SOP# = Arth4
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SHRIMP CARE

PURPOSE: To describe methods of care for shrimp.
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 are a very large number of shrimp species to be found around BMSC. The following a number of the more common species.

Species:	Sand shrimp	*Crangon* sp.
	Ghost shrimp	*Neotrypaea californiensis (Callianassa californiensis)*
	Blue mud shrimp	*Upogebia pugettensis*
	Coonstripe shrimp	*Pandalus danae*
	Spiny pink shrimp	*Pandalus eous*
	Pacific prawn	*Pandalus platyceros*
	sidestripe shrimp	*Pandalopsis dispar*
	Shrimp	*Paracrangon echinata*
	Shrimp	*Heptacarpus sp.*
	Spiny Lebbeid	*Lebbeus groenlandicus*
	Blade shrimp	*Spirontocaris sp*

Identification: Refer to Gregory C. Jensen's book: "Pacific Coast Crabs and Shrimps", Eugene N. Kozloff's book: "Seashore Life of the Northern Pacific Coast" and Gotshall's "Guide to Marine Invertebrates: Alaska to Baja California" for in depth descriptions of individual species. Shrimp are difficult to identify.

Crangon sp.: These shrimp are abundant in shallow water, especially at lower tide levels. Their mottled, sandy gray colour camouflages them in the sand that they burry into.

Neotrypaea californiensis: The bodies are poorly calcified and pinkish in colour. Males have one claw much larger than the other and this claw is paler in colour. Females have equally sized and coloured claws. These shrimp are excellent excavators and leave small mounds of sand as evidence of there presence. They are up to 12 cm long.

Upogebia pugettensis: These shrimp are superficially similar in appearance to *N. californiensis*. They have a prominent rostrum and are covere in short hair. They are commonly grey-brown in colour and occasionally blue. They can be up to 15 cm in length.

Pandalus danae: Have characteristic prominent marking on abdomen of broken, diagonal stripes that bary from dull brown to red. They have strong brown, red and nearly white markings on tail. They are quite large (may reach 15cm or more) and straight bodied. They most likely occur around pilings.

Pandalus eous: These shrimp are thin-shelled, uniformly pink with no banding. They have a dorsal sping on the middle of the third abdominal segment. They are up to 15 cm in length.

Pandalus platyceros: These are the largest local species of shrimp. They are pink in colour with definite thick white lines on the carapace and large white spots on the tail. Younger indicuduals may often have a green hue to their colouration. They are up to 25 cm in length.

Pandalopsis dispar: The first antennae of these shrimp are almost as long as the entire body. They are pink in colour with one white strip running down both sides of the tail. They are up to 20cm longand more delicate and slender than *P. eous* or *P. platyceros.*

Paracrangon echinata: These shrimp are pale tan in colour with many spines on its body and a long pointed rostrum similar to the *Pandalus* sp.. They will go into a cataleptic pose (rigor) when disturbed. They are up to 7cm long;

Spirontocaris sp.: These morphologically diverse species are found in tidepools and among seaweeds. See G.C. Jensen's "Pacific Coast Crabs and Shrimps" for in depth descriptions of each species.

Heptacarpus sp.: These medium sized shrimp are highly variable in colour. See G.C. Jensen's "Pacific Coast Crabs and Shrimps" for in depth descriptions of each species.

Lebbeus groenlandicus: These are stout-bodies shrimp. The carapace has four large teeth and the rostrum reaches slightly beyond the middle of the antennal scale. They typically have brown or reddish-brown bands on a translucent background. Typically 3-4 cm but can be up to 10 cm.

Sites: Intertidal and subtidal sites are found on the shores of the Deer Group Islands, Dixon L, Scott's Bay, off the Blowhole, along Grappler Inlet and at the Harbor mouth across from Aguilar Pt.

Methods: Shrimp can be caught in dip nets from tidepools or shrimp nets and shrimp trawls.

Holding: Shrimp should be held in continually flowing seawater in large tanks. Lids are not necessary.

Feeding: Shrimp are predators and scavengers that feeding on large invertebrates. Many are also detritus feeders.

Tank Cleaning: Once a week the shrimp 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 shrimp replaced.

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 uneaten prey organisms.
5. Check for and remove any foreign organisms.