand, rocks for hiding and kelp for cover. Lids are necessary.

Feeding: Greenling are voracious and eat any smaller fishes; will readily eat large pieces of frozen chopped fish or mussels.

Tank Cleaning: Once every 3 weeks 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. 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 MS-222. 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.