

SEA CUCUMBER CARE

PURPOSE: To describe methods of care for sea cucumbers.

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: The sea cucumber species currently found at BMS are:

Species:	Red sea cucumber	<i>Cucumaria miniata</i>
	California sea cucumber	<i>Parastichopus californicus</i>
	White cucumber	<i>Eupentacta quinquesemita</i>
	Armored sea cucumber	<i>Psolus chitonoides</i>

Identification: Refer to Eugene N. Kozloff's book, "Seashore Life of the Northern Pacific Coast" for in depth descriptions of individual specimens.

Cucumaria miniata: small (6cm long) and has ten branched tentacles. It is usually white, with brown or black speckles.

Parastichopus californicus: large (40cm long) with prominent, stiff, conical papillae on the dorsal side and tube feet on the ventral side. Color varies from dark red to brown to yellow. Tentacles (modified tube feet) around the mouth look like mops, with branch tips elaborated into little disks.

Eupentacta quinquesemita: up to 10cm long; white to creamy yellow in colour; tube feet slightly darker in colour than the body; the tube feet are stiff to the touch due to the number of ossicles within the skin and tube feet.

Psolus chitonoides : like a cucumber cut in half lengthwise, with the ventral side completely flat. In contrast to other sea cucumbers, it is essentially sedentary. The oral tentacles are bright red and the upper body is covered in calcareous plates. It is mostly found in deep water and reaches 5cm in length.

Sites: Intertidal and subtidal sites are found on the shores of the Deer Group Islands, Dixon I., Scott's Bay, off the Blowhole, along Grappler Inlet and at the Harbor mouth across from Aguilar Pt. *Cucumaria miniata* can easily be found in the low intertidal under rocks or burrowed in the sediment.

Parastichopus californicus can be collected by dredging but more easily by scuba diving or by hand at a low tide.

Eupentacta quinquesemita can be found on docks and pilings and on ropes pulled up from the docks.

Psolus chitonoides can be collected by scuba diving and by dredging

Methods: Sea cucumbers can be collected either by hand or scuba/skin diving.

Hand: small buckets with handles for carrying

Scuba: plastic bags to hold water and animals grab/collection bag to hold plastic bags green bucket with lid to hold during transport

Holding: Held in continually flowing seawater. Lids are unnecessary. *P. californicus* and *E. quinquesemita* do not need habitat provides. *P. chitonoides* does not need rocks to attach to but since they are difficult to pry off the sides of a tank without injury it is best to provide them with a rock or two. If there are no predators in the tank *C. miniata* does not need to be provided with rocks and sediment .

Feeding: All sea cucumbers feed on detritus, *Parastichopus californicus* also feeds on very small organisms such as zooplankton.

Tank Cleaning: Once every other week the sea cucumbers 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 down and rinsed out with warm freshwater. The tanks should then be rinsed with seawater and allowed to refill. Place the sea cucumbers back in the tank once refilling has begun.

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 any dead animals.
4. Check for and remove any foreign organisms