



Padilla Bay Newsletter

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

Winter 2011-2012



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.

Padilla Bay Foundation
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Clean, Safe, Fishable, Swimmable - A Goal for Padilla Bay and the Salish Sea

Labor Day weekend saw some of the warmest days of the summer, but visitors at Bay View State Park were advised to stay out of the water. High levels of fecal coliform bacteria in the water made the beach unsafe for swimming that week.



Volunteers worked with the BEACH Program (Washington State Departments of Ecology and Health) to sample the water at Bay View throughout the summer, taking samples to a commercial lab for testing. This program reduces the risk of disease for people who play in saltwater by:

- Monitoring bacteria levels at popular, high risk beaches.
- Notifying users when bacteria results are high or when a known pollution event, such as a sewage spill, has occurred.
- Teaching people about the risks associated with polluted water and what each of us can do to reduce that risk.



This program complements the Storm Team, an ongoing volunteer effort to monitor the water entering Padilla Bay around Bay View, when heavy rains wash pollutants off the land. Working with staff from Padilla Bay and the Skagit Conservation District, volunteers are starting their second year sampling 18-20 sites in the Bay View

and No Name Slough watersheds. They use Padilla Bay's volunteer lab to test the water for fecal coliform bacteria, an indicator of harmful pollutants that may be getting into the water. Fecal coliform comes from warm blooded animals, so sources of this pollution could be septic systems, pets, farm animals, birds, and mammals such as raccoons and deer. Too much fecal coliform in the water means a danger of illness or disease for humans. Bay View State Park has been closed to shellfish harvest for many years in order to protect people from water-born diseases.

Many communities around Puget Sound have been tackling this problem by picking up pet waste, improving farming practices, repairing septic systems, and managing storm water runoff. For more information about safe shellfish and the activities of the Storm Team, come to a program at the Interpretive Center December 6, 7:00pm. Details are on page 5.





New AmeriCorps Team Gives Invaluable Support to Padilla Bay Programs

Each October, we welcome new AmeriCorps staff to Padilla Bay. These folks bring young energy, fresh ideas, and lots of enthusiasm to the Reserve. They'll spend the next eleven months teaching students, cleaning aquariums, collecting and counting eelgrass samples, feeding fish, maintaining equipment, answering phones, mowing and weeding the grounds, testing water quality, greeting visitors, writing articles, entering research data, and more. In exchange, they will receive hourly wages, valuable job experience and training, and a tuition award at the end of the year.

Leah Hall grew up in Portland, Oregon and recently graduated from the University of Oregon where she majored in Environmental Science and Geography. When she was in high school, she fell in love with this area after going on a boat trip through the San Juan Islands with her family. She's excited now to be working and living here.

Stephanie Eckard studied environmental toxicology at Western Washington University's Huxley College and served as assistant supervisor on a 6-month Washington Conservation Corps trail crew in Bellevue. She enjoys being active outdoors running and biking, wilderness adventures, seeing and making art, and exploring new cultures through food, friends and travel.

David Baer is a graduate of The Evergreen State College with a BS in Marine Biology and is a previous resident of Enumclaw Washington. In his free time David enjoys long walks on the beach and sightseeing by bike.

Welcome!



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
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 (360) 757-3234
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PADILLA BAY FOUNDATION NEWS

Padilla Bay Foundation is a membership-based non-profit organization formed in 1987. Its mission is to help preserve the Padilla Bay estuary through support of the Padilla Bay National Estuarine Research Reserve. Foundation programs include:

Support for Education

- Funding for aquaria and displays at the Breazeale Interpretive Center
- Purchase of educational equipment
- Funding for public programs and presentations
- Scholarships for selected Washington Conservation Corps/Americorps members

Support for Research

- Funding support for students conducting research into the ecology of Padilla Bay
- Purchase of research equipment

Special Projects

- An annual environmental presentation funded by the Smith-Aguero Trust.
- Support of meeting rooms and guesthouse
- Providing match for federal grants
- Yearly Members' Day event and annual meeting

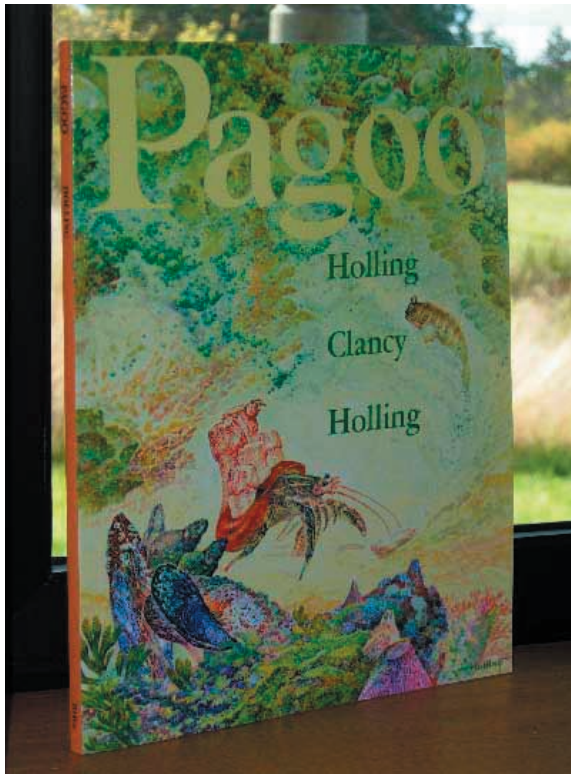
To contact the Padilla Bay Foundation or discuss donations

Kay Reinhardt, Administrative Officer
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 PO Box 1305
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Choose our Online Newsletter

Please help us save energy, resources, and money. You can receive this newsletter online. Just go to Padilla Bay's website at www.padillabay.gov and select "Newsletter" from the list of related links. You can also call us at (360) 428-1558 and we'll make the change for you. (You'll get the news earlier, with color photos to boot.) Thanks!

Name _____	Membership Category _____
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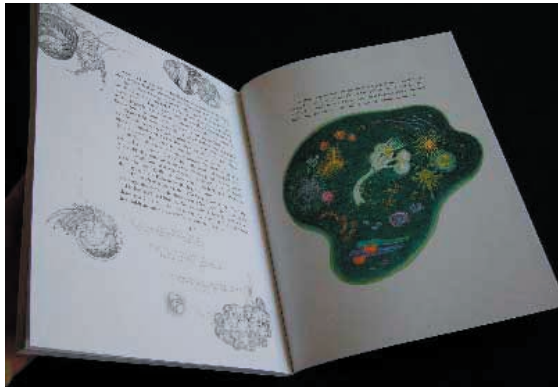


Pagoo by Holling Clancy Holling, The Classic Tale of a Two-Fisted Hermit Crab

“Little Pagurus—'Pagoo' for short—floated at the surface of the sea. Pagurus (Pa-gu-rus) would grow into a two-fisted Hermit Crab if he could make it. Someday he would live near shore, walking on a sea floor of rock and sand. But before he could walk on the sea’s bottom he must drift on its top, as helpless as a tiny fleck of foam. Pagoo’s chances of growing up were not very good.” Such a beginning is sure to be followed by all the dangers and adventures the world can offer a young hermit crab.

First published in 1957, this classic story of tide pool life has remained popular with children (and adults) from the start. The beautifully illustrated book gives a thorough lesson in marine biology while serving up page after page of entertainment. Glittering waters, dark caves, crashing waves, battles with the older boys, narrow escapes from the mouth of a sculpin, near death from a fresh water rain, and the endless search for food and a bigger shell, are all met and conquered by this tough little hermit crab.

The author is very careful to keep Pagoo a hermit crab, with only his instinct to guide him. He doesn’t think or feel like a human as so many children’s book characters do. He makes foolish mistakes, to be sure, and amuses the reader with comical escapades and suspenseful explorations of the unknown, but always remains a simple hermit crab. It’s clear that Mr. Holling spent countless hours observing tide pool life. Reading his book is the next best thing to observing one yourself. At the Padilla Bay Interpretive Center (\$11.95).



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.



Presentations for December 2011, January, February 2012

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 10, with a Saturday field trip. The class fee is \$150 per person. To register, send check or money order to the Falcon Research Group, PO Box 248, Bow, WA 98232.



Team volunteers who will share results from their program to test local streams for bacteria contamination. **Tuesday, December 6, 7:00-8:30.** Please register online or call the Interpretive Center.

Introduction to Hawks of the Skagit

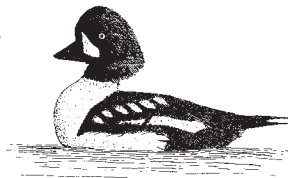
Learn to recognize the most common species in our area with raptor biologist and falcon aficionado, Bud Anderson. A slide presentation from 9:00-11:00 will introduce you to raptor biology, field characteristics, and common behaviors. The afternoon field trip runs until around 2:00 and is limited to 15 participants. **Saturday, January 7, 9:00-11:00.** Register online or by phone.

Aquarium Tour and Fish Feeding

Padilla Bay's aquarium inhabitants are always changing. Join Padilla Bay's aquarist, Mark Olson for a behind-the-tanks view of our new system, and a close-up look at the amazing critters in the tanks. From the best camouflaged pipefish and flounder to the flashiest seastars and anemones, aquarium inhabitants have unique habits and stories. **Saturday, January 21, 11:00.** No need to register. Just join us in the aquarium room at 11:00.

Winter Birds of Padilla Bay and the Skagit Flats

Join naturalist, Libby Mills, listening and looking for winter birds around Padilla Bay. Wintering raptors, marine birds, and the hardy little resident song birds will be some. We'll begin with a **slow** walk around the reserve uplands, (so bring **warm** clothes, warm drink and lunch), and will then carpool to nearby fields. Binoculars and field guides are available at the Interpretive Center. Meet in the Padilla Bay parking lot. Each class limited to 15 participants. **Friday, December 2 and Saturday, December 3, 9:00-1:00.** Please register online or call the Interpretive Center.



Paws to Ponder: Mammal Tracks and Ecology

Ever wonder whose tracks those are and what they were up to? Join David Drummond, wildlife biologist with the Merlin Falcon Foundation, to explore the wide range of critters that wander our backyards and wilds of Washington. Such diverse habitats support a plethora of niche opportunities for these warm-blooded and furry herbivores and predators. We will learn their various imprints, habitat and food associations, as well as discuss their fascinating behaviors through images and hands-on resources. Bring your wild animal stories! **Sunday, February 12, 1:00-2:30.** Please call or register online.

Bay View Storm Sampling and Safe Shellfish in the Salish Sea

People today harvest shellfish in much the same way and with the same enthusiasm as the first people who have lived here for thousands of years. Greg Combs, Recreational Shellfish Program Lead for the Washington State Department of Health will talk about human health and shellfish harvest, why there are concerns, what we learn from monitoring, and how we can harvest safely and keep our water clean. Greg will be joined by Bay View Storm

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

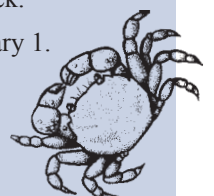
Staff are available 7 days a week.

Closed December 24-25 & January 1.

Register online or by phone.

www.padillabay.gov

(360) 428-1558



Aquarium Notes

The Giant Pacific Octopus, *Enteroctopus dofleini*

Would you like to meet the world's largest cephalopod? Well, the octopus living in Padilla Bay's aquarium, may not be the largest right now, but she has great potential. In four or five years, she may weigh up to 100 pounds with a 14-20 foot reach. (Picture a 7 foot tall basketball player and double or triple that!)

This octopus is nocturnal, so a daytime visitor is likely to see a bumpy, reddish blob, wrapped in sucker-lined tentacles. A careful observer might find the slit of a closed eye, or a siphon slowly exhaling water as the animal "breathes." But don't let the stillness of this snail-relative fool you.

An octopus is very intelligent, considering it is a mollusc like a clam, slug, or limpet. It has excellent vision and good problem-solving skills. This makes it an escape artist in an aquarium, able to squeeze through small spaces and lift heavy objects with eight strong arms. It can even screw the lid off a jar.

Its body is not at all what it appears to be. What looks like a large head is called the mantle, and holds the internal organs like stomach, kidney and three hearts. Its head is hidden just behind its arms. It has no bones or shell at all—just a beak on its mouth for crunching shells.

We feed our octopus shrimp and bits of fish, but in the wild they usually eat crabs and clams. It can taste with its arms, reaching into tight places to search for food.

And if that isn't cool enough, an octopus can change color to match its surroundings or show alarm. It can tighten muscles in its skin to change the texture of its mantle, mimicking a rough rock, spiky seaweed, or smooth kelp as needed. It can release a cloud of smell-inhibiting ink to confuse a predator, or it can escape with jet propulsion. Not bad for a lowly mollusc, eh?



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 14 & 15, 10:00 & 1:00

Wrack and Wreath—*Come and sift through treasures left by the waves and create wonderful holiday decorations.*

January 11 & 12, 10:00 & 1:00

Rocks up Close—*From exploding volcanoes to tiny grains of beach sand, rocks are the greatest! This is a fun introduction to geology.*

February 8 & 9 10:00 & 1:00

Food Chain Fun—*Who eats what in the estuary world? Come find out: We'll do a little eating ourselves!*



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 16 & 17, 10:30-12:00

Wrack and Wreath – *Awaken your inner artist and create wonderful holiday decorations using natural treasures from Padilla Bay.*

January 13 & 14, 10:30-12:00

Bivalve Beauties—*We'll unlock some of the secrets inside the 2 closed shells of Padilla Bay's clams, oysters, mussels, and their friends.*

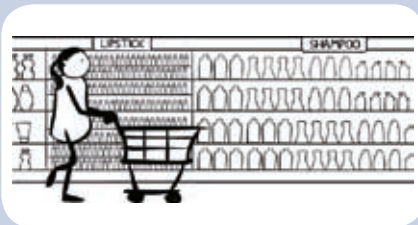


February 17 & 18, 10:30-12:00

Terrific Tides—*When the tide goes out in Padilla Bay, it goes all the way out. Come find out why, and enjoy some fun games and activities about this important force in the bay.*

Where to go for more information

For more information about potentially hazardous chemicals and a shopper's guide to safe alternatives, see Department of Ecology's website at www.ecy.wa.gov/toxicfreetips/.



The Story of Cosmetics is a short video about toxics in health care products, available at <http://storyofstuff.org/cosmetics/>



People For Puget Sound has information and publications available on toxics in Puget Sound. Check their website at www.pugetsound.org/policy/toxics.



Pharmaceutical and Personal Care Products in the Bay

By Stephanie Eckard

Ammonium Xylenesulfonate? Methylchloroisothiazolinone? The ingredient list on the back of your shampoo bottle can contain chemical names that twist your tongue as you attempt to pronounce them. So what exactly happens to these chemicals once you lather your hair and rinse them down the drain? Pharmaceutical and personal care products (PPCPs) are coming into the spotlight as emerging contaminants in the aquatic environment.

PPCPs are products like cosmetics, detergents, and over-the-counter and prescription drugs that individuals use and consume. They also include hormones, antibiotics, and steroids used for livestock. The chemicals in these products can directly enter the water through streams or storm drains—or they may flush down drains and end up at waste water treatment plants.

As people continuously use PPCPs on a daily basis, low levels of chemicals persist in the water. The effects to human health and the environment are still unknown in most cases. Scientists and government regulators are raising concerns about exposure to PPCPs, especially hormones and hormone-mimicking chemicals, for fish and other aquatic organisms. There is a lot of research to be done on this subject before we can even begin to treat and regulate PPCPs.

What can we do as residents enjoying a beautifully unique bay to minimize our impact? First, don't flush old pills and medications down the toilet. Most pharmacies will take your unwanted pills and dispose of them properly. Second, try to make informed, conscious decisions when shopping for toiletries and household cleaners. Biodegradable soaps and other alternatives are available even at conventional supermarkets. Save money and try cleaning around the house with a vinegar-water solution, a great disinfectant. Small steps can go a long way when a community comes together.

As research progresses on the ways PPCPs behave and influence the environment, better household and management practices will unfold. Until then, keep asking yourselves and local decision makers what can be done now to protect the waters of the Salish Sea.

Skagit Beach Watchers Winter Lecture Series

The Skagit Co. WSU Beach Watchers are pleased to announce the sixth year of our popular Winter Lecture Series. This series of lectures offers presentations on various topics related to the Puget Sound and our local marine environment. All the lectures are presented at the Anacortes Public Library from 7-9PM, are free, and open to the public. Please take note of our specific dates and topics:

January 13, Weather of the Pacific Northwest

February 17th, Orca Whales and Other Marine Mammals of the Salish Sea

March 9th, Decline of Large Fish Species

April 13th, Tectonic Processes of the Salish Sea

For more information or questions, please contact Matt Kerschbaum at cherrytree2@comcast.net



Especially for Teachers

Storming the Sound on January 26

Environmental Educators from the North Puget Sound region will be gathering for a day of workshops, networking, and information sharing. Thursday, January 26, 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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