

POLYCHAETE CARE

SOP# - POLY1

PURPOSE: To describe methods of care for polychaetes.

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 a number of polychaete species found around BMSC.

Species

Scaleworm	<i>Arctonoe vitatta</i>
Sea-mouse	<i>Aphrodita negligens</i>
Calcareous tubeworm	<i>Serpula columbiana</i>
Feather duster worm	<i>Eudistylia vancouveri</i>
Nereid	<i>Nereis vexillosa</i>
Blood worm	<i>Glycera Americana</i>

Identification

Refer to Kozloff's "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.

Arctonoe vitatta*:** Almost every keyhole limpet will have one of these scaleworms tucked away between the foot and mantle cavity. It is ivory in color with a few dark transverse stripes, almost perfectly matching that of the mantle of it's host. It may also be found associated with ***Cryptochiton and in the ambulacral grooves of certain sea stars such as ***Dermasterias sp.*** It reaches 10 cm in length.

***Aphrodita negligens*:** This polychaete's shaggy appearance resembles a furry mouse but it's underside shows it's segmentation. It's off-brown tan colour is usually the same as the colour of the sediment that it is buried in. It can be up to 8cm in length.

***Serpula columbiana*:** This worm lives in a white calcareous tube that is attached to rock. The tentacular crown (feeding appendages) can range from bright red in colour to various shades of orange or pink banded with white. Generally, the extended animal and its tube can be 6.5 cm long.

***Eudistylia vancouveri*:** The leathery tubes of these polychaetes reach a diameter of more than 1cm and sometimes 20 to 25cm long. Often found on floats, they also occur

on rocky shores. The cirri are simply pinnate and richly colored by alternating bands of maroon and dark green. They often form large aggregate colonies.

Nereis vexillosa: They are found among California mussel beds and are abundant under rocks and wood in quiet bays. Their color is mostly a mixture of leaden grays with iridescent greens and blues and some reddish tones. The eversible pharynx is armed with pincer-like jaws and numerous small denticles. In sexually mature individuals, the parapodia become expanded into paddle-like structures for swimming. It reaches a length of about 15cm.

Glycera Americana: This worm is colourful and quite iridescent. Also known as the bloodworm, it is a common burrowing polychaete found along the coast. It has a pointed prostomium. It can evert a long muscular proboscis with four jaw-like teeth at the end. The worm has venom glands at the base of the jaws. Some people can have severe inflammation and possibly an allergic reaction to it's bite.

Sites

Arctonoe vitatta can be found intertidally living on ***Cryptochiton***, ***Dermasterias*** or ***Diodora***. ***Aphrodita negligens*** can be found by dredging or scuba diving in appropriate muddy or sandy bottoms.

Serpula Columbiana can be found in the very low intertidal and collected with the rocks they are attached to. The rocks can also be dredged.

Eudistylia vancouveri can be found off of just about every dock or piling. These may be accessed by hand but generally a scuba diver can find a loosened bunch of these worms.

Nereis vexillosa can be found off of any dock or piling enmeshed in a bundle of mussels. It is sometimes found in California mussel clumps in the intertidal.

Glycera Americana can be found by digging in shell or muddy intertidal areas.

Holding

Held in continually flowing seawater. Lids are necessary. The free-living animals must be provided with some sort of meshy type substrate in order to entangle itself or it will look for routes of escape.

Feeding

Aphrodita negligens - active predator and scavenger feeding primarily on small arthropods and other polychaete worms

Serpula Columbiana - Filter feeder

Eudistylia vancouveri - Filter feeder

Glycera Americana - Carnivorous on small prey items.

Arctonoe vitatt - Nips off the heads of small, tube dwelling worms.

Nereis vexillosa - Herbivorous, feeds on algae.

Tank Cleaning

Once a month the worms should be removed from the container 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 worms replaced.

Animal Return

Return animals to the site of collection.

Anesthetic/Euthanasia

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.

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