



Padilla Bay Newsletter

A Joint Publication of the Padilla Bay Foundation and Padilla Bay National Estuarine Research Reserve

Winter 2010-2011



Padilla Bay

National Estuarine Research Reserve

Padilla Bay National Estuarine Research Reserve is managed by the Washington State Department of Ecology under the National Estuarine Research Reserve System established by NOAA.

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The Padilla Bay Foundation is a membership-based non-profit organization formed in 1987. Its mission is to help preserve the Padilla Bay estuary in Skagit County, Washington, through support of Padilla Bay National Estuarine Research Reserve.

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New Exhibit Celebrates Birds of Padilla Bay

Recent visitors to the Padilla Bay Reserve have found the aquarium room blocked and a smell of construction in the air. By sometime in mid-February, the back room will be ready for visitors once again, with a fourth aquarium and a new bird exhibit. The Padilla Bay Reserve is popular among birders, especially in winter when the surrounding farmland and estuary host hundreds of thousands of migrant birds. From raptors, swans and snow geese, to over 200,000 dabbling ducks, birds from the north come to our area for the (usually) snow-free habitat and plenty of food.

Padilla Bay's new exhibit includes mounted specimens and beautiful video footage of our most common birds. Whatever your level of birding expertise, the Breazeale Interpretive Center is a great winter stop. You can check out field guides and binoculars, find out about current sightings, pick up maps and a bird checklist, and warm up in the exhibits. If you'd like to learn more about birds, we're offering three different classes this winter. We're open Wednesday through Sunday from 10:00-5:00. See page 5 for class details and holiday closure dates.



Northern Harriers like this can often be seen gliding low over the fields around Padilla Bay. The disc-like feathers around their face give an owl-like appearance and may help them hear prey in the long grass.

Quotable Notes from Students

by Kara Bloch and Katie Gell

As an educator, one of the greatest forms of feedback or evaluation comes straight from the mouth of a child. To hear the honesty of their thoughts and ideas gives you true confidence in the next generation. The following remarks come from 3rd to 6th grade students who had the opportunity to visit the Padilla Bay Reserve this past school year. We hope you enjoy as much as we did!



When you look at one [an estuary] at low tide, it looks like a lot of mud. Underneath though, there is a whole load of flourishing life. The best part was going out to the bay because I got to hold my first crab.

I learned the smell I smell every morning is called detritus. AKA: Dead animal bodies.

One reason people need healthy estuaries is because a lot of food lives in an estuary - and I'm talking about fish, oysters, shrimp and clams. A lot of people like eating these things, so we need to have a nice healthy estuary.

I learned what kind of crab I eat because I was always curious (I eat Dungeness crab.)

I learned about plankton, zoo, phyto and copepods. I am amazed by finding out more about plankton!

The most important thing about estuaries is that its home for other animals and it's a fun place. You can find stuff there. Animals live there like crabs, clams and worms. Estuaries are real fun because you can find animals.

The most important thing I learned was that estuaries give oxygen to the world.



The most important information I learned about is how many animals depend on estuaries to live, eat and grow up in. I think it is very surprising that many estuaries have not been taken care of because people also need it so that we can have sea food.

I had an awesome time at Padilla Bay! My favorite part is well, pretty much everything!



Padilla Bay Foundation

How You Can Help

Grassroots involvement is the core of Padilla Bay Foundation's commitment to protect Padilla Bay and support the Padilla Bay Reserve.

Membership in the Foundation means you are contributing directly to environmental education and research right here in Western Washington.

Categories of membership are:

| | |
|---------------------|--------|
| Senior/Student | \$25 |
| Individual | \$35 |
| Family | \$50 |
| School/Organization | \$50+ |
| Supporting | \$75 |
| Sustaining | \$100+ |
| Small Business | \$100+ |
| Sponsor | \$250 |
| Patron | \$500 |
| Steward | \$1000 |

Send your contribution to:
Padilla Bay Foundation
PO Box 1305
Mount Vernon, WA 98273
(360) 757-3234
a 501(c)(3) organization

Foundation Board Members

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Charlie O'Hara
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Terry Stevens - Advisory Member
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PADILLA BAY FOUNDATION NEWS

Foundation Board Grows with Four New Members

Effective October 2, 2010 at the Foundation's Annual Meeting & Dinner, voted ballots verified that 4 new board members have been elected to serve on the Board of Directors. Please join us in welcoming:

- Glenda Alm – Bay View resident, US Forest Service retiree.
- Dr. Jude Apple – Anacortes; marine scientist at Shannon Point Marine Center
- Bob Hyde – Anacortes resident, Executive Director of the Port of Anacortes
- Carl Molesworth – Bay View resident, Communications Manager Port of Skagit.

We are thrilled to have them join a board that now numbers 17. It is exciting to have their support of the Foundation's work on behalf of the Padilla Bay Reserve.



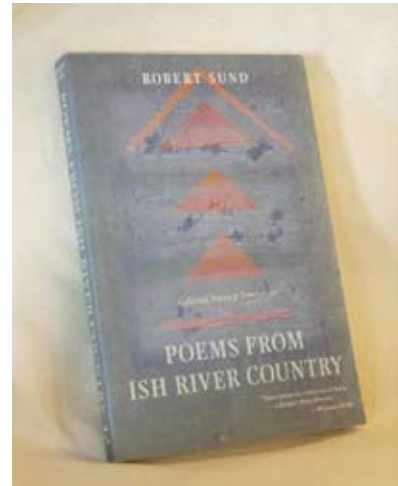
The Foundation has raised \$59,000 since last October for completion of the new aquarium room. With your continued help we will achieve our goal of \$85,000 by the time the total aquarium room renovations are complete. Two sizeable exhibits will fill out the room. A walk through eelgrass immersion tank and a bird community exhibit are currently under construction, with installation beginning in November. We ask for your continued support of this worthy project and please remember that your donations are fully tax-deductible. We couldn't do this important work without your support. Thank you for all of your efforts thus far! Your \$1 donation is matched with \$2.30. A special thank you is extended for the recent donation of \$4,000 from the Shell Puget Sound Refinery especially for this project.

| | |
|--|--|
| Name _____ | Membership Category _____ |
| Address _____ | (see reverse) |
| City/State/Zip _____ | Membership Amount \$ _____ |
| E-mail address _____ | Extra Donation \$ _____ |
| | <input type="checkbox"/> Check enclosed |
| | <input type="checkbox"/> Charge my card (VISA/Mastercard) |
| mail to: Padilla Bay Foundation P. O. Box 1305 Mount Vernon, WA 98273 | Card # _____ Expiration Date _____ Signature _____ |

Poems from Ish River Country, Robert Sund

"It's been a busy day.
First,
 one hummingbird,
then
Another!"

In 1997, Robert Sund taught Padilla Bay's annual poetry workshop, guiding participants in expressing their experience of this extraordinary place. For 11 years beginning in 1973, Sund lived in Fishtown, a community of artists on the Skagit River near LaConner. Home was an abandoned gillnetter's shed on pilings which he fixed up, joining artist Charles Krafft and then other painters, musicians, and poets in this neighborhood perched above the tide. When Fishtown gradually faded away, Sund continued living in western Skagit County until the end of his life in 2001. Earlier this year the Museum of Northwest Art presented a fine exhibit on Fishtown, where you may have seen Robert Sund's art work and the calligraphy of his poems.



Though the best known of the Fishtown poets, Sund's work was long difficult to find, published in limited printings of a few small books. In 2004, the Robert Sund Poet's House Trust made possible the publication of the extensive collection titled Poems from Ish River Country. It includes Sund's earlier work set in the wheatlands of eastern Washington, all of his Ish River volume, and more. Sund wrote: "I live in the Ish River country/between two mountain ranges where/many rivers/run down to an inland sea," locating his home where the Skagit River meets Puget Sound between the Cascades and the Olympics.

With a few vivid details expressed in the simplest language, Sund's poems evoke his life along the river and the natural world interwoven with his daily activities. A small frog who "has come to live with me" is a companion sharing the poet's simple existence. A string of snow geese passing over on a cold April day "calls me out/to sing a farewell, and/ I wish them luck as they go from Ish River" bound for their breeding ground off the far Siberian coast. Sund expresses his experience of summer turning to fall as "Long spells of heron-watching/Now that the swallows are gone."

Field guides and natural history books help us know Padilla Bay, the Skagit and Samish Rivers, Puget Sound and its shores. Poetry such as Robert Sund's and others' who have experienced this place help us know it in other ways. You can buy Poems from Ish River Country at the Breazeale Visitor Center.

- Review by Tim Manns

Padilla Bay Foundation Membership

Grassroots involvement is the core of Padilla Bay Foundation's commitment to protecting our estuaries and supporting the Padilla Bay National Estuarine Research Reserve.

Members of the Padilla Bay Foundation contribute directly to environmental education and research at Washington State's only Estuarine Research Reserve.

Memberships can be for multiple years. Please consider payment of 2 or 3 years at a time, as this will save the Foundation considerable labor and mailing costs and insure that your dues work harder supporting the programs you care about.

Please fill out the reverse side of this form and join today.

Membership Categories

| | |
|---------------------|--------|
| Senior/Student | \$25 |
| Individual | \$35 |
| Family | \$50 |
| School/Organization | \$50 |
| Supporting | \$75 |
| Sustaining | \$100 |
| Small Business | \$100 |
| Sponsor | \$250 |
| Patron | \$500 |
| Steward | \$1000 |
| Benefactor | \$2000 |

Hand cast brass critters, mounted at the Interpretive Center, are available to donors of \$1000 and above who would like to be acknowledged in this way.



Winter Events

Presentations for December, January, and February

Raptor Class

The Skagit Flats are nationally recognized for their hundreds of wintering birds of prey. This class will teach about different kinds of raptors, emphasizing field identification and the particularly fascinating element of winter behavior. Instructor Bud Anderson has studied raptors for over 35 years, and has an incredible knowledge of local populations and peregrine falcons. This 5 week class meets Tuesdays from 7:00-9:00PM beginning January 11, with a Saturday field trip. The class fee is \$135 per person. To register, send check or money order to the Falcon Research Group, PO Box 248, Bow, WA 98232.



Winter Birds of the Skagit Flats

Winter is a wonderful time for enjoying birds, from the hardy resident song birds, to thousands of marine birds taking advantage of Padilla Bay's eelgrass and tideflats. Join naturalist, Libby Mills, for a morning of birding around Padilla Bay. We'll begin near the Interpretive Center and end up carpooling to local spots on the Skagit Flats. Wear **warm**, outdoor clothing, and pack binoculars, field guides, and snack or lunch. The class is offered twice, with each class limited to 15 participants. Please call or register online. **Sunday, January 30 or Friday, February 4, 8:00-12:00.**



Introduction to Hawks of the Skagit

Learn to recognize the most common species in our area with raptor biologist, Bud Anderson. A slide presentation from 9:00-11:00 will introduce you to raptor biology, field characteristics, and common behaviors. The afternoon field trip runs until around 2:00 and is limited to 15 participants. Saturday, January 8, 9:00-11:00. Register online or by phone.

Salish Sea Marine Bird Project

Over 170 bird species use the Salish Sea, an inland sea shared by British Columbia and Washington State. Over 40 years of research on both sides of the border have shown that the populations of some species have increased, while others have drastically decreased. Dr. Ignacio Vilchis, with the SeaDoc Society, is investigating possible ecosystem-wide factors that might be causing the declines. His group uses data from US and Canadian researchers to identify ecosystem-wide population trends and environmental stressors, with the end-goal of helping reverse the declines. **Thursday, February 10, 7:00-8:30.** Please register online.

Beachwatchers Winter Lecture Series

All of these lectures will be held at the Anacortes Public Library, 7:00pm.

Jan 14th, The Gulf Oil Spill and Its Implications for Puget Sound, by Jon Neel, Washington State Department of Ecology

Feb 11, Jellyfish Gone Wild by Jennifer Purcell, Marine Scientist, Shannon Point Marine Center

Mar 11, Kiket Island: History, Resources and Future Plans by Jack Hart, Park Manager, Deception Pass State Park

April 8, Deep Sea Ocean Communities by Jonathan P. Kellogg, Department of Oceanography, University of Washington

The Breazeale Interpretive Center is open to the public Wednesday-Sunday, 10:00-5:00.

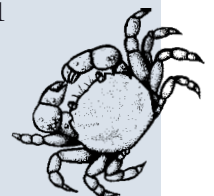
Staff are available 7 days a week.

Closed: December 24-27 and 31

January 1 and 28

Register online or by phone.

www.padillabay.gov



Aquarium Notes

Species Spotlight: Aggregating Anemone

-by Luke Hansen



Anthopleura elegantissima is one of the most common—and most beautiful intertidal anemones found on the west coast, occurring from

Alaska all the way to Baja, Mexico. They can grow up to 10 inches across, and are robust filter feeders, helping us keep our aquarium water clean for other critters.

These anemones are just one example of a widespread biological phenomenon called endosymbiosis, where one or more species resides inside another species. In the case of *A. elegantissima*, several species of photosynthesizing algae (called zooxanthellae and zoochlorellae) live inside the tissue of the anemone. They thrive on sunlight and the carbon dioxide produced by the anemone's respiration. In return, the algae photosynthesize, and create carbohydrates which help supplement the anemone's diet! Through their production of chlorophyll, the zoochlorellae are also responsible for the beautiful green coloration found on some *A. elegantissima* specimens.

These anemones can reproduce through broadcast spawning to create genetically unique colonies, or they can split into genetically identical colonies, or polyps. These clones will then go to battle with genetically different groups of clones over territory, a conflict biologists have been studying with great fascination.

One current issue, coral bleaching, also involves zooxanthellae and is of great concern to biologists. Like their distant anemone relatives, corals also house symbiotic photosynthesizers. When the corals are stressed by poor environmental conditions, they can expel these previously welcomed guests in a last-ditch attempt to survive. Ocean acidification and ocean temperature rise can trigger coral bleaching.

To see Padilla Bay's elegant anemones, you'll need to visit the Padilla Bay Reserve after mid January. Beginning in November, the aquarium room will be closed for the final phase of construction. Phase II includes a 1,100-gallon eelgrass immersion tank which visitors will be able to walk under – an experience sure to inspire oohs and aahs in children and adults alike! Our completed aquarium room is scheduled to open to the public in February 2011.

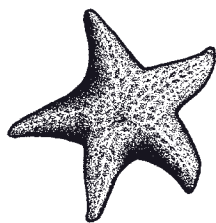
Monthly Youth Programs Offer Fun Learning

Mini Explorers are the 3-5 year old learners. We look at a new topic each month, with stories, games, hands-on observations, art projects, and plenty of action. Call the Interpretive Center to register or register online.

December 8 & 9, 10:00 & 1:00
Wrack and Wreath– *We'll create decorations and food for wildlife with natural treasures from the beach.*

January 12 & 13, 10:00 & 1:00
Salmon–*Here is an amazing fish with an incredible life story. Come hear the river-to-sea adventure of the Salish Sea's most famous fish.*

February 9 & 10, 10:00 & 1:00
Clams are Cool–*Who's hanging out in Padilla Bay's mud? Come and find out about clams and their bivalve cousins with stories, songs and activities.*



Junior Ecologists are 6-9 year olds who have fun exploring the estuary. Excursions to the beach, science experiments, games, art projects, and studying life in the bay–this program is guaranteed fun! Call the Interpretive Center or register online.

December 3 & 4, 10:30-12:00
Wrack and Wreath– *We'll create decorations and food for wildlife with natural treasures from the beach.*

January 21 & 22, 10:30-12:00
Adaptations–*Finding food, staying safe, or finding a mate: adaptations help plants and animals in all kinds of ways.*

February 18 & 19, 10:30-12:00
Who Eats Whom in the Food Web?–*Have fun untangling the sometimes confusing estuary food web, and learn how everything seems to be connected.*

Measuring Nutrients in Padilla Bay

In Padilla Bay, nutrients are important for plant growth. They come from many different sources such as water entering Puget Sound from deep ocean currents or in fresh water from rivers and streams. Nutrients get into rivers and streams from natural and human sources.

By measuring nutrients including nitrogen and phosphorous compounds, we can better understand how they impact the eelgrass and other organisms in Padilla Bay. Nutrients are important because all plants, including eelgrasses, macroalgae, and microscopic algae need nutrients to grow. However, too many nutrients can create nuisance growths of macroalgae and microscopic algae. When these die, they reduce oxygen needed by animals such as crabs and salmon. Excess nutrients can come from fertilizer, pet waste, failing septic systems and sewage treatment plants.

An interesting part of the nutrient cycle is how eelgrass affects the amount of nutrients in the water that flows into and out of the bay. In the summer, when eelgrass is actively growing, the amount of nitrogen in the water decreases over the course of a day. However the amount of dissolved phosphorous in the water does not change.

Padilla Bay researchers measure nutrients in the water as part of the ongoing monitoring program. They sample at different time scales: twice a month at each water quality monitoring site, and hourly for one 26-hour tide cycle each month at one site.

You can see the results of this monitoring on Padilla Bay's website.





Cathy Angell, Coastal Training Program Coordinator at Padilla Bay Reserve, received the National Estuarine Reserve System Outstanding Service Award for 2010. Shown above (left) with NERRS director, Laurie McGilvay and NERRA president, Rebecca Ellin, Cathy received complements like, “leading thinker and innovator,” “positive, collaborative, professional manner is remarkable and provides an example for us all,” and “This person accomplishes her work with unsurpassed enthusiasm, passion, and friendliness.” Congratulations Cathy!

Storming the Sound on January 27

Environmental Educators from the North Puget Sound region will be gathering for a day of workshops, networking, and information sharing. **Thursday, January 27, 9:00-4:00** at Maple Hall in LaConner. Padilla Bay staff are helping to organize and sponsor this event for classroom teachers, agency staff, and educators from non-profit groups. Teachers—there is money available for substitutes. Call the Reserve at 428-1558 or check our website at www.padillabay.gov for more information.



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