

Tunicates on the Move

Judy D'Amore, Naturalist/Curator NHE

With international trade and travel on the upswing, it shouldn't be a surprise that plants and animals are on the move too. Intentionally or unintentionally, we are helping living organisms get to places they never could reach before. When it happens below the water, we sometimes miss species we'd like to keep out until it's too late to stop them.

Some of the worst marine nuisance species belong to the taxonomic group tunicates. Commonly called sea squirts, tunicates are a group of marine animals that spend their adult lives attached to hard surfaces, such as docks, rocks or the undersides of boats. Since these small, sedentary animals aren't able to disperse themselves except during a brief larval stage, at first glance they wouldn't seem like something that could cause us much trouble, but appearances can be deceiving. Once attached to the hull or ballast compartment of a boat, they have become as mobile as we are. In a new environment, sea squirts can grow rapidly, covering all available surfaces, competing with native species and disrupting their new habitat.

Tunicate species have one of two basic body plans. Some species live as solitary individuals in the way of clams or sea anemones. Other species are organized in colonies of smaller individuals called zooids. Colonial forms can grow outward by the asexual budding of zooids, but they can also reproduce in the normal way by releasing motile larvae. Of the two species currently raising concern around Puget Sound, one is a solitary tunicate and the other a colonial tunicate.



Styela clava, the solitary species, was first noticed in Puget Sound in 1998. It is club-shaped and very large for a tunicate—6–8 inches long—with a cylindrical body that tapers to a thin stalk that anchors it to a rock. The “head” end has two openings or siphons through which the animal pumps water to filter plankton. *Styela clava* grows on rocks, floats and pilings in the low intertidal. Its native range is the western Pacific but it is now widely distributed

STYELA CLAVA
 COURTESY OF
 STACHOWICZ LAB



DIDEMNUM SP. A COURTESY OF GRETCHEN LAMBERT

on both the east and west coasts of North America, throughout Europe and in Australia. Although it is closely related to several native and non-native tunicate species previously living on the West Coast, *Styela clava* is a particular nuisance because it is large and can reach extremely high densities, competing with other species, fouling boat hulls and floating docks, and causing damage to shellfish beds. In some parts of the world it has reached densities between 500 and 1500 adults per square meter, an alarming prospect indeed!

Styela clava is able to reproduce in water above 15° C, a temperature easily reached in most parts of Puget Sound during the summer, but so far it has only been found in three places. One of these sites, Pleasant Harbor Marina near Brinnon, is not far from Port Townsend. The other two Washington locations are the marinas at Neah Bay and Blaine.

The second tunicate being closely watched is a colonial species in the genus *Didemnum*. Taxonomists have not yet decided which species we have in Puget Sound, so for now it is being called *Didemnum sp. A*. This species can grow in harbors over boat hulls, ropes, docks and other structures where it forms irregular lobes and hanging sheets up to a meter long. It can also form extensive encrusting mats over gravelly bottoms, smothering other marine organisms. It can be spread in several ways: by dispersing motile larvae, by overgrowing surrounding areas, or, when fragments break off a colony, they can be carried about by currents to settle and grow in a new location. It is difficult to

... continued on page 6

IN THIS ISSUE

- 2  PTMSC Monitoring Opportunities
 - 3  Schedule of Events
 - 3  Big Eddy Goes International:
Thinking Ecosystems Without Borders
 - 4  Spring Programs
 - 4  Hands-On Summer Science Camps
 - 4  What's New at the Burke
 - 5  Extreme Nature: Images from the World's Edge
 - 6  Onshore/Offshore: Marine Ecology &
Conservation for Teachers
 - 7  Interaction with Marine Mammals
 - Inserts  MSC Pen
- 

Spring Opening Weekend
 at the Marine Exhibit
 April 1 & 2

Both Exhibits open
 Sat. & Sun. 12–4pm
 Check Web site for scheduled
 family-friendly activities

PTMSC Monitoring Opportunities

With the opening of the New Discovery Lab last year at the PTMSC, we have renewed our dedication to citizen science. If you want to learn more about the marine environment around you, we have several different baseline monitoring projects to get involved with. Baseline monitoring is not always the flashiest of scientific studies, but your participation in any of these projects will provide essential data needed to understand long term trends and offer support for studies of our nearshore which might not get done without citizen involvement. If you'd like to get involved with any of the projects listed below, please contact Kristin at 385-5582 ext 110 or kwilkinson@ptmsc.org.

East Jefferson County Marine Mammal Standing Network (EJCMMSN) This volunteer network provides data to NOAA on dead, stranded or abandoned marine mammals on our shores. Volunteers are trained to respond and collect vital stats on any marine animal reported to the stranding net hotline (360-385-5582 ext 103). This information is entered into a national database that is used to establish baseline information on marine mammal communities.

Beach Environmental Assessment, Communication and Health Program (BEACH) A partnership with Washington State Department of Health, Department of Ecology and EPA, that tracks water quality of saltwater recreational beaches to protect public health. Water samples are collected weekly, June–September, in Fort Worden State Park and sent to an accredited lab to be analyzed for harmful bacteria loads. This information is made available to the public on a Web site or by phone.

Surfrider Blue Water Task Force The program is similar to BEACH but is managed by Surfrider Foundation. It also looks for harmful bacteria loads but samples can be processed by volunteers at the PTMSC. The group acts as a watch dog, alerting state health and safety organizations if a beach is of concern.

Paralytic Shellfish Poisoning Detection Network A Partnership with Department of Health designed for recreational shellfishers who rely on accurate and timely PSP information. Mussels are gathered from the PTMSC dock every other week, May–November, and sent to the Department of Health. Volunteers make a valuable contribution to the health and safety of our community by tracking concentration of the PSP toxin in blue mussels so beaches can be closed in a timely manner if shellfish are unsafe to eat.

Long-Term Monitoring Program and Experiential Training for Students (LIMPETS) This program is an intertidal transect inventory of Kinze Beach. This study is done 3 to 4 times a year, often with program participants such as summer camp and teachers workshops. Our goal is to train a team of volunteers in the survey protocols so that they can assist with visiting groups and carry out a fall survey. The cool thing about this project is that

all groups participating in this partnership with the National Marine Sanctuaries and NOAA follow the same protocol and data is available on a NOAA Web site. Contact Mikkel for more information on this study at ext. 110 or mbjornson@ptmsc.org.

European Green Crab Monitoring Program This Washington Department of Fish and Wildlife project managed by Nahkeeta Northwest Wildlife Services focuses on monitoring for the presence of the Green Crab, an invasive species. Volunteers monitor several beaches in our area using crayfish traps deployed for 24 hours once a month, April–September. The contents of the traps are then recorded and reported back to WDFW.

Olympic Region Harmful Algal Bloom (ORHAB) This study investigates bloom origins of toxic algae, assesses environmental conditions conducive to blooms and monitors where and when the blooms occur. The group was organized to foster collaboration and cooperation among federal, state, and local management agencies. Volunteers gather plankton samples from docks in Port Townsend and Marrowstone Island and analyze them for the presence of any species of concern. Gathered May–October and takes about three hours.

Marine Water Quality Monitoring Program This is an extension of work being done by the Hood Canal Dissolved Oxygen Program, HCDOP. The PTMSC will follow all protocol designed by the HCDOP adding to their extensive baseline data set for Hood Canal. This will allow researchers to compare what is happening inside the Canal with water samples outside that system. We start sampling in Port Townsend this spring and hope to find funding to start a sampling program out of Port Ludlow. Volunteers will be asked to take very accurate readings of water quality once a week year round in rotating teams.

Beach Seines This is a great way to monitor the eelgrass system in Fort Worden State Park. Often beach seines are done with groups of visiting students but we also have opportunities for volunteers to help pull the 100-foot net through the eelgrass bed to inventory species found. This in-house, long-term data set is an incredible resource for anyone studying near shore eelgrass-based food webs.

Other projects that you might want to check out: *Coastal Observation and Seabird Survey Team (COASST)*—monitors dead seabirds. www.coasst.org

North Olympic Salmon Coalition (NOSC)—A group focused on salmon restoration. www.nosc.org

Water/Beach Watchers—A program designed to help educate Jefferson County residents about their watershed. www.jefferson.wsu.edu

To learn more or get more involved with Puget Sound conservation issues:

Marine Resources Committee—A citizen-based effort to identify regional marine issues, foster community understanding and involvement, recommend positive action and develop support for various protection and restoration measures. www.jefferson.wsu.edu/mrc

Puget Sound Action Team—This team defines, coordinates and implements Washington State's environmental agenda for Puget Sound. www.psat.wa.gov

You have plenty of ways now to get involved with monitoring Port Townsend Bay and adjacent waters. As you can see, we have taken on a lot of projects and will need your help. I hope to see you soon, with your hands wet, eyes to a microscope or a smile on your face as we play, I mean study, this beautiful water around us.

—Cinamon Moffett

Octopress is a quarterly publication of the Port Townsend Marine Science Center, A 501(C) (3) nonprofit educational organization. Your comments, contributions, and support are greatly welcomed and appreciated. PTMSC is located at Fort Worden State Park in Port Townsend, Washington on the Olympic Peninsula.

PTMSC

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info@ptmsc.org | www.ptmsc.org

The Main Office is located on the 2nd floor of the Fort Worden State Park Office. The Marine Exhibit & Natural History Exhibit are located on the Pier and on the Beach at Fort Worden State Park.

Admin. Staff	Bookkeeping	Executive Director	Marketing	Volunteer Coordinator
Alice King info@ptmsc.org ext. 104	Marilyn Hoelt mhoelt@ptmsc.org ext. 105	Anne Murphy amurphy@ptmsc.org ext. 102	Christina Pivarnik christina@pivarnik.com 379-3378	Jean Walat jwalat@ptmsc.org ext. 112
Americorps Interns	Educator/Aquarist	Maintenance	Museum Curator/ Educator	Volunteer Scheduling No.
Mikkel Bjornson Kristin Wilkinson Molly Maline	Cinamon Moffett cmoffett@ptmsc.org ext. 109	Jeff Gallant Keith Brkich	Judy D'Amore jdamore@ptmsc.org ext. 204	ext. 112

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*Bo Bricklemeyer Ron Deisher Michael Legarsky Gary Pascoe Chuck Turner
Dan Darrow Frank Handler Ev Muehlethaler Dave Sterritt Connie Welch*

PORT TOWNSEND MARINE SCIENCE CENTER

SCHEDULE OF EVENTS

See MSC Pen for Volunteer Events

NEW SPRING HOURS

MARINE EXHIBIT (ME) & NATURAL HISTORY EXHIBIT (NHE) HOURS:
Friday, Saturday and Sunday, 12noon to 4pm

APR	1	SA	Spring Opening Day Exhibits open Friday through Sunday: 12 noon to 4pm Protection Island Spring Migration Cruise 1–4pm
	8	SA	Introduction to Marine Biology: Training to Become a Marine Exhibit Docent 9am–12:15pm NHE Classes every Saturday until May 13
	11	TU	Geology Study Group 5:15pm NHE
	15	SA	Protection Island Spring Migration Cruise 1–4pm
	22	SA	Protection Island Spring Migration Cruise 1–4pm
	23	SU	Lecture— <i>Extreme Nature: Images from the World's Edge</i> , by Bill Curtsinger (see p. 5) 2:30 NHE
	25	TU	Geology Study Group 5:15pm NHE
MAY	29	SA	Protection Island Spring Migration Cruise 1–4pm
	7	SU	Volunteer Potluck
	9	TU	Geology Study Group 5:15pm NHE
JUN	23	TU	Geology Study Group 5:15pm NHE
	6	TU	Marine Birds: Trends and Stewardship
	13	TU	Geology Study Group 5:15pm NHE
	15	TH	Summer Opening Day Exhibits open Wednesday through Monday, 11am–5pm Lecture— <i>Big Eddy Goes International</i> by Carol Bernthal, Olympic Coast National Marine Sanctuary 7pm NHE
	27	TU	Geology Study Group 5:15pm NHE

**FOR INFORMATION ON ANY OF THESE PROGRAMS CALL THE PTMSC
at 360-385-5582 or e-mail—info@ptmsc.org**

PORT TOWNSEND MARINE SCIENCE CENTER PROGRAMS ARE OFFERED IN COOPERATION
WITH THE WASHINGTON STATE PARKS AND RECREATION COMMISSION

Big Eddy Goes International: Thinking Ecosystems Without Borders

A Presentation by Carol Bernthal, Superintendent of the Olympic Coast National Marine Sanctuary

Thursday, June 15 7pm in the NHE



Who the heck is Big Eddy and what is he doing to sustain our beloved whales, salmon, and seabirds? Come and learn about the Big Eddy Ecosystem and an international grassroots campaign to protect this transboundary region. The Big Eddy, formally known as the Juan de Fuca Eddy, straddles the northern portion of the Olympic Coast National Marine Sanctuary in Washington State and the southern coastal waters of Vancouver Island. Driven by a seasonal, nutrient-rich coastal upwelling that feeds one of the most productive eco-

systems on the continental margin, the Big Eddy is North America's second most important fishing ground, home to rich First Nations' cultures, and a popular recreation and tourism destination. An international group composed of conservationists, scientists, tribes, aboriginal interests and governmental officials have come together to foster cooperation and awareness of the Big Eddy. Ms. Bernthal will update you on the initiative's efforts to date and what the future might hold.

A long time resident of Port Townsend, Carol considers herself a "resource management mutt" having worked in diverse settings ranging from the Bering Sea (in winter!), the alpine meadows of Mt. Rainier, and the salmon streams of the Olympic Peninsula.

Admission: \$7 nonmembers (\$4 for youth), \$3 members (\$2 for youth).

Hands-On Summer Science Camps

In **Bones, Bugs & Bluffs Day Camp**, campers will explore the varied natural environments from beach and glacial bluff to forest, pond and meadow. Campers will put together skeletons of marine mammals, catch and learn about insects, find out about earthquakes detected on our seismograph, investigate the life in a pond, and make connections between fossil animals and their descendants alive today. With hikes, crafts, games, and quiet times in a beautiful setting, this camp offers fun, hands-on experiential learning.

In **Marine Biology Overnight and Day Camps**, campers are immersed in scientific study and creative activities. Activities include sieving through goopy sediments looking for brittle stars, pulling a seine net through eelgrass beds to learn where young fish hide and observing microscopic life that supports all life in the sea. These activities give campers the opportunity to learn about individual groups of marine plants and animals while taking an ecosystem approach to marine study.



opportunity to learn about individual groups of marine plants and animals while taking an ecosystem approach to marine study.

Adventures in Marine Research—A weeklong residential workshop for teens where students jump into the world of coastal marine research by spending

a week backpacking on the outer coast. They learn about current research projects designed to assess the health of our marine environment while exploring the tide pools and watching the marine birds and mammals play in the nearshore. This small group will work with marine scientists to participate in several long-term research projects and conduct their own experiments while in the field. We invite all students that are passionate about science, the marine environment, the outdoors or just want the experience of a lifetime to join us.

Marine Biology Residential Camp

July 9–15, 2006 \$575 For ages 9–13

Adventures in Marine Research

July 23–29, 2006 \$725 For students entering grades 9–12

Bones, Bugs & Bluffs Camp

July 31–August 4, 2006 \$180 For ages 8–12

Marine Biology Day Camp

August 7–11, 2006 \$180 For ages 9–13

Spring PROGRAMS

All programs are at 2:30 pm

APRIL

1	SA	Life in the Food Chain	ME
2	SU	Bird Beak Buffet	NHE
8	SA	Big on Bivalves	ME
9	SU	Amazing Seabirds!	NHE
15	SA	Puget Sound Food Webs	ME
16	SU	Endangered Species	NHE
22	SA	Seastars of Puget Sound	ME
23	SU	Extreme Nature: Images from the World's Edge: Bill Curtsinger	NHE
29	SA	Who Eats Whom?	ME
30	SU	Geo-puzzle Fun	NHE

MAY

6	SA	Squid Dissection	ME
7	SU	Beaks to Feet	NHE
13	SA	Life in the Food Web	ME
14	SU	Volcanoes	NHE
20	SA	Forage Fish	ME
21	SU	Earthquakes	NHE
27	SA	Who Eats Whom?	ME
28	SU	Raised in the Rainshadow	NHE

JUNE

3	SA	Awesome Anemones	ME
4	SU	On a Mammoth Scale	NHE
10	SA	Puget Sound Food Webs	ME
11	SU	Following Animal Tracks	NHE

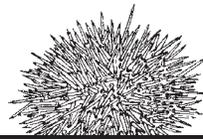
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WHAT'S NEW AT THE BURKE

Wildlife Photographer of the Year, 2005

June 24–Sept 3, 2006

The world's most prestigious wildlife photography contest is coming to the Burke Museum this June with over 90 winning wildlife images from around the globe. Art Wolfe, Northwest photographer, was among the judges for the 2005 competition, sponsored by *BBC Wildlife* magazine and the Natural History Museum in London. Winners were culled from over 20,000 entries of images from whales to waterfalls. Activities and demonstrations are planned for the opening weekend, Sat. June 24, from 10am to 4pm.

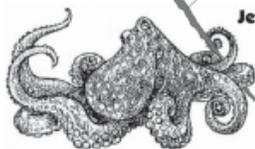
"Tides of March" Thank You

The second annual "Tides of March" Benefit Auction was another great success for the PTMSC! On behalf of the entire auction committee, we thank you for your support as sponsors, contributors, volunteers, and especially as bidders. It was such a fun evening, with outstanding food (thanks to our amazing chefs) and great items to bid on (thanks to our creative and persevering acquisitions committee).

Everyone's generosity raised over \$40,000 to help with operating expenses and to help fund our educational programs. This is such an important contribution to our organization; we simply can't thank all of you enough for your support!

—Your Hardworking, Effervescent
Auction Committee

The Tides of March Benefit Auction



Jefferson County
Fairgrounds
Erickson Bldg.
6 pm

Extreme Nature: Images from the World's Edge

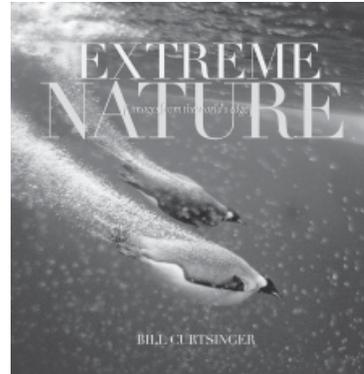
A lecture and slideshow with Bill Curtsinger, Saturday April 23, 2:30pm

Bill Curtsinger is an extraordinary photographer who specializes in seldom-seen subjects below the water's surface. He says, "I have always been drawn to remote regions and severe landscapes." He avoids the "colorful, flamboyant environment of coral reefs," preferring dark, cold places best. He adds that he is attracted to "shy animal subjects, ones that are elusive and unseen."

Bill's photography takes him on dives beneath the polar ice caps, or swimming with whales and seals, sharks and jellyfish, and he has the patience and artistic vision to capture on camera the strange images he finds there. He writes, "My goal is to immerse myself in an animal's world so that I can extract from those moments a new image or a new insight into behavior heretofore unseen."

The Port Townsend Marine Science Center is thrilled to host an afternoon with this remarkable photographer. Bill's career spans more than 30 years and his work has appeared in high-profile magazines for decades. He has photographed 33 articles in *National Geographic* including six cover articles. Among his earlier books is *Wake of the Whale*, written in 1980 with Kenneth Brower of Friends of the Earth. "His photographs of whales, seals, and dolphins that appeared in *Wake of the*

Whale, were the first look at many marine mammal species in their natural habitats around the world, and helped launch an international interest in whales, seals, and dolphins, and their plight" ... David Brower, 1999. Bill is bringing with him his most recent book, *Extreme Nature*, which he will be signing and making available for sale.



"I like to think that my work has revealed to some how splendid a place our planet is, and has instilled a sense of wonder and reverence for its natural gifts—especially those that often go unnoticed and unseen."

Extreme Nature: Images from the World's Edge will be held at 2:30pm in the Natural History Exhibit, on **April 23**. Program admission, which includes admission to the Natural History Exhibit, is \$7 for nonmembers (\$4 for youth), \$3 for members (\$2 for youth). We hope to see you all there.

1539 Water Street, Port Townsend, WA 98368
(360) 385-1461



Seth Bender Memorial Scholarship Fund

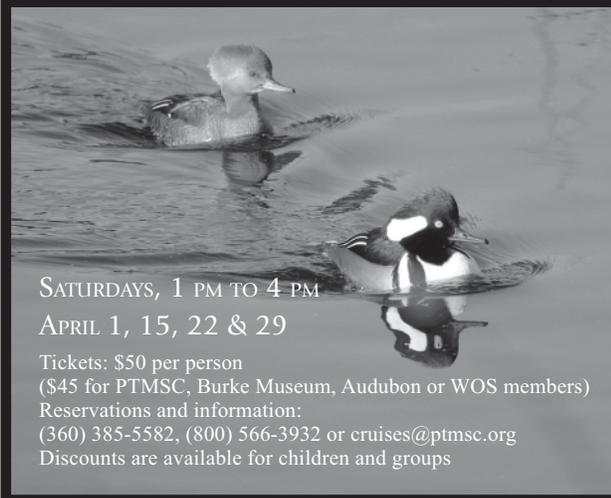
PTMSC's hands-on Marine Science and Natural History camps provide educational opportunities for boys and girls ages 8–18. This scholarship fund, established in memory of Seth Bender, provides tuition assistance for low-income families.

We sincerely thank the following who have contributed since our last issue: Sheila Bender.

Contributions to the scholarship fund are always accepted and can be sent to:

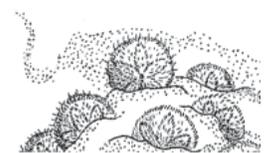
Seth Bender Memorial
Scholarship Fund
Port Townsend Marine Science Center
532 Battery Way
Port Townsend, WA 98368

PROTECTION ISLAND SPRING MIGRATION CRUISES



SATURDAYS, 1 PM TO 4 PM
APRIL 1, 15, 22 & 29

Tickets: \$50 per person
(\$45 for PTMSC, Burke Museum, Audubon or WOS members)
Reservations and information:
(360) 385-5582, (800) 566-3932 or cruises@ptmsc.org
Discounts are available for children and groups



HEIDI HECHT-HOGLUND
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PHOTO: CAROLINE LITTLEFIELD

ATTENTION K-12 TEACHERS!

ONSHORE/OFFSHORE: Marine Ecology & Conservation for Teachers

June 24-29, 2006

Spend half the week onshore in Fort Worden State Park doing labs and classes, and half the week onboard the schooner *Adventuress*.

- Explore the world of marine science at the Port Townsend Marine Science Center
- Sail aboard the *Adventuress*, owned and operated by Sound Experience.
- Take home great standards-based activities for K-12 classrooms in content areas ranging from biology to geology, art, chemistry, physics, and language arts.

Tuition: \$350 for Washington teachers; \$650 for out-of-state teachers, 50 clock hours and/or 5 credits available for an additional fee. Enrollment **limited** to 24 participants. Apply now to be sure of a place. For information and registration, visit www.ptmsc.org, click on "School Visits and Teacher Workshops," then "Onshore/Offshore Teachers Workshop." Or contact us at (360) 385-5582, (800) 566-3932 or info@ptmsc.org.



Tunicates ... continued from page 1

pinpoint where this species originated, since it is still unclear which of several closely related species it is, but it may have come from Japan. It could have arrived as a fouling organism on a ship's hull, as a floating fragment in ballast water, or attached to shellfish brought in for aquaculture. *Didemnum sp.* A was first discovered in Washington in 2004.

Because it disperses so easily and overgrows surfaces in its environment so rapidly, *Didemnum sp.* A is considered a serious threat in Puget Sound. Off the East Coast it has managed to cover between 50 to 90% of the bottom of a 100-square-km area on Georges Bank, with serious impact to other bottom-dwelling organisms. Locally it has been found growing on mussel lines at Taylor Shellfish in Dabob Bay, as well as in Totten Inlet, Des Moines Marina and at Edmonds Underwater Park. The tendency of this species to break up into fragments makes eradication difficult, though not impossible. At the Edmonds Park eradication efforts and monitoring by local dive groups has had some success.

This past year, regional awareness of invasive tunicates received a boost from Simon Geerloffs, a graduate student at the UW School of Marine Affairs and Port Townsend native. In May 2005, Simon led a workshop on recognizing invasive tunicates, sponsored by Washington Sea Grant and held at the Port Townsend Marine Science Center. He also helped coordinate the partial eradication of *Styela clava* at the Pleasant Harbor Marina in November 2005. Now serving as an intern with Senator Maria Cantwell, Simon is hopeful the State of Washington will fund a major effort to remove these two nuisance species while it is still possible to control them.

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President
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Many Thanks are due ...

- ❖ **Roz Greene** for the comprehensive collection of books on marine science and natural history.
- ❖ **Dave Drewry** for the beautifully-mounted specimens of three scoter species and a harlequin duck
- ❖ **Karen DeLorenzo** for the copy of *Eastern Pacific Nudibranchs*
- ❖ **Lynn Nadeau** for the underwater strobe light



SAIL TO PROTECTION ISLAND

Saturday, July 1, 2006

Every summer the Port Townsend Marine Science Center offers ONE 6-hour sailing adventure to Protection Island National Wildlife Refuge aboard the historic schooner, *Adventuress*. Tickets are \$75 per person or \$70 for



members of the Marine Science Center, Audubon, or the Washington Ornithological Society.

Join the Port Townsend Marine Science Center for a unique experience. Call the Marine Science Center at (360) 385-5582 or (800) 566-3932 or email cruises@ptmsc.org for reservations and additional information.

Donald R. Young, DDS, FAGD
Fellow, Academy of
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NEW & RENEWING MEMBERS

Thanks! To our New & Continuing Members! The following folks have either joined or renewed their PTMSC membership since the Winter '06 *Octopress* was sent!

STUDENT

Charley Waters

INDIVIDUAL

Marge Abraham
Doris Bailey
Katherine Baril
John Bates
Harriet Beale
Cheryl Bentley
Nancy Giebink
Joan Celia Goff
Kathleen Kelly
Beth Krehbiel
Caroline Littlefield
Gwen Lovett
Larry McKinnon
Jamie Parker
Bob Pastorok
John Pedersen
Melanie Power
Maurice Schwartz
Mary Ann Shaffer
Katrina Spear
Richard Strickland
Julie Sutherland
Sharon Thomsen, M.D.
Joe & Claudia Wagner
Claudia Welch
Ruth Weyman
Merilynn Wilson
Clarice Wyant



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Phil Andrus and Family
George & Jane Ansley
Johan Bahlmann
Rosina C. Banks
Frank & Betty Bellinghausen
Mack & Barbara Boelling
Dorothy Bonnett
Adam & Lani Burns & Family
Dr. & Mrs. Michael & Hilda Cahn
Betsy Carlson & Erik Wennstrom
Mel Christensen & Seth Rolland
Roger Contor
Bonnie Corra
Stanley L. Cummings
Janet Dallett & David Mathieson
Britt & Curt Danielson
Leo & Pat de Grijjs
Woody & Hiroko Dennis
George & Donna Earl
Rosemarie Edwards
Reto and Jana Filli
Nancy & Gary Fredrick
Carl & BettyAnne Friedericks
Rachel & Joe Gaspers
Richard & Jody Glaubman
Johanna Goering
Charles & Joan Gotschalk
James, Rebecca, Brandon, Kendall & Kaitlyn Hawley
Carl & Barbara Hill
Greg & Pam Jensen
Chris Jones & Eileen Cooney
Elsie & Hank Kimball
David & Alice King
Renee & Jim Klein Family
Vicki Kobeski
Jane & Charlie Kopriva
Thomas Lambert
Sally Loken
Frank & Lois McFeely
Margaret McGee & David Schroeder
Gail Miller
Carol Modena & Dana Roberts
Cheryl Moffett
Gwen Moore & Pat Britt

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Ellen Mosolf
Kathleen Muir & Jack Manning
Jim & Helen Oakland
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Catharine Robinson
Heidi Ruegg & Ralph Watson
Kevin & Sue Ryan
Joan Sandford
Richard & Nancy Schneider
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Interaction with Marine Mammals

By Kristin Wilkinson

You are enjoying a walk along your favorite beach and come upon a seal pup. It is alone, you want to do something but are not sure what you should do. Do you leave it alone and keep walking? Do you guard the animal? Should you call someone? The last answer is the correct one. If you encounter a marine mammal on the beach, and feel that it needs assistance please call the East Jefferson County Marine Mammal Stranding Network. Our hotline is: (360) 385-5582 ext. 103 and I will take it from there.



Among my other responsibilities at PTMSC, I am currently the coordinator for the East Jefferson County Marine Mammal Stranding Network. The network was established in 2004 and is designed to respond to marine mammal stranding events within East Jefferson County. The network is affiliated with the National Marine Fisheries Service, Northwest Region Protected Resources Division located in Seattle.

Volunteers are trained in the methods of handling beached and stranded marine mammals. Data is collected from each event and entered into a national database that is used to establish baseline information on marine mammal communities and their health.

Several species inhabit Puget Sound and Washington's coast, these species are vital to the environment and are protected under the Marine Mammal Protection Act, and certain species are also protected under the Endangered Species Act.

Seals and sea lions utilize shoreline locations in Jefferson County on a regular basis as resting places or "haul-outs." These haul-outs are vital to their health and daily activity. Humans should keep a distance of at least 100 yards from any marine mammal on the shore. Harbor seals are very common in Jefferson County and haul-out for several hours every day to regulate their body temperature, sleep, and interact with other harbor seals. Pups are born in Puget Sound in late June through August and will remain with their mothers for 4–6 weeks, they are then weaned and taught to forage and survive on their own. Up to 50% of the pups born will not survive the first year of life due to premature birth, disease, predation, starvation, and other natural factors. If you encounter a seal or sea lion pup alone on the shore it is usually not abandoned but has only been temporarily left behind while the mother forages at sea. Reports indicate that pups can be successfully reunited with their mothers up to 48 hours after separation, the mother will return to her pup once any disturbance has been removed. Please do not attempt to move or feed the pup, this will result in injury or abandonment by the mother.

Other marine mammal species, including dolphins and whales are found in Puget Sound. National Marine Fisheries Service guidelines recommend a minimum approach distance of 100 yards, which will minimize the potential of disturbing the animal. If you are watching from a boat, it is recommended that you spend a maximum of 30 minutes observing the animal—observation could cause stress or other factors detrimental to the health of the animal. If you respect these guidelines for watching and interacting with marine wildlife, you will prevent disturbance or harassment to the animal and ensure the animal's health and safety.

Please call the East Jefferson County Marine Mammal Stranding Network hotline at (360) 385-5582 ext. 103 in the event that a marine mammal is dead, or alive on a beach or shore that is unable to return to the water under its own power. If you would like to become a volunteer for the East Jefferson County Marine Mammal Stranding network please contact Kristin Wilkinson, at kwilkinson@ptmsc.org or call (360) 385-5582 ext. 110.

Sources:

NOAA Fisheries Enforcement. *Sharing the Shores with Harbor Seal Pups in the Pacific Northwest.*

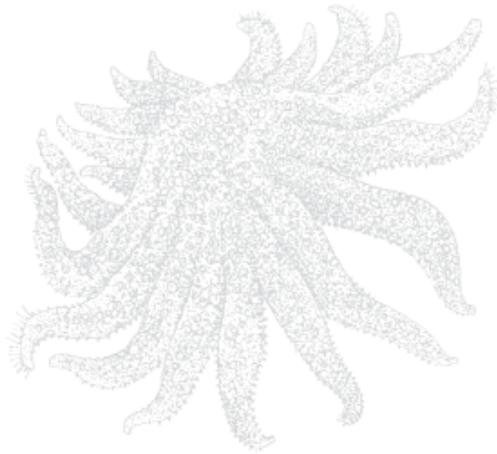
NOAA Fisheries Enforcement. *Sharing the Sound with Killer Whales; Whale Watching Etiquette in Washington State.*

National Marine Fisheries Service. *Protecting Marine Mammals.*

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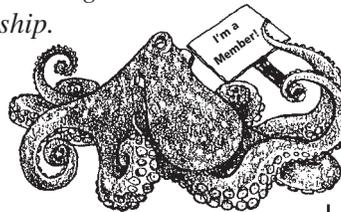
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