



# Padilla Bay Newsletter

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

Spring 2009



**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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## Educators Gather for 9th Annual Storming the Sound



Over 150 environmental educators from around the north Puget Sound gathered in La Conner on January 30 to exchange ideas, learn new skills, and hear about local resources and programs. This popular event is organized by Padilla Bay staff along with

People For Puget Sound and the National Park Service. Participants included school teachers, high school and college students, community volunteers, and environmental education professionals working for government agencies, businesses, and non-profit organizations.

Sessions at this year's Storming the Sound were varied and timely. Popular topics included: climate change education, working with interns, updates on the Puget Sound Action Plan, barriers to environmental education in schools, toxics in Puget Sound, helping organizations be more sustainable, and education programs that happen on the water. There was time for networking and sharing, eating wholesome, local food, and even swapping songs and stories.



Over 30 organizations sponsored the event, and their displays showcased amazing resources that are available to teachers and environmental educators in our region. Sponsor and participant donations, grassroots planning, donations from local stores, and lots of hard volunteer work on the day of the event help make this a free event, and substitute teacher reimbursement is available to teachers. Organizers do everything possible to offer an "environmentally friendly" event, helping to orga-



nize carpools, offering local, organic food, using washable plates, cups, and napkins, recycling or composting waste, and minimizing use of paper.

Keynote speaker, Michelle Long, Executive Director, and co-founder of Sustainable Connections shared her organization's success in helping Whatcom County businesses move to more sustainable practices.

# Volunteers

## Becoming a Climate Steward

by Ed Gastellum



As a board member of the Padilla Bay Foundation for a number of years, I have observed many of the programs and classes offered at Padilla Bay. I've been especially impressed with the WSU Beach Watcher's Program. When the concept of the similar Climate Stewards came up three months ago, I saw an opportunity that I wanted to pursue. The Climate Stewards program is a twenty hour training program with the stipulation that you give back at least 20 hours through volunteer efforts. Climate Stewards educate their community about climate change and how we can make a difference individually and collectively in reducing our carbon footprint. Through this program, I learned that we can make a big difference by altering how we use (and conserve) energy at home.

The training was a cooperative effort of the Padilla Bay National Estuarine Research Reserve, the Padilla Bay Foundation, Northwest Clean Air Agency, and WSU Beach Watchers. State and local experts presented material about home energy use, sea level rise, weather patterns, and the effects and impacts on various environments in our region. We learned about specific greenhouse gases including carbon dioxide, nitrous oxide, water vapor, methane, halocarbons, and ozone. A very compelling case was presented about greenhouse gas origins and the chain of events that they cause.

The objective of Climate Stewards was to provide us with both information about climate change, and the tools to reduce our own carbon footprint at home and work. The hope was that afterwards, Stewards could go out to the community to talk about climate change or partner with other groups to educate the public.

My wife, Carolyn, and I both completed Climate Stewards training, and have already been busy with education and outreach projects in Skagit County. We would recommend this course to others who might be interested in attending the next session. With financial support from a grant to the Padilla Bay Foundation from the Northwest Clean Air Agency, the training will be offered again in October 2009.

At this time of renewal and hope in our country and the challenge that the president has given us, we think about what we can do collectively to improve our local environment and communities. We need to change how we live by making daily decisions about what we do, how we live our lives, and how we can make a difference for the future.

*Ed and Carolyn Gastellum are enthusiastic community volunteers and Foundation members.*



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: Tom Richards  
Vice-president: Tim Manns  
Secretary: Don Sorensen  
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Past-president: Charlie O'Hara

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Ed Gastellum  
Kraig Kemper  
Mark Kresovsky  
Cort Liddell  
Patsy Martin  
Gail Smith  
Phil Teas

Terry Stevens - Advisory Member  
Kay Reinhardt - Administrator



# PADILLA BAY FOUNDATION NEWS

## High School Students Working on Puget Sound Projects

Padilla Bay Foundation is currently negotiating the terms of an exciting new grant from the Puget Sound Partnership. Padilla Bay will be a partner in a demonstration project to help high school students carry out meaningful culminating projects that preserve and restore Puget Sound. Culminating projects are required of all high school students graduating in the state of Washington. Students will have help from the Puget Sound Partnership, partners in the grant (Padilla Bay is one partner.), teachers, and mentors (community members with expertise and willingness to help high school seniors with their projects).

Student projects could focus on the most urgent and important problems facing the health of the Sound: restoration, monitoring, and non-point source pollution. Projects might also focus on protecting healthy ecosystems that sustain the Sound. As ever, an ounce of prevention. . . These educational efforts will increase community awareness of how to keep pollutants out of water, and keep fish and shellfish healthy.

Beyond the first series of culminating projects themselves, this project aims to have lasting affects. It will form a network of environmental stewardship among students, teachers, mentors and partners. It will enable a culture of student community service to take hold and will foster careers in environmental science among the students who participate. Establishing a system of mentors willing to assist graduating high school seniors will result in a lasting task force for ongoing culminating projects in years to come.

If you'd like to serve as a mentor or have an idea for a project for a high school senior, please contact Glen "Alex" Alexander at the reserve: 360-428-1070, alex@padillabay.gov

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 _____

## Save the Date for Members Day

Members Day will be co-hosted by the Padilla Bay Foundation and the Swinomish Tribal Community, Saturday April 4th, 2009 from 12:00 - 4:00PM. We will visit a watershed restoration site on the Swinomish Reservation located along the Lone Tree Creek, with a refreshments reception to be held at the Lodge at 1,000 Trails RV Park. Look soon for your invitation in the mail. Carpooling will be highly encouraged for this event. Details on the logistics of carpooling will be included on your invitation.



### 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.





**Padilla Bay**

National Estuarine Research Reserve

# Spring Events

## Presentations for March, April, and May

### Mammals in Bird Communities

Northwest birds and mammals have co-evolved in their shared communities over time. This elegantly balanced cast of characters is an intriguing study. We will examine niche overlap, inter-actions and the interplay of humanity within our related habitats. Learn haunts, habits and handprints of our local mammals in this presentation by David Drummond, wildlife biologist with the Merlin Falcon Foundation.

Bring your critter stories to share!  
**Saturday, March 14, 1:00-2:30.**  
Please call or register online.



### Spring Birding by Ear

There is no better time than this to enjoy the music of Padilla Bay's songbirds. Join naturalist, Libby Mills, for a morning of watching and listening for neotropical migrant birds. This excursion involves a slow walk around the reserve uplands, so you may want to bring a folding chair. Bring warm, outdoor clothing, binoculars, field guides, and snack or lunch. Each class limited to 15 participants. Please call or register online.  
**Saturday, April 18 and Saturday May 2, 8:00-12:00.**

### Stewardship Workshop Series

Learn more about the habitats around Padilla Bay - and your own backyard. Sharon Riggs, Stewardship Coordinator for the Padilla Bay NERR, will share her extensive understanding of local ecosystems, gained from over 20 years of restoration and stewardship work at the reserve. Please call or register online for these programs.

### Indispensable Forests: Life Support on Earth

Trees provide many benefits for wildlife and people. Come and learn more about the most common local species and the role they play in our lives and watersheds. **Saturday, March 7, 1:00-2:30.**

### Amazing Water

Water is truly amazing. We can't live without it, yet we all take it for granted. Come to this workshop and learn really cool facts about water that you can share with family and friends.

**Saturday, March 21, 1:00-2:30**

### Landscaping with Native Plants

Have you ever thought of using native plants in your landscape or wondered how to fit them into your current plantings? Come hear the advantages and benefits to using native plants, find resources about native plant gardening, and learn about sources for buying native plants. **Saturday, April 18, 1:00-2:30**

### The Wonder of Wetlands

Why should we care about wetlands? Get an armchair tour of different kinds of Washington wetlands, their place in the landscape, and the kinds of plants and animals you might find there. Estuaries are just one kind of wetland. **Saturday, May 9, 1:00-2:30**

### Aliens in our Midst: Invasive Species

Yes, there are aliens in our midst. Non-native plants and animals in Padilla Bay arrived through many means, from all over the world. Learn to recognize some of the most common ones and how they affect the places they invade—including your own backyard. **Saturday, June 6, 1:00-2:30**

Please call or register online.

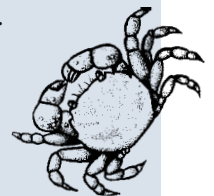
The Breazeale Interpretive Center is open to the public Wednesday-Sunday, 10:00-5:00.

Staff are available 7 days a week.

Register online or by phone.

[www.padillabay.gov](http://www.padillabay.gov)

(360) 428-1558



# For Teachers

## EstuaryLive for Schools

Teachers: here's an exciting Internet program that brings the estuary into your classroom. On May 1, you can take your students on a virtual field trip to estuaries around the country, including Padilla Bay. A live Internet broadcast will connect your students to scientists and educators on site for a close encounter with the estuary. It's the next best thing to being there. Contact Alex (alex@padillabay.gov) for more information. Register at [www.estuarylive.org](http://www.estuarylive.org).

## Estuaries 101 Curriculum

Our national office (Estuarine Reserves Division of NOAA) developed this new on-line science curriculum. It provides powerful ways for students to learn fundamental concepts in science, develop scientific thinking skills, and explore the nation's biologically rich estuaries. From flying over an estuary with Google Maps to tracking the path and impact of a hurricane, Estuaries 101 modules feature hands-on learning, experiments and field-based activities.

The Estuaries 101 curriculum is designed for grades 9-12 classrooms, but is useful to higher or lower grades, as well. It meets key National Science Education Standards and can be readily

aligned to our state standards. Each module tells the estuary story through one of three domains - earth, life, or physical science. Made to be woven into existing science courses, the modules can be used together or separately. Get more information online at [www.estuaries.gov](http://www.estuaries.gov).

## Videos: Sundays at 1:00 & 4:00

March	1	The Northern Elephant Seal (14 min)
	8	The Secret World of Sharks, Rays (60 min)
	15	Secrets of the Salt Marsh (20 min)
	22	Winged Migration (85 min)
	29	Seasons in the Sea (55 min)
April	5	Pacific Estuaries (28 min)
	12	The Life of Birds-Fishing for Living (55min)
	19	Where Have all the Orcas Gone? (40)
	26	The Intertidal Zone (17 min))
May	3	The Worlds Below (40 min)
	10	Padilla Bay (20 min)
	17	Shadow of the Salmon (42 m)
	24	Estuary! (15 min)
	31	Planet Earth: Deep Ocean (60 min)

## 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.

### March 4 & 5, 10:00 & 1:00

*Wet and Wonderful Water!—Become a water drop on an amazing journey and find out why good clean water is more precious than gold.*

### April 8 & 9, 10:30

*Food Chain—Who's eating whom in the estuary? Come and find out with stories, songs and activities.*

### May 6 & 7, 10:30

*Trees are Great!—Where would we be without the biggest of the plants? We'll take a short tree hike, so dress for the weather.*



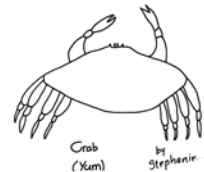
**Junior Ecologists** are 6-9 year olds who have fun exploring the estuary. Excursions to the beach, science experiments, games, art projects, and studying life in the bay—this program is guaranteed fun! Call the Interpretive Center or register online.

### March 20 & 21, 10:30-12:00

*Salmon—Find out all about the king of northwest fish.*

### April 10 & 11, 10:30-12:00

*Field Journal— Through drawing, writing and observing, this class will help you see and experience the natural world in a new way.*



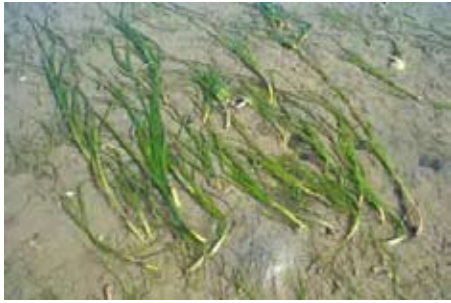
### May 8 & 9, 10:30-12:00

*Wiggling Polychaete Worms—Worms are the coolest, especially when they live in the estuary mud. Become a polychaete expert and check out these amazing animals.*



## Vegetation Mapping

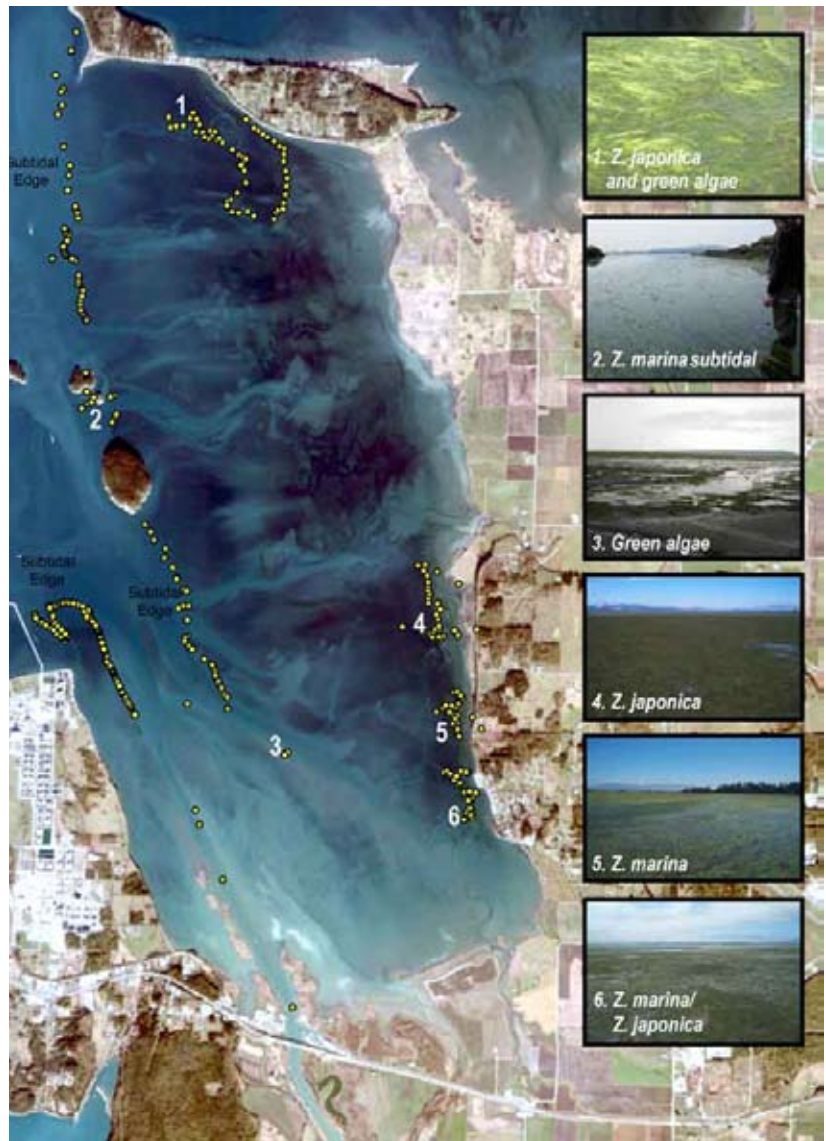
Padilla Bay researchers have mapped the vegetation in Padilla Bay (eelgrass, salt marsh and macroalgae) in 1989, 2000 and 2004. From a high resolution aerial photo, researchers can get a good idea of what grows where, but for better accuracy, they add “groundtruthing”—slogging across the mudflats with digital camera, clipboard, and a GPS unit. In order to create a 2008 updated map of the intertidal and subtidal vegetation in Padilla Bay, PBNERR staff, WCC crew, and a summer intern collected data this summer. Information about the type of vegetation, the composition of the vegetation, the percent cover as well as substrate type were recorded on datasheets at about 400 sites. Global Positioning Systems were used to get an exact position and a digital photo was snapped to document the habitat type. The data was collected by foot or by boat on low-tide days. This summer the overcast skies postponed the aerial image acquisition to September 11 at a +0.3' tide. For a color version of this map, go to Padilla Bay's website and click on Newsletter.



Padilla Bay has two species of eelgrass, the native *Zostera marina* and a smaller Asian *Zostera japonica*.



Padilla Bay intern, Nat Woodsmith uses a hand-held GPS unit to determine the location of the edge of this mixed algae and eelgrass habitat.





## Skagit County Beach Watchers Spring Lecture Series

### Anacortes Library

March 20, 7:00PM, Puget Sound Partnership: What's happening and what it means for Skagit County. Steve Sakuma, Sakuma Brothers Farms and member of Puget Sound Partnership Leadership Council

April 17, 7:00PM, Sea Level Rise in the Pacific Northwest and Impacts in Skagit County, Patty Glick, Sr. Global Warming Specialist, National Wildlife Federation

### Special Earth Day Lecture at the Skagit Valley Food Co-op, 202 S. 1st St, Mount Vernon

April 22, 7:00PM, The Impacts of Plastic in the Marine Environment, Jen Kingfisher, Port Townsend Marine Science Center



## Join Skagit County Beach Watchers

Love Puget Sound? Want to learn a ton? Then join WSU Beach Watchers!

Becoming a Beach Watcher begins with 100 hours of university-level training. This training program includes expert presentations, field trips and hands-on practice. In return, Beach Watchers continue learning while volunteering at least 100 hours over two years as citizen scientists, educators, restorationists and project planners.

The 2009 training will be held Tuesdays and Fridays, March 17 - May 1, 2009, 9am - 4pm at Padilla Bay Center. Registration deadline is March 2. For an application and more information, check the Skagit County Beach Watchers website at <http://www.beachwatchers.wsu.edu/skagit/training/> or contact Adria Banks at [abanks@co.skagit.wa.us](mailto:abanks@co.skagit.wa.us), 360-428-4270, ext. 223.



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