



Padilla Bay Newsletter

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

Winter 2007-2008



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.

www.padillabay.gov

swood@padillabay.gov

10441 Bay View-Edison Road
Mount Vernon, WA 98273
(360) 428-1558



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
PO Box 1305
Mount Vernon, WA 98273
(360) 757-3234

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What Do Seals in Padilla Bay Eat?

Harbor seals are a common marine predator here in Puget Sound. In fact, since the passage of the Marine Mammal Protection Act, harbor seal populations have increased tenfold. This raises concerns about how seals could impact protected marine environments where prey species are recovering. Declining salmon stocks have been of particular concern in our region, and often the blame is placed on the seal's appetite for marine fish. Do they eat enough salmon to account for the declining numbers, or might there be other factors involved? What else do seals eat? Does their diet have a negative impact on recovery of depleted species? These are a few of the questions that must be addressed to better understand the harbor seal's influence on marine ecosystems.



Katie Luxa, a graduate student at Western Washington University, is conducting research to help answer some of these questions. Her Master's thesis project focuses on the diet of Pacific harbor seals in Padilla Bay. Katie kayaked to seal haul-out sites in Padilla Bay and Drayton Harbor where she collected scat, or fecal samples. The undigested bones and hard parts of the prey were then removed and identified, providing information about the variety and quantity of prey eaten by harbor seals.

Katie is also studying other aspects of seal foraging habits, such as seasonal variation in diet and variations between the soft-bottomed habitats of Padilla Bay and Drayton Harbor and the rocky habitats of the San Juan Islands.

Sample collection was recently completed and Katie is now working on finishing identification of the prey species. Some of the prey identified so far from the Padilla Bay seals includes Pacific staghorn sculpin, gunnels, snake pricklyback, shiner perch, and flatfish. Prey found in the Drayton Harbor samples is similar; however these seals enjoy a greater abundance of Pacific herring and threespine stickleback. There is more information about Katie Luxa's research at Padilla Bay website: <http://padillabay.gov/researchselectedluxa.asp>.

Katie received a BS in Marine Science from Southampton College of Long Island University. She is currently a MS candidate in the Biology Department of WWU under Dr. Alejandro Acevedo-Gutierrez. Her thesis project is partially funded by Padilla Bay Research Assistantship in Estuarine Science and Coastal Management and the Western Washington University Bureau for Faculty Research.

Padilla Bay Foundation News

Padilla Bay Mud Slugs at the Bellingham Traverse

Even on their day off, it's hard to stop Padilla Bay and Northwest Straits Commission staff from working. In this case the work was the Bellingham Traverse, a multi-sport, endurance race that raises money while demonstrating the urban and natural challenges that salmon face in their life journey. The race is billed as "A Northwest Rite of Passage" and is designed to raise money for and awareness of the incredible resilience of salmon and the unparalleled beauty of the Pacific Northwest.



The Padilla Bay Foundation sponsored the team, called the Padilla Bay Mud Slugs. The Mud Slugs slithered their way through a course of scenic greenways, back roads and open waters of Bellingham Bay in record (for them) time. Funds raised by the team went to the Padilla Bay Foundation and Northwest Straits Marine Conservation Foundation. The team consisted of: Ginny Broadhurst - Run, David Henry - Road Bike, Liz Leavens - Trail Run, Nicole Burnett - Sea kayak, Suzanne Shull - Mountain Bike. The race ended like a real salmon run with a group trek to end it all, in this case at Boundary Bay Brewery. Who says hard work doesn't pay off?



Changes for the Foundation Board

The Padilla Bay Foundation offers thanks and best wishes to departing board member, Richard Treston. Beginning with volunteer work in 1996, Richard spent the past 6 years on the board of directors. Richard's calm energy and dedicated leadership will be missed. Please join us in welcoming new board member, Phil Teas, Manager of Business and Planning at the Shell Puget Sound Refinery.

Boeing's Matching Gift Program

The Foundation can now benefit from Boeing's Matching Gift Program. Donations by current Boeing employees will be matched 100% and retirees' contributions can be matched 50%. Two recent donations from Boeing employees have been matched for a total of \$2250. Check your employer for similar programs, and make the most of your donations!



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

President: Charlie O'Hara
Vice-president: Tom Richards
Secretary: Tim Manns
Treasurer: Deb Canon
Past-president: Gail Smith

Lyn Bishop
Paul Dinnel
Ed Gastellum
Brian Hanson
Kraig Kemper
Cort Liddell
Patsy Martin
Phil Teas

Terry Stevens - Advisory Member
Kay Reinhardt - Administrator



Winter Events

Presentations for December, January and February

Northwest Woodpecker Ecology

Washington is home to many members of the specialized woodpecker family and they are fascinating to study. You have heard them at work in the backyard trees, but what do you know about them? These birds are an important component of our shared landscape. We will review their adaptations, life history and place in our different forest types through images, voice imprints and story. Join David Drummond, Merlin Falcon Foundation Biologist, for a fresh look at the “drummers!” **Saturday, December 1, 1:00-2:30.** Register online or by phone.



Flowering Plants of Puget Sound

Winter leads into Spring and the blossoming of many Northwest plants. Enjoy a virtual safari of native wildflowers, visiting our favorite haunts of coast, bog, marsh, field, forest and sub-alpine meadows. Learn major plant families and their representative plants, their adaptations and communities. Enjoy a stunning display of showy inflorescences and fruits, in rainbow hues. Join us for a touch of summer sunshine color presented by Merlin Falcon Foundation Biologist, David Drummond. **Saturday, January 12, 1:00-2:30.** Register online or by phone.



Winter Hawks of the Skagit Flats

The Skagit Valley is an incredible area for observing wintering hawks and falcons. 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. **Please check our website or call the reserve for the date and time of this January class.** Register online or by phone.

The Estuary in Color Pencil

Learn the basics of color pencil drawing in this workshop with local artist and naturalist, Libby Mills. You'll improve your skills and then celebrate your new success by drawing some of Padilla Bay's estuary creatures. Some drawing experience is helpful. You will need a lunch, and you may bring your own color pencils- or try out ours. **Sunday, February 3, 10:00-4:00.** Register online or by phone.



Birding by Ear: Listening and Watching for Winter Birds

Join naturalist, Libby Mills, using sight and sound to find winter birds. This excursion will include walking around the reserve uplands as well as car-pooling to nearby flats to look for raptors. Pack warm clothes, binoculars, field guides, and warm drink or lunch. Meet in the Padilla Bay parking lot. Each class limited to 15 participants. **Friday, February 15 and Sunday, February 17, 8:30-12:30.** Register online or by phone.

2008 Beach Watchers Lecture Series

7PM at Anacortes Public Library

Salmon Families of the San Juans, January 11

Russel Barsh, Director of KWIAHT, Center for Historical Ecology of the Salish Sea, Lopez Island, WA.

Keeping Current on Tidal Power: Exploring Tidal Power Potential in Washington State, February 15

Craig Collar, Sr. Manager of Energy Resource Development, Snohomish PUD

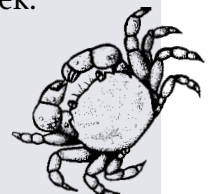
The Breazeale Interpretive Center is open to the public Wednesday-Sunday, 10:00-5:00.

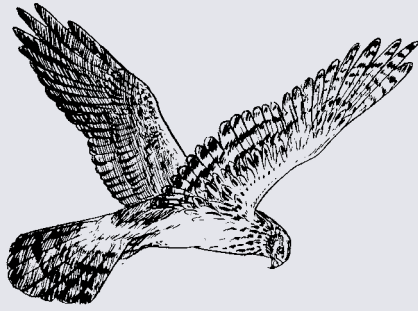
Staff are available 7 days a week.

Register online or by phone.

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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 from 7:00-9:00PM weekly in January and February, 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. Class size is limited, so register early. Check online or call the reserve for this year's dates.

Videos: Sundays at 1:00 & 4:00

December	2	Yellowlegs, Eelgrass, Tideflats (60 m)
	9	Incredible Suckers (60 min)
	16	Wild Northwest (45 min)
	23	Padilla Bay (20 min)
	30	Orcas in the Balance (40 min)
January	6	Hawks Up Close (55 min)
	13	Finding Solutions–Derelict Fishing Gear Removal Project (13 min)
	20	Song of the Salish Sea (45 min)
	27	Steller Sea Lions in Jeopardy (27m)
February	3	Eagles (40 min)
	10	Tide of the Heron (12 min)
	17	Saving Swans: One Family's Ordeal(27 min)
	24	Estuary! (15 min)

Focus the Nation on January 31, 2008



Focus the Nation is a coordinated Global Warming teach-in engaging millions of students, citizens and political leaders at institutions around the US. A Padilla Bay event will center on the effects of predicted climate change on estuaries, shorelines, and local habitats and what we can do to lessen the impacts. The program will include live webcasts and speakers. Watch Padilla Bay's website for details or go to <http://focusthenation.org> for more information.

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 5 & 6, 10:00 & 1:00

Habitat–Find out why Padilla Bay is the perfect home for so many things.

January 9 & 10, 10:00 & 1:00

Rocks up Close–From exploding volcanoes to tiny grains of beach sand, rocks are the greatest!

February 6 & 7, 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.



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 14 & 15, 10:30-12:00

Round and Round–Many things in the estuary get used over and over. We'll have a fun time exploring how things like water, air and nutrients are changed and recycled in Padilla Bay.

January 11 & 12, 10:30-12:00

Octopus–Come explore the mysterious world of these amazing eight-legged creatures.



February 15 & 16, 10:30-12:00

Native Americans – For thousands of years, people have been living near our local estuaries. Hear their stories, try their art, and find out how important the coast was to their lives.



NANOOS (Northwest Association of Networked Ocean Observing Systems) is a regional system for providing access to ocean data, products, tools, and knowledge for coastal managers, scientists, industry, and the public. Examples of the partner programs in NANOOS are:

- NOAA buoys measuring wind, waves, and sea surface temperature,
- Padilla Bay's System Wide Monitoring Program measuring water quality and weather,
- The Puget Sound Partnership's Puget Sound Assessment and Monitoring Program.
- The Washington State Biotxin Monitoring Program assessing biotoxins in shellfish.

NANOOS will collect and disseminate coastal ocean and estuarine data and products that can be used to:

- improve predictions of climate change and its coastal impacts
 - more effectively protect and restore healthy marine ecosystems
 - sustain marine resources
 - reduce public health risks through better assessment and prediction
 - more effectively mitigate the effects of natural hazards
 - improve the safety and efficiency of marine operations
 - enhance national security
- NANOOS is a regional program within a larger national initiative, The Integrated Ocean Observing System (IOOS).

New Web Site Provides Pacific Northwest Shellfish Growers With Real-time Water Quality Data

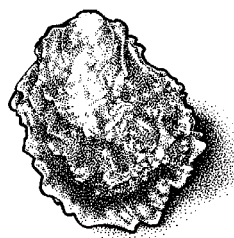
Staff at Padilla Bay Reserve in Washington, South Slough Reserve in Oregon, and Kachemak Bay in Alaska have been involved in a pilot project to make real-time water quality data available to shellfish growers in the Pacific Northwest. Padilla Bay, along with all 27 reserves in the National Estuarine Research Reserve System have satellite telemetry equipment hooked up to their monitoring stations. This means that water quality and weather data are transmitted in "near-real time" every 30 minutes via satellite to a data management office in NOAA.



Shellfish growers can now closely monitor the safety of their oysters, mussels, and clams thanks to a new web based information system that was developed as part of this pilot project. Water quality data is available from the three northwest reserves, as well as from four buoys in Hood Canal operated by the University of Washington. The data are provided for shellfish growers through a Web site, <http://www.nanoos-shellfish.org>, jointly sponsored by NERRS and the Northwest Association of Networked Ocean Observing Systems, or NANOOS (see sidebar at left).

The Web site displays up-to-date water temperature, salinity, oxygen, turbidity, pH, and chlorophyll data. Future sites are also being planned. While there are no growers located directly in Padilla Bay, the data is still of interest to growers located north of the reserve in Samish Bay.

"Current, accurate assessments of water quality data will help commercial shellfish growers manage their stocks to protect public health from potentially dangerous shellfish diseases that can result from sudden changes in water quality," said Cathy Angell, the Coastal Training Program coordinator at the Padilla Bay reserve, who spearheaded development of the Web site with support from research coordinators at the three reserves. "For example, in Alaska, growers are particularly concerned about *Vibrio parahaemolyticus*, a bacterium that flourishes with excessive temperature or salinity changes. Growers in Kachemak Bay could reposition their nets based on data that comes out of the reserve."



The project received funding from NOAA's Coastal Services Center, the National Estuarine Research Reserve Association, and NANOOS. Technical assistance was provided by the Pacific Coast Shellfish Growers Association and the Pacific Shellfish Institute.



Welcome to New Padilla Bay Staff

The Padilla Bay Reserve is pleased to welcome three new AmeriCorps/Washington Conservation Corps members to help with a wide variety of tasks. Amy Campbell, Austin Rose and Emily Mendell will be assisting researchers with water quality monitoring and boat handling, maintaining facilities, caring for the salt water aquariums, teaching school classes, creating learning materials, and working on a variety of special projects. The AmeriCorps program is a federal program for 18-25 year olds that offers work experience and a tuition award in exchange for public service.

For Teachers: Storming the Sound on January 18

Environmental Educators from the North Puget Sound region will be gathering for a day of workshops, networking, and information sharing. **Friday, January 18, 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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