



**POULSBO
MARINE
SCIENCE
CENTER**

Poulsbo Marine Science Foundation QUARTERLY NEWSLETTER

WINDOWS ON THE SEA

by Nancy Sefton

THE GIANT GREEN ANEMONE CAN CLING TO WAVE-SWEPT ROCKS DURING LOW TIDE.

I am bent over double, unable to stop a steady slide down a slope of green slime, tennies soaking, shoulders in knots. Add a sniffly nose, blue hands, and legs that collapse like a folding chair when I try to stand after hours of crouching. Without warning, the sea sends an occasional scout wave to lick hungrily at my cold, wet feet. This is heaven.

It's noon on a crisp spring day. I'm perched precariously on a rock, overlooking the Strait of Juan de Fuca, during a minus tide. The sun has at last dissolved a veil of coastal fog. And quite honestly, I'd rather be here at this moment than anywhere on earth, creeping from one tide pool to another, staring at the colorful creatures displayed in nature's aquariums.

At the right time and place, marine animals representing every biological group found in the sea are showcased for the coastal hiker. Some creatures become dormant when exposed, their shells closed like trap doors to await the return of the sea. Other animals occupy shallow pools where they remain submerged during the lowest tides, carrying on their normal lifestyles, defending themselves, trying to gobble each other up, even reproducing.



For its inhabitants, the intertidal zone is a tough neighborhood. It features wide temperature and salinity variations, periodic drying, and the sledgehammer blows of tons of water at regular intervals. Despite the conditions, a huge variety of animals lay claim to this inhospitable real estate. The intertidal zone is the maritime equivalent of downtown. In fact, things get so crowded that it's literally Standing Room Only for some residents like mussels, barnacles and oysters.

The tenacity of intertidal dwellers comes in many forms: clinging feet, suction cups, gripping fibres, custom shell shapes, rubber necks, impregnable armor, a camel-like tolerance for the hot sun.

Before I knew much about intertidal life, I felt about as knowledgeable as the youngsters I often encounter in the intertidal zone. "Com'eer and see this neat thingamajig with all the legs! Hey, this purple creepy-crawly is eating a green whatchamacallit!" Time, experience, and some handy field guides have taught me much. I can now identify

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QUARTERLY NEWSLETTER

The Poulsbo Marine Science Foundation is a private, non-profit, 501(c)(3) corporation dedicated to supporting the Poulsbo Marine Science Center 18743 Front Street NE
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2009 CONTRIBUTIONS

The Poulsbo Marine Science Foundation gratefully acknowledges the following individuals, families and organizations who provided financial support during 2009.

Orca Benefactor

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MEMBERSHIP LEVELS

\$20 Student and/or 6-18 yrs

\$35 Individual

\$50 Family

\$250 Chinook Benefactor

\$500 Sea Star Benefactor

\$1000 Orca Benefactor

From your Foundation President **BRUCE HARLOW**



We have some great news to report this time – the second floor of the Marine Science Center has been rented. Our new tenant, Sealaska Environmental Services (SES), is a subsidiary of Sealaska Corporation, an Alaska Native corporation, which provides economic, cultural and social benefits to current and future generations of Alaska Natives. SES provides environmental remediation and restoration services to government and private clients. They currently have a five year contract with the NW US Navy to conduct Long Term Monitoring and Remediation Operations at their NW facilities. They conduct environmental sampling and remediation of soils,

groundwater, marine sediments and ecology, and fresh and marine surface waters. We are delighted to have them as tenants as their environmental work provides good synergy and has great value-added for the City of Poulsbo and the Center. The rent income will provide enough cash flow that, with careful management of our modest budget, we will be able to keep our doors open for the next five years. This is wonderful news for all of you who have worked so diligently and tirelessly to make our Marine Science Center a center of excellence.

BRUCE HARLOW

From your Education Director **SUSAN CRAWFORD**

Joyce Nishimura-Aquatic Zone Classroom Instructor
Ralph St. Andre-Marine Discovery Lab Instructor

Grade 6

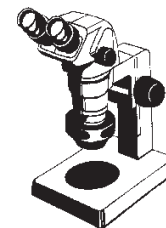
May (Sun) 17 Prep and set up for new grade level

May (Mon) 18, (Tues) 19, (Wed) 20, (Thurs) 21

Grade 3

June (Mon) 14 Prep and set up for new grade level

June (Tues) 15, (Wed) 16, (Thurs) 17, (Fri) 18



WINDOWS ON THE SEA

by Nancy Sefton

the purple creepy-crawlies, and I know why they're so busy eating those green whatsits.

On the edge of a shallow, rock-strewn pool, I sit quietly waiting for something to happen. Shortly the bottom debris begins to stir. What appeared to be small dark pebbles suddenly sprout jointed legs and lurch across the bottom – hermit crabs dragging their borrowed snail shells, like RVs, as they forage for food.

Nearby is a narrow surge channel, a crevice between rocks. From its dark depths, a red fluid form rises to the surface, extends tapered tentacles into the exposed rockweed and probes for a meal. Unmindful of me, an octopus casually penetrates a forbidden world.

Sea stars grip the rocks with tiny suction cups on the ends of their tube feet. The strongest waves fail to dislodge them. The Pacific's colorful five-rayed ochre starfish is the Jesse Owens of the intertidal zone, a voracious carnivore that "gallops" across the exposed shore, shamelessly gorging itself in the high mussel and barnacle beds.

The bat stars, not quite so mobile, are scattered helter-skelter, splashes of red, orange, blue and purple on the bottoms of dark pools, cartoon stars in a painted sky.

From every nook, giant green anemones blossom like chrysanthemums, some open and inviting, others closed upon themselves. Actually carnivorous animals, these flower look-alikes can be fatal, their poisonous tentacles spread to seduce the unwary. A tiny blue crab goes down for the third time into the gullet of an anemone, only the victim's claw emerging in a last silent plea for help.

As one wanders down the rugged shore, the sea delights in offering a hint here, a clue there, tantalizing fragments tossed up to lie scattered on the mind. The molted crab's abandoned shell is a half-told tale. The mussels and barnacles, their doors closed to strangers, keep their secrets until the waters rise. The spent

heap of kelp piled upon the rocks beneath a buzzing cloud of insects alludes to a drowned forest, its canopy afloat on the far surface like a girl's hair. An empty snail shell, the sea's refuse, is an object of desire.

At each tiny pool I've stared through the sea's looking glass into an intriguing world I can never be part of. The tide turns at last and water flows like a transfusion into nooks and channels, bringing renewal. As the sea returns, intertidal residents resume their normal lifestyles, while I, the uninvited, retreat to higher ground.

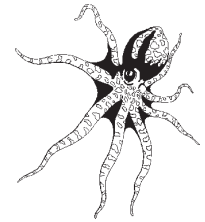
THIS SPRING'S BEST TIDE POOLING:

Beaches #3 and #4 north of Kalaloch
Ruby Beach
Rialto Beach north of La Push
Second and Third Beach south of La Push
Cape Alava (3.5 mi. trail from Lake Ozette)
Salt Creek State Park west of Port Angeles

THE BRIGHT BLOOD STAR IS COMMONLY SEEN ON ROCKY SHORES AT LOW TIDE.



From your Aquarium Director PATRICK MUS



Onward and upward as the saying goes! The look down tank is completed with the new inhabitants living well. The list of animals and plants inhabiting the tank thus far are: eight Starry Flounders (*Platichthys stellatus*) ranging from 7.4 cm to 12.3 cm, two Northern Kelp Crabs (*Pugettia producta*), three Graceful Crabs (*Cancer gracilis*), four juvenile Great Sculpins (*Myoxocephalus polyacanthocephalus*), two Pacific Staghorn Sculpins (*Leptocottus armatus*). In addition, you will find three bright orange Sea Pens (*Ptilosarcus gurneyi*) along with some native eelgrasses. There are other assorted animals and sponges as well. So when you come in, you will have to look hard to find the flounders and other small creatures.

So what is next? The lower sides of the octagon tank will be covered with driftwood along with the installation of two 125 gallon glass aquariums that will be placed next to the window that looks into the early education classroom. I plan to place the small inhabitants of the area in these, such as decorator crabs, small fishes, corals, sponges and Moon Snails (these aren't small) and other types of bivalves.

Photo of a California Sea Cucumber
(*Parastichopus californicus*) by Tyne Tennyson 03/08/2009



Photo of the Look Down Tank with Sea Pens (*Ptilosarcus gurneyi*) by Patrick Mus 03/11/2009

As for Sam the octopus, he weighs around 40 pounds and is at least 8 ½ feet across. He is still healthy and growing. Nevertheless, his time with us is ending and he needs to be released soon. I have not picked a date but the day will have to be mid to late May.

We will have a going away party for him prior to his departure and the date will be posted in the local paper, on the sign out front, as well as the web site. This news brings sadness and joy at the same time. He will have a chance to continue his unique physiology by passing on his genes.

At the same time, I am looking for his replacement and again will be holding a naming contest for her or him. Ten year olds and below will do the choosing, ending with a random drawing for the final pick.

So thanks again for all of the support, from the donations of air from Sound Dive to Hot Shots Java, The Book Stop, Liberty Bay Books to all of the membership donation and the individual donations.

Denise and I have figured that we have had at least 3800 hours of donated time through volunteerism since we have opened. This not only

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Volunteer of the Quarter **RICK SPENCER**



Rick retired from the Federal Government in 2006 after a thirty year civilian career as an Environmental Engineer with the Navy. Looking for something to do to help out in the community, he started volunteering at the MSC in January 2008. Rick has had a definite affinity for water during his entire life. While growing up, many of his summers were spent swimming, camping, and eating lots of oysters along Hood Canal. In addition, Rick started swimming competitively at the Bremerton YMCA at age eight and has continued swimming ever since. At age 60 he still regularly competes in Master's swim meets in the Puget Sound area. In January of this year Rick gave up his part-time lifeguard job at the Bangor swimming pool and is now "more or less" fully retired. This leaves more time for his favorite pursuits of kayaking, hiking, and golfing with his wife Polly.

At the MSC, Rick especially enjoys assisting Aquarium Director Pat Mus with aquarium operations and helping with the design and installation of new exhibits. According to Rick, "It's amazing the amount and complexity of the behind-the-scenes equipment and processes that are required to support our aquarium exhibits. It's very similar to a small-scale industrial operation." He also enjoys feeding the animals (especially the wolf eel) and performing his docent duties on Friday afternoons. Rick says, "It's especially gratifying to hear comments from our patrons about how much the MSC continues to improve with every visit." Finally, Rick adds, "I've learned so much from Pat, my fellow volunteers, and our patrons about our local marine environment. Thank you all!"

DENISE BAUMAN

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From your Aquarium Director

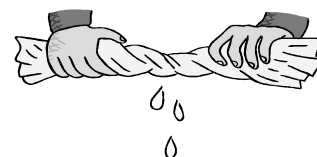
benefits the community but the volunteers and me as well. So between us all, including the board of directors, we are holding our own.

A touch screen has been donated that will be connected wirelessly to a new buoy to be placed in Liberty Bay in the next few months. This donation was from Intellicheck/Mobilisa. Along with that, we will have a "traveling photographic exhibit" sponsored by NOAA of their 2009 Preserve America Initiative proposal to showcase 30 years of novel scanning electron microscope images of marine life in the Pacific Northwest. So keep track of the web site for new events and programs.

PATRICK V. MUS

DONATIONS SOUGHT!

- ◆ Coffee maker with light that shows if it is on/off (as you can tell, we are into coffee!)
- ◆ Water heater for tea
- ◆ Bottled water, soda, or snacks for volunteer area
- ◆ Extension cord (especially the three-pronged, grounded type)
- ◆ Old towels



From your Volunteer Coordinator

DENISE BAUMAN

“What do you mean – you don’t offer classes?”
The new Marine Science Center does not receive any money from the schools or anyplace that would fund educational activities. And yet we try to be educational in everything we do. What do we do if someone wants to take a class? The younger ones are free to come with their parents/guardians and look as long as they want. We have books, DVDs, knowledgeable volunteers, and lots of observation time to offer. For high schoolers and older, the option is to VOLUNTEER.

If someone wants to find out if they want a career in marine science, what better way than to spend time with the critters? High school and college volunteers find out first-hand if they like the countless hours spent observing intertidal life. In addition, most of our volunteers get to feed or at least help with food preparation, cleaning the glass and the facility, and counting visitors. Interacting with human visitors is usually not the first choice of a new volunteer but over time, students get

more comfortable with that aspect. Most marine scientists will spend at least part of their time talking with people, giving guided tours or presentations, writing proposals, teaching, etc. So human interaction is a valuable skill that is learned by volunteering at the Marine Science Center, even if it is not the original goal.

While our volunteers are invaluable in running the MSC and keeping the doors open, let’s not forget that the Center also offers something to volunteers besides just the knowledge that they are helping others. And thanks to all you long term volunteers who are providing this experience to the new and young volunteers, who are checking out marine science,

If a visitor doesn’t know anything, then the volunteers are very knowledgeable, but if a visitor is an expert, then it is a chance to learn by asking questions rather than giving answers. If someone is a volunteer, visitors don’t expect them to know much besides where the restrooms are. So the fact that our volunteers know so much about what is at the Center impresses visitors!

2009

SCHEDULE OF EVENTS

Dates:

- April 10, Friday : Volunteer potluck at MSC at 6:00
- May 2, Saturday: Next volunteer docent training class at MSC at 10:30
- May 5, Tuesday: Kitsap Water Festival, MSC booth, daytime. Festival for Kitsap 4th graders at the Fairgrounds.

Holiday Schedule

- Spring Break, Kitsap Public Schools, March 28 – April 5 (two weekends and week in between)
- Easter Sunday - MSC is open, April 12 regular hours
- Memorial Day weekend, Monday May 23-25 – MSC is open Saturday and Sunday, but closed on Monday as usual.

Preschool storytime, 11:00 on Saturdays (starting soon)