

## **SPONGE CARE**

SOP #- PORI1

**PURPOSE:** To describe methods of care for sponges.

**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 number of sponge species found around BMSC.

<b><u>Species:</u></b>	Boring sponge	<i>Cliona californiana</i>
	Breadcrumb sponge	<i>Halichondria bowerbankia</i>
	Tiny vase sponge	<i>Sycon</i> spp.
	Spaghetti sponge	<i>Leucosolenia nautilia</i>
	Hermit crab sponge	<i>Suberites domuncula</i>
	Peach ball sponge	<i>Suberites montiniger</i>
	Orange puffball sponge	<i>Tethya californiana</i>
	Velvety red sponge	<i>Ophlitaspongia pennata</i>

**Identification:** Refer to 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 specimens.

***Cliona californiana:*** Sponge that 'bores' into calcium substrates; often bores into giant barnacle shells and giant rock scallop shells. The sponge appears as bright yellow dots of sponge within the structure of the host shell.

***Halichondria bowerbanki:*** This is an encrusting species that may form extensive patches up to 3cm thick. These sponges have many visible oscula over the exposed surface. It is generally tan or yellowish. It will fall apart like breadcrumbs and gives off a strong odor similar to that of exploded gunpowder when squeezed or broken.

***Sycon* spp.:** This sponge grows up to 5 cm and is found in silty low current areas. It is delicate, long, thin and flimsy in appearance. It's colour is off-white. They are often found in clusters on the docks and pilings.

***Leucosolenia nautilia:*** These sponges have a convoluted growth pattern which basically makes up hollow tubes all raveled together. These are one of the simplest sponges and are off white in colour. They reach a size of about 15cm.

***Suberites domuncula:*** These are boring sponges that use snail shells as hosts. The snail shell is then often occupied by a hermit crab so that it appears that the hermit crab is living in a sponge. The colour of the sponge is usually bright red and it grows to about 25cm in diameter.

***Suberites montiniger***: This orange sponge has a soft texture and a smooth surface. It bears a few scattered oscula which make it distinctive. It is globose in appearance. It grows to about 30cm in diameter.

***Tethya californiana***: As its name (Orange puffball sponge) implies this looks like an orange puffball. It is usually quite spherical in shape and can be found singularly or in clusters. Its surface has a corrugated texture and it is slightly lighter in colour in the crevices of the texture. This sponge can grow to 20cm in diameter.

***Ophlitaspongia pennata***: This is a bright red encrusting sponge, generally found on the undersides of rocks. It is highly variable in size.

**Sites**: Intertidal and subtidal sites are found on the shores of the Deer Group Islands, Dixon Island, and Scott's Bay, off the Blowhole, along Grappler Inlet and the Harbour mouth across from Aquilar pt.

**Collection Methods**: Sponges can be scraped off the substrate with a knife or spatula and collected in plastic bags or small plastic pots with some seawater. Some species, like *Tethya californiana*, may have to be collected with the rock that they are attached to. Many of the subtidal species cannot tolerate being exposed to air at all. Once they have been exposed to air, they tend to die over a period of a couple of weeks.

**Holding**: Held in continually flowing seawater in glass bowls in a sea table. No lids are necessary.

**Feeding**: Sponges extract microscopic food from the water, particularly phytoplankton. Supplemental feeding from plankton tows or with commercial algal pastes are needed at least twice a week to keep sponges healthy for long periods

**Tank Cleaning**: Once a month, the sponges should be removed from the tank and placed into a holding bucket. Care should be taken to transfer sponges from one tank to the other under water to ensure that the sponges do not have contact with air. 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 sponges 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 foreign organisms.