SOP# = Moll2
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CEPHALOPOD CARE

PURPOSE: To describe methods of care for squid and octopuse.

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 4 species of cephalopods commonly found around BMSC.

Species:	Opalescent squid	*Loligo opalescens*
	Red octopus	*Octopus rubescens*
	Giant Pacific octopus	*Enteroctopus dofleini*
	Stubby squid	*Rossia pacifica*

Identification: Refer to Eugene N. Kozloff 's book, "Seashore Life of the Northern Pacific Coast" for in depth descriptions of individual specimens.
Loligo opalescens: the mantle (conical part of the body) may reach a length of 15 cm. In *L. opalescents* the 8 arms and 2 tentacles are shorter in proportion to the length of the mantle than they are in many other squid species. The tail fins of *L. opalescens* are also less ample than those of some other squid.
Octopus rubescens: has an ovoid body less than 6 cm long, ranging in colour from dull red to mottled white. The arms are about 4 times the length of the body. Three tiny flaps or 'eyelashes' below each eye will differentiate it from small specimens of giant octopus. In behaviour, tends to be more timid in captivity than the giant octopus, and spends most of its time hiding.
Enteroctopus dofleini: at least 7.3 m arm spread and 73 kg, even small animals tend to be more 'outgoing' in captivity spending less time hiding than the red octopus.
Rossia pacifica: Look like a combination of a squid and an octopus. Large eyes for body size compared to octopus, much shorter arms than octopus and have eight arms and two tentacles. Exhibit octopus-like behaviours by spending most of their time on the bottom.

Sites: Trevor Channel as bycatch from shrimpers or in trawl nets. Some have been found near Diana I., off BMSC docks, or Scott's Bay.

Methods: Caught by trawling or dredging. They are difficult but not impossible to catch by scuba diving. May be able to obtain them from shrimpers when caught as by-catch. They are rarely caught as individuals and hardly ever caught in large numbers. Few will survive collection and transport to BMSC.

Holding: A large tank is necessary with continually flowing, cold seawater and plenty of dissolved oxygen. In-flow must be strong and directed to provide a current. Lids are necessary and should be able to firmly close as octopuses are strong and will push up a lid and climb out of tanks. Being soft-bodied, they can escape out of an opening that is the size of their beak. Rocks, empty giant barnacle shells or hiding places are necessary

help to decrease the level of stress of the animals, including some areas of sand or mud. Since octopus are quite intelligent and curious, if animals are to be kept longer than a week various 'toys' should be put into tank to provide some stimulation.
Squid also need to be held in large tanks as they are enthusiastic swimmers. They also need a strong water current. Lids are necessary as they will occasionally jump out. They do not seem to need as much stimulation provided in their tanks nor do they need to be provided with rocks for shelter although providing sediment on the bottom of the tank seems to decrease their stress. Squid and octopus should be handled as minimally as possible and never with a bare hand. Not only can they give a nasty bite but their skin can be easily damaged leading to bacterial infections.

Feeding: Squids need to be fed twice a week with an alternating diet of small fishes, shrimps, and swimming invertebrates. There should be enough for each animal to feed on 1-2 prey items per feeding. Octopuses feed on crabs and eat heartily in captivity.

Tank Cleaning: Every 2nd week, the cephalopods should be removed from the tank with a net and placed into a holding bucket with a fitted lid. 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. Once enough water has filled the tanks to allow the cephalopods to swim freely, they should be placed back into the tank.

Animal Return: Always return to the site of collection. Small octopus can easily become prey items for fish when they are released at the surface of the water and have to swim to the bottom. If possible encourage octopus into a shell or empty giant barnacle where it will be safe until it hits the ocean bottom.

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.
6. Ensure there are no holes or other routes of escape the animal might use to get out. Octopus, in particular are extremely agile and determined!