



# Padilla Bay Newsletter

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

Autumn 2010



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

[swood@padillabay.gov](mailto: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

## Inside

- AmeriCorps Garden .....p. 2
- Foundation Newsletter.....p. 3-4
- Presentations for Winter.....p. 5
- Youth Classes/Lectures.....p. 6
- Bay View Watershed.....p. 7
- Volunteer Opportunities.....p. 8

Publication No. 10-06-023

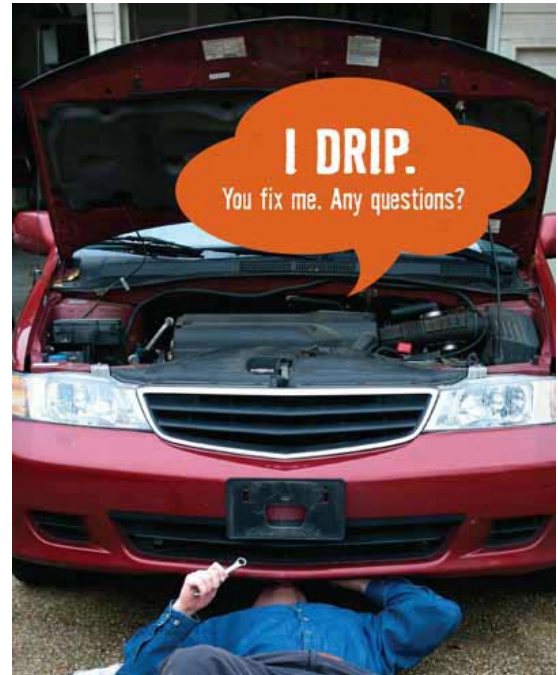
## Puget Sound Starts Here

“Here” is where each of us live. It’s our backyard. It’s our driveway. It’s our house. Here is everywhere in the Puget Sound region. But what we do here is having a serious impact on our local waterways and ultimately on Puget Sound.

Our actions on land pollute the Sound with yard chemicals, oil, grease, soap, and bacteria from pet waste and septic systems that are in disrepair. No matter where we live – from Bellingham to Olympia, Snoqualmie Pass to Shelton – our daily actions are contaminating stormwater runoff with pollution. This untreated stormwater empties directly into streams, rivers and lakes and winds its way into Puget Sound – where it stays.

On the surface, Puget Sound is a watery wonderland and a source of great enjoyment. It’s a gem we are proud to claim as our own. Yet we are damaging our national treasure. Throughout the 12 counties that border Puget Sound there are thousands of storm drains and streams pouring polluted water into the Sound’s delicate ecosystem. While it might look pristine on the surface, Puget Sound has unhealthy levels of many different toxic chemicals. Signs that we are killing Puget Sound are becoming harder and harder to ignore. The problem will only become worse as our population continues to grow.

We can fix the problem. There is hope. The solution starts here ... where you live and play. You are the solution to the problem. Approximately 75% of all pollution in Puget Sound comes from stormwater runoff. By changing a few of the things you do in your yard, with your car, around your dog and in your home, you will become part of the solution. Together, we can fix it. You can help save Puget Sound at its source. For more information, go to [www.pugetsoundstartshere.org](http://www.pugetsoundstartshere.org).





### Breazeale Farm Once Again Under Production— With a Purpose

The Skagit River Valley is one of the largest and most diversified agricultural communities west of the Cascade Mountains. Every year, around 100,000 acres of agricultural land produce a wide variety of food products, worth about 300 million dollars. Blueberries, raspberries, apples, wine grapes and vegetable seeds are among more than 90 different crops grown in the county. The Skagit Valley is recognized worldwide for this rich bounty. In fact, 95% of all the red potatoes grown in Washington are grown in Skagit County, about a third of the beet seeds grown worldwide are grown in the valley, and more tulip, daffodil and iris bulbs are grown in Skagit County than in any other county in the country. Despite this abundance, many people living here still struggle to make ends meet. One out of every four households in the county relies heavily on local food banks to feed the members of their families.

In 2005, a group of AmeriCorps volunteers, sponsored by the Padilla Bay Foundation, began a volunteer garden project with the goal of donating the produce to local food banks. Using all recycled materials and utilizing compost from the Center's own composting program, Padilla Bay's AmeriCorps members have successfully contributed fresh produce to local food banks over the past five years. This year, Corps members have already donated over 147 pounds of produce including broccoli, zucchini, peas, and potatoes. Over the next few months additional shipments of fruits and vegetables, including tomatoes, bell peppers, beets, kale, broccoli, cauliflower, potatoes, corn and beans, will be grown, harvested and donated. Food is taken to the Skagit County Community Action Agency, who distributes donations to 13 food banks in the area.

You can help too! As we enter into the harvest season, consider donating your excess produce and join in the satisfying act of giving. For more information about Skagit Valley farms, come to Padilla Bay October 9, at 2:00 for a great presentation on agriculture in the Skagit by Skagitonians to Preserve Farmland. (See page 5.)



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: Tim Manns  
Vice-president: Don Sorensen  
Secretary: Mark Kresovsky  
Treasurer: Deb Canon  
Past-president: Tom Richards

Lyn Bishop  
Paul Dinnel  
Ed Gastellum  
Kraig Kemper  
Cort Liddell  
Patsy Martin  
Charlie O'Hara  
Gail Smith  
Phil Teas

Terry Stevens - Advisory Member  
Kay Reinhardt - Administrator



# PADILLA BAY FOUNDATION NEWS

## Padilla Bay Foundation asks for your support

Like no time in its history, the Foundation is funding many projects at the Padilla Bay Reserve. The Department of Ecology, which administers the Reserve, has felt the current budget shortfall and has scaled back many programs and services. Padilla Bay Foundation members and donors have been of tremendous help in keeping the organization growing as the financial needs of the Reserve increase. Here are a few areas in which we have stepped up to the task of assisting the Reserve in its research, stewardship and education:

- Funding research assistantships
- Funding public presentations and events
- Contracting employees to help manage special projects or fill in for an employee on leave
- Purchasing equipment for research and education
- Managing the Guesthouse for visiting researchers
- Outfitting the meeting room kitchen – including dishes, glassware, cutlery and utensils to encourage sustainable practices
- Fund raising to establish an Endowment Fund to grow the Foundation’s base
- Providing matching funds for Aquarium Room renovations

Here are a few ways you can help:

- Keep your membership current and consider an extra donation of any amount.
- Invite a friend to visit the Reserve and speak to them about becoming a member.
- Purchase a quality item for our gift shop.
- Make a donation specifically to the Endowment Fund to provide long term support.

The Foundation has been working hard since last October to raise \$85,000 in matching funds for completion of the new aquarium room. We are now about halfway to that goal, with only 4 months remaining. Thanks to all of you who have contributed!!! Recent donations:

- \$5,000 from Skagit Community Foundation
- \$5,000 from the Lucky Seven Foundation
- \$10,000 was awarded anonymously

We are asking for your support to help us achieve our goal by December 2010. We are very thankful for the support that you have given us in the past with our mission to assist the Reserve.

All donations are tax-deductible and each \$1 donated is matched with \$2.30 from NOAA.

*We know you are not shellfish, so please help us to not flounder ... donate to our campaign, just for the halibut.*

This amazing asset, the National Estuarine Research Reserve at Padilla Bay, belongs to all of us. It makes a difference when you tell a friend or family member how to find us and that we are here for them. We appreciate your support over these years! Thank You

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 _____

**Shells & Shellfish of the Pacific Northwest: A Field Guide, Rick M. Harbo**

For us terrestrial dwellers shells are the most visible evidence of the sea’s creatures and their diversity. Exploring the beach, we come on the clam and oyster shells, spiral homes of snails, and little limpet cones that are the durable parts of mollusks. Of all animal life, only the arthropods (insects, crabs, shrimp) are more varied than these shellfish. With Rick Harbo’s Shells & Shellfish of the Pacific Northwest in hand, you’ll be set to enjoy this aspect of what makes beaches here so interesting.

Subtitled “A Field Guide,” Harbo’s book is well organized for use on the beach. Detailed descriptions follow color photos divided by type. Line drawings and natural history introduce each section. Special pages show how to determine bivalve species just by siphon ends. Clams and many other bivalves burrow in sand and mud, reaching one siphon to the surface for water and food and another to expel waste. For shellfish people eat, Harbo includes history and historical photographs. We read how the commercially-grown Manila clam and Pacific oyster arrived here and about the culinary challenge posed by the Giant Pacific (or Gumboot) chiton. With eight butterfly-shaped plates attached to a thick, oval body, chitons have slowly grazed across algae-covered rocks the last 500 million years or so. On the low tide beach, keep an eye out for the Gumboot, which Harbo rightly says “has the appearance of a wandering meatloaf,” at 13 inches, the world’s largest chiton.

A proper field guide, this one includes a checklist to note what you’ve seen, a good index, and glossaries of descriptive terms and scientific (i.e. Latin) names of the 225 species presented. Another thoughtful inclusion is contact information for license requirements to harvest shellfish and a list of marine toxin hotlines; for Washington, (800) 562-5632. Paralytic shellfish poisoning (PSP) is a Northwestern reality, one which cooking does not remedy. (For details, go to Washington State Department of Health: <http://www.doh.wa.gov/ehp/sf/biotoxinprogram.htm>.)

Even if catching dinner is not on your mind, observing and learning about the Northwest’s shell-making creatures will add a lot to your enjoyment of the beach. Look for this handy field guide at Breazeale Interpretive Center! (\$25.95)

- 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.



**Padilla Bay**

National Estuarine Research Reserve

# Autumn Events

Presentations for September, October and November 2010

## Kids Day at Fidalgo Bay

This year's Puget Sound Kids Day will be held across the bay with our neighbors on Fidalgo Island, as a part of Fidalgo Bay Day. Help celebrate Skagit County's marine shorelines, marine organisms, history and culture.

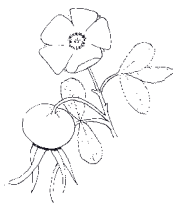


Since 1992 Padilla Bay has been helping kids and parents celebrate Puget Sound with its annual Kids Day celebration. The event has been a favorite from the start, and each year a wonderful group of energetic volunteers and staff brings activities, songs, and fun to children and families.

Padilla Bay will be celebrating Kids Day on **September 18 from 11:00-3:00 at the Samish Indian Nation's Fidalgo Bay Resort and RV Park Convention Center on Weaverling Spit, near Anacortes**. We need adult and high school volunteers to make it all happen, so call Alex at the Interpretive Center to help out. 360-428-1070. Invite your friends and family, and come celebrate our great Puget Sound. Fidalgo Bay Day is held jointly with Skagit County Beachwatchers, the Skagit Marine Resource Committee, and Skagit Shore Stewards.

## Wild Edible Plants in Fall

Northwest naturalist, Marlee Osterbauer joins us once again for a popular program on wild edible plants. Marlee has a wealth of knowledge and stories about native plant uses and traditions. Weather may be chilly or wet, so dress for the outdoors. You may want to bring a notebook and pencil along with your appetite. **Saturday, October 2, 2:00-4:00**. Please call to register.



## Farming in the Skagit Valley

Have you ever wondered who eats all those raspberries? Why did they let that cabbage go to seed? Where does that huge truck load of potatoes end up? The Skagit River Delta boasts some of the world's best farmland. Join Allen Rozema Executive Director of Skagitonians to Preserve Farmland for a presentation on the ins and outs of agriculture in Skagit County. **Saturday, October 9, 2:00-3:30**. Please call to register.

## Autumn Birds of the Skagit Flats

Though the wild summer singing is done, fall is a great time to focus on newly arrived migrants and those persistent locals that stay through the winter. Join naturalist, Libby Mills, for a morning of watching and listening for birds 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. **Friday, November 5 or Saturday, November 6, 8:30-12:30**.



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

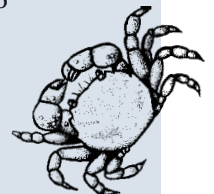
Staff are available 7 days a week.

Closed November 11, 25 & 26

Register online or by phone.

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

(360) 428-1558



# Aquarium Notes

---

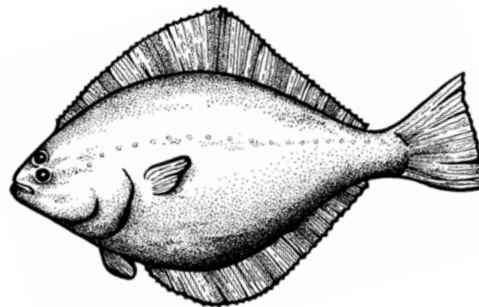
## Starry Flounder

You might think that people change a lot as they grow older, but imagine if your eyes rearranged themselves on your head! That's what happens to the starry flounder, *Platichthys stellatus*, several of which now reside in our eelgrass tank. Flounders are easily recognizable by their flat shape, but they don't always look like that. When they are very young they swim upright like most other fish, with an eye on each side of their body. Slowly they flip over on one side and one of their eyes migrates to the top side. Their bottom side turns white. Most starry flounders are "right-eyed" but some can be "left-eyed."

Their flat body shape is an adaptation to living on the bottom. Starry flounders can hide by burying themselves in sediment, leaving their eyes to look up and watch for predators or food. They can also change their color to match the sediment they are lying on. (So look carefully for them in the aquarium because you might not see them at first.) When they are very small they feed on zooplankton. As they grow, their diet includes brittle stars, fish and crab.

Starry flounders can be distinguished from other types of flounders by the black bars alternating with white, yellow, or orange on their fins. They get their name from the star shaped scales they have on their eyed-side, which causes their skin to be very rough. They can reach up to three feet in length. Starry flounders are very tolerant of fresh water, especially when they are young, and are occasionally found swimming up from the estuary into freshwater rivers. Padilla Bay's eelgrass meadow is a great habitat where this fish can hide and find food.

We hope you enjoy watching this strange shaped master of disguise in the eelgrass tank!



---

## Monthly Youth Programs Offer Fun Learning

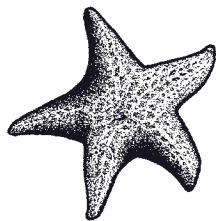
---

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.

**September 15 & 16, 10:00 & 1:00**  
*Stars of the Sea—Meet a sea star face to face and find out all about these colorful creatures and their spiny friends.*

**October 13 & 14, 10:00 & 1:00**  
*Cider Pressing—Turn the crank and enjoy a fall day in the Breazeale family orchard. Don't forget warm clothes!*

**November 3 & 4, 10:00 & 1:00**  
*How Animals Move—Swimming, flying, crawling, squirming—only a few estuary animals walk on two legs like you!*



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.

**September 17, 10:30-12:00** (No Saturday class)  
*Explore the Upland Trail—We'll have fun with activities all along Padilla Bay's 1-mile upland trail, sharpening our senses and discovering lots of treasures that most folks walk right past.*

**October 15 & 16, 10:30-12:00**  
*Cider Pressing—Spend a fall afternoon out in the orchard, and learn about the Breazeale family farm. (Wear a warm jacket.)*

**November 5 & 6, 10:30-12:00**  
*Estuary Art—Estuaries are beautiful places full of marvels. They have inspired artists for centuries, and they can inspire you, too. We'll look at beautiful examples of estuary art, and make some ourselves.*

Fidalgo Bay Day - Saturday, September 18. Fun estuary activities for the whole family.



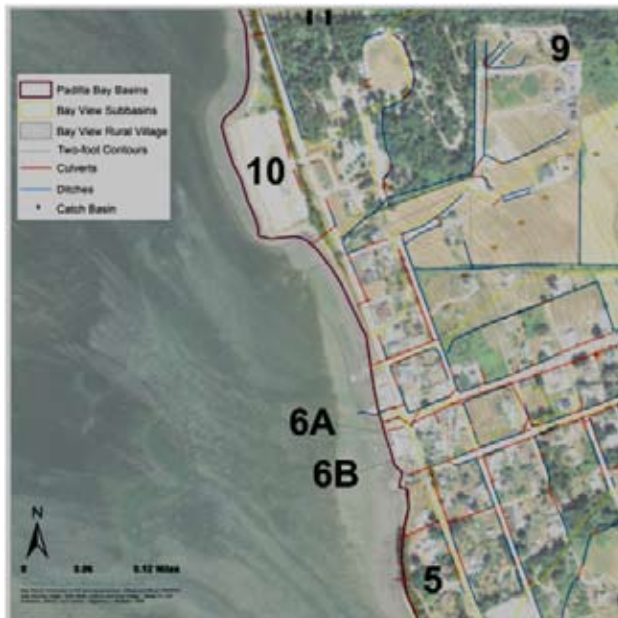
## Getting to Know the Bay View Watershed

An ambitious mapping project begun in 2007 is now completed, thanks to the enthusiasm and effort of volunteer Jack Middleton. Jack worked with Suzanne Shull, Padilla Bay's GIS specialist, Austin Rose, a Padilla Bay AmeriCorps member, as well as with other agencies and landowners. Jack, Suzanne, and Austin presented their findings at the Washington Urban and Regional Information Systems Association GIS conference in Tacoma in April.

Back in 2007, high fecal coliform levels in Padilla Bay near the village of Bay View created need for a detailed map of water flow. The county had mapped the drainage, but had focused more on water flowing through the dike districts. The rain that falls on Bay View Ridge however, flows directly into Padilla Bay, so the ridge was not surveyed. Because the water flows directly into the Bay, it can have a large impact on water quality. Knowing where the water is coming from and where it is going is a very important first step in managing the health of our watershed. Jack Middleton, retired from 15 years of serving Snohomish County as an Environmental Health Specialist, was eager to take on the challenge.

The community now has a tool to better understand water flow through their properties. This data is available to the Public Works and Public Health departments, the Conservation District, and the Skagit County Marine Resources Committee. Soon anyone who is interested will be able to access and download the data from the Padilla Bay website.

This data is remarkable for its detail. Using a 2 foot contour map on an ariel photograph and his "boots on the ground" method, Jack surveyed the land and interviewed landowners. The data is compiled into GIS maps that show 26 basins, the lengths of roads and ditches in each basin, types of land use for each basin, 366 culverts of six material types, and 21 outfalls directly into the bay. Very few communities are lucky enough to possess such intimate knowledge of their watershed. Along with the details of the lay of the land, Jack also learned about the rich history of the Bay View area and the people who live here.



Jack found that neighbors and landowners were extremely helpful. The project would not have been a success without their cooperation. It would also not have been possible without the partnership between the community and Padilla Bay staff. Austin's work on this project, under the expert GIS guidance of Suzanne, gave her the opportunity to build on her college GIS studies in a real world situation. She is now continuing her Geography studies in Western Washington University's Graduate Program.

This project gives us much more than a map to help us understand the Bay View Watershed. It is also a map to how similar projects can be accomplished in the future. It is a wonderful example of how community members can connect to the landscape they live on by first connecting to each other.

## Join the Skagit Stream Team

Get intimate with Skagit County's waterways. The Skagit Stream Team is looking for volunteers to monitor the quality of water in the Samish and Skagit River watersheds. Teams of 3 to 4 people check a stream's temperature, salinity, dissolved oxygen, and depth once a month. Samples are then brought back to the Padilla Bay lab where another volunteer tests for fecal coliform and turbidity. The goal is to collect 9 months of accurate water quality data to share with interested agencies. The program provides hands-on learning about natural systems, land-use impacts, and stream/estuary health. Orientation and training will be at the Interpretive Center on: **September 8 and 9, from 6:00-8:30PM and Saturday, September 11 from 9:00AM-3:00PM.** If you'd like to volunteer or have any questions, call Susan Wood at 360-428-1066 or Kristi Carpenter at the Skagit Conservation District, 360-428-4313.

## Climate Stewards

Global climate change may seem a daunting challenge, but every individual has the power to be a part of the solution. Climate Stewards are trained volunteers who work with their local communities to educate their neighbors about climate change and demonstrate how simple changes in our lives can make huge differences.

Climate Stewards receive 35 hours of FREE professional training. Participants become familiar with the science of

climate change, impacts of global warming and actions that reduce global warming pollution. In exchange, participants return at least 35 hours of volunteer service over the next eight months. They develop and implement outreach projects in their communities that promote energy conservation and other strategies to reduce global warming emissions. Projects are geared toward the interests of the volunteers.

Next training: **Thursdays, 5:30pm - 8:30pm starting September 16 and ending October 28, with 2 Saturday field trips.** Call Padilla Bay for an application. Be part of the solution!



Padilla Bay National Estuarine Research Reserve  
Breazeale Interpretive Center  
10441 Bay View-Edison Road  
Mount Vernon, WA 98273

PRSR STD  
US POSTAGE PAID  
WA STATE DEPT  
OF PRINTING 98501

