



# Padilla Bay Newsletter

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

Autumn 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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## Energy on the Home Front

Climate change is something we hear a lot about. Shellfish growers are wondering how to manage as ocean waters turn more acidic. Shoreline planners are asking how fast sea level will rise in the coming decades. Energy companies are calculating how changes in precipitation might affect our hydroelectric potential. Counties are considering what the expected “10 year flood” will look like now.

We know that too much greenhouse gas in the atmosphere is the cause of the concern. And we have a pretty good handle on where that gas comes from. What we haven’t quite decided is how to reduce it so the consequences will be manageable. Some of the reductions will have to come from government action, big changes to the way we produce and distribute electricity, and how industry operates. But, about half of the greenhouse gas emissions are a direct result of how we run our houses, work places, and personal vehicles. Luckily, saving energy at home is something we can do right now - and we’ll save money at the same time.

No one wants to see money going down the drain -- or heat wafting out the windows or kilowatts leaking out of appliances. Did you know some of your neighbors pay about 1/4 to 1/2 as much as you to light and heat their homes? If you’d like to see your power bill shrink while making your home snug and efficient, check out this workshop just for you.

**Home Energy Workshop** Climate Steward, Eric Shen, along with a team of local homeowners, will share their experience and knowledge about household systems, alternative energy sources, money-saving tricks, rebates and incentives. From window caulk and the latest light bulbs to photo-voltaic panels, this information-packed workshop will give you the tools and resources to start your home on a path to efficiency. **Saturday, October 20, 1:00-4:00.** Please call or register online.



## Japanese Tsunami Brings Unexpected Arrivals

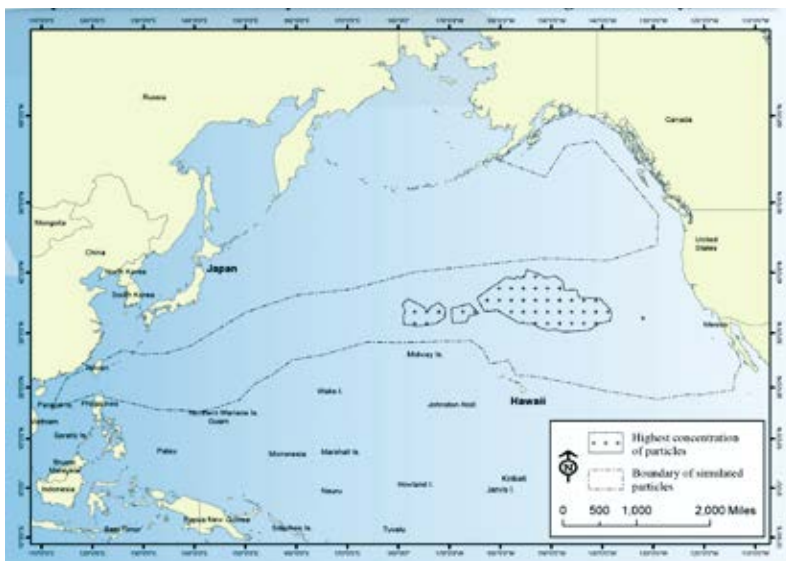
Over a year has passed since the tragic tsunami hit the coast of Japan in March of 2011. While efforts are still being made to clean up the destruction overseas, we are now starting to see signs of this natural disaster on our own coasts. This evidence comes in the form of marine debris ranging from plastic bottles to whole boats. The Japan Ministry of the Environment estimated that 5 million tons of debris washed into the ocean. Although it is estimated that 70% of the debris ended up sinking near the coast of Japan, the other 30% or 1.5 million tons is making its way across the Pacific Ocean towards the coasts of North America.

While efforts to clean up the debris were focused initially on issues such as radiation, chemical contamination, and boating dangers, an unexpected twist came in June of this year. A dock 66 feet long by 19 feet wide washed up on Agate beach in Oregon, with it came dozens of potentially invasive species. The organisms included barnacles, starfish, urchins, anemones, worms, mussels, limpets, snails, sea squirts and algae. The problem doesn't stop here though, these foreign species could also play host to diseases and parasites that could have devastating effects on Washington State aquaculture.



After a year of floating across the harsh conditions of the open ocean, it would seem impossible for creatures to survive, but researchers are saying that life on the open ocean may be a little more comfortable than was once thought. Scientists are not sure if any of the species on the dock jumped ship before being contained, but they hope we won't start to see them establishing on our coasts anytime soon.

Washington government agencies such as the Dept. of Ecology, and NOAA are starting to tackle the issue with budget plans, clean-up crews, and a toll free reporting and information line. Beachgoers are encouraged to call 1-855-WACOAST if they see marine debris on Washington beaches. For more information, check out the joint information center, from all government agencies addressing this issue at <http://diasterdebris.wordpress.com>. – by Allison Cook



Expected distribution of particles through June 13, 2012



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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# PADILLA BAY FOUNDATION NEWS



## Skagit Watershed Letterbox Trail

Since the June 24 kick-off at Padilla Bay, families have followed clues to discover hidden letterboxes up and down the Skagit watershed. Boxes include a journal (for stamping) and a stamp or stickers for participants to place in their own journal.

Letterboxing is a great way to explore the natural wonders of Skagit County while learning how to help protect our watershed.

The fun-filled kickoff event was supported by Skagit County, Skagit Conservation Education Alliance, Skagit PUD, Padilla Bay Foundation and Shell Puget Sound Refinery. Participants made stamps, enjoyed the first look at this year's clues, and— a special treat—tasted ice cream by Mad Hatter!

It's still not too late do some hunting. Letterboxes will be in place until October 13. See this website for details: <http://www.atlasquest.com>

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

To contact the Padilla Bay Foundation:

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PO Box 1305  
Mount Vernon, WA 98273  
360-757-3234  
[foundation@padillabay.gov](mailto:foundation@padillabay.gov)

Name \_\_\_\_\_

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(see reverse)

Membership Amount \$ \_\_\_\_\_

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(VISA/Mastercard)

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P. O. Box 1305  
Mount Vernon, WA 98273

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## Rufous: The Amazing Hummingbird Story of “Red”

by Craig & Joy Johnson

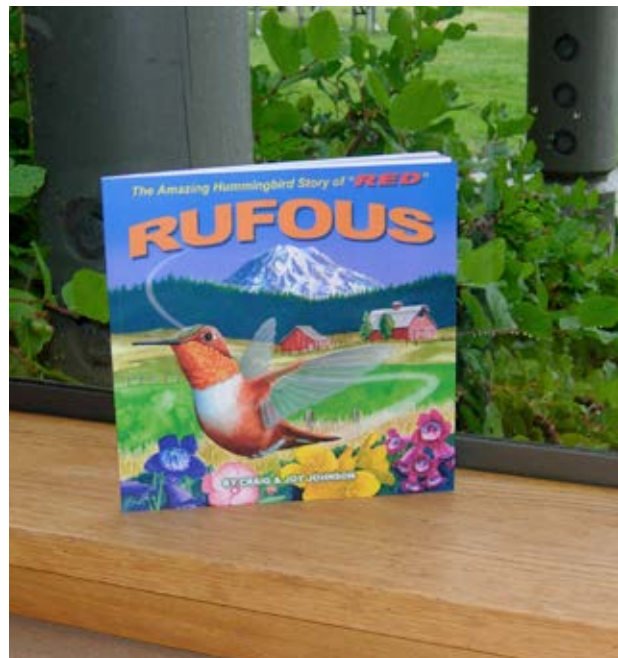
Hummingbirds are creatures we could hardly imagine if we didn’t see them in our gardens many spring and summer days. Weighing just over a tenth of an ounce; able to fly backwards, forwards, and hover; making nests of moss, lichen, and spider webs; these birds are incredible. Rufous: The Amazing Hummingbird Story of “Red” does a fine job portraying the life of the Rufous Hummingbird in art and text. The book is designed for children but is very interesting for adults too.

That tiny bright orange bird you noticed zipping around your yard again this summer was a male Rufous Hummingbird, one of two hummingbird species breeding in western Washington. The Rufous is a champion migrant, traveling further each year than any other bird so small. Authors Joy and Craig Johnson live on Whidbey Island and based this little book on what they observed in their own neighborhood. The Johnsons found a Rufous Hummingbird nest in an Oregon grape shrub and carefully photographed the two nestlings each day. The book, beautifully illustrated with Craig Johnson’s watercolors, describes the young birds’ early life, their migration to Mexico where most Rufous Hummingbirds winter, and the return northward the next year. Some individuals of this species fly all the way to Anchorage, Alaska, to nest—further north than any other hummingbird.

The Johnsons have created an excellent website to supplement the biology presented in the book ([www.pugetsoundbackyard-birds.com](http://www.pugetsoundbackyard-birds.com)). There are day-by-day photographs of the young birds on which the book is based as they grow in the nest and are then fed nearby after fledging. You can watch hummingbirds in flight, hear the Rufous’ song, learn about how they manage to fly so nimbly, and lots more. There’s information too about what to do and what to avoid if you’d like to attract hummingbirds to your yard. Read the book first, enjoy its great illustrations, and then go to the website if you would like to learn more.

The Johnsons’ little book Rufous is sure to deepen your child’s and your own wonder at this amazing creature with which we share the Northwest. Keep an eye out for Rufous Hummingbirds and look for Rufous next time you visit the Padilla Bay Interpretive Center (\$9.95 paperback).

—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.

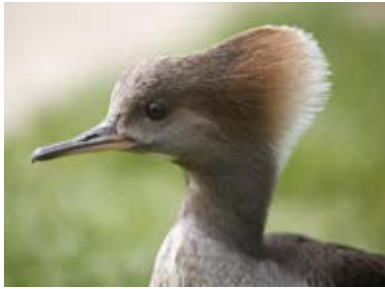


# Autumn Events

## Presentations for September, October and November 2012

### Salish Sea Ducks: Field ID, Migration and Bio-Ecology

In early autumn, diving ducks that breed in northern latitudes appear on local marine waters. Join David Drummond, wildlife biologist and director of the Merlin Falcon Foundation, to



learn about this family's adaptations, behaviors and wintering ecology. We will share captivating images, research findings, literature and "fresh from the field" insights, in this interactive discussion about these backyard beauties. If you want to better appreciate the diverse flock from up north, don't miss this fun-filled program! **Saturday, September 29, 1:00-2:30.** Please register online or call the Interpretive Center.

### Wild Edible and Medicinal Plants

Come and enjoy fall's bounty. Naturalist Marlee Osterbauer will help you search for wild edible and medicinal plants. She will share her extensive knowledge of plant uses and folklore. Weather may be chilly, so dress appropriately.



You may want to bring a notebook and pencil. **Saturday, October 6 and Sunday October 7, 2:00-4:00.** Please register online or call the Interpretive Center.

### On the Trail of a Vanishing Ornithologist

Kathleen Kaska, writer of fiction, nonfiction, travel articles, and stage plays, has just completed her most challenging endeavor. *The Man Who Saved the Whooping Crane*, a true story set in the 1940s and 50s, is about Audubon ornithologist Robert Porter Allen whose mission was to journey into the Canadian wilderness to save the last flock of whooping cranes. Kathleen will discuss the serendipitous events which led to the writing of the book,



the dangers whooping cranes still face, and the continued efforts to save them from extinction. **Saturday, October 27, 1:00-2:30.** Please register online or call the Interpretive Center.

### 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, November 3, 11:00.** No need to register. Just join us in the aquarium room at 11:00.



### Fall Birds of the Skagit Delta

Early November is the time a lot of the wintering birds begin to settle in to the Samish and Skagit Flats and estuaries. Come explore with Libby Mills, looking for a nice representation of winter mega-birds, (the ones that are more easily visible than spring birds) and dig into why the Skagit delta is a great place to live in the winter! Bring warm and dry layers, a snack, and maybe a hot thermos. Scopes are handy. Binoculars are available for those who need them. We'll meet at the Interpretive Center and carpool. **Friday, November 9 and Saturday, November 10, 8:30-12:30.** Please register online or call the Interpretive Center.



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

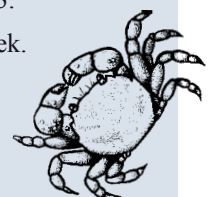
Closed November 11, 22 & 23.

Staff are available 7 days a week.

Register online or by phone.

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

(360) 428-1558



# Aquarium Notes

## White Spotted Greenling, *Hexagrammos stelleri*

Many pet owners may have started out with an unassuming goldfish. Although they make good company your pet goldfish would have a hard time getting along with our resident white spotted greenling. Here is a perfect example of a fish you might not have heard of but that is rather common in the waters right outside your door. Which is a real shame. This fish embodies the spirit and beauty of Padilla Bay, and is a bit of a celebrity in our aquarium.

White spotted greenlings are very striking fish. Coloration can vary from mottled browns and greens to tan and sandy. These background colors are barred down the length of the fish with darker patterning. Oh—and guess how it got its name? The white spots, of course. The specimen at the Padilla Bay Aquarium has an impressive almost gold tone in its coloration.

The white spotted greenling is shaped somewhat like a bowling pin, with its tail found at the neck end of the pin. Like all greenlings it is topped with a continuous dorsal fin that is notched near the center. Most specimens of this species range in size from nineteen to twenty-two inches and tip the scale at around five pounds.

White spotted greenlings make their homes in kelp beds, rocky seafloor, or eelgrass. They will claim and defend a

defined territory where they hunt for crustaceans, worms, and small fish (goldfish tartare).

White spotted greenlings are part of a family known for their tenacious attitude. They can be voracious eaters, sometimes striking out of annoyance rather than hunger. You may be familiar with their cousin the Lingcod, notorious for being easily agitated. Lingcod are absolute bullies at their full size of eighty pounds. Fear not though. Most encounters with the white spotted greenling are peaceful. This docile member of the family would much rather find shelter in a rock or kelp bed. Come meet our shy resident, the white spotted greenling at the Padilla Bay aquarium.

— by David Baer



## 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 12 & 13, 10:00 & 1:00

*Life on a Rock—Lots of plants and animals make their homes on rocks. We'll look closely at rocky homes in Padilla Bay to see who's hiding and hanging on tight.*

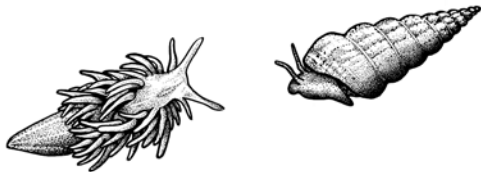


### October 24 & 25, 10:00 & 1:00

*Cider Pressing—We'll head for Padilla Bay's orchard, learn about the people who farmed here, and have fun cranking the cider press. Wear warm clothes for wet, fall weather.*

### November 14 & 15 10:00 & 1:00

*How Animals Eat—You won't find forks and spoons on Padilla Bay's beach, but estuary animals have all sorts of ways to make sure they get enough to eat.*



**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 7 & 8, 10:30-12:00

*Salmon Run—Fall is the perfect time to learn all about Washington's coolest fish. From tiny streambed fry to glistening, ocean adults, here's a fish that's fun to learn about.*

### October 19 & 20, 10:30-12:00

*Cider Pressing—We'll head for Padilla Bay's orchard, learn about the people who farmed here, and have fun cranking the cider press. Wear warm clothes for wet, fall weather.*

### November 16 & 17, 10:30-12:00

*Migration Adventure—From baby crabs heading out to deeper water to swallows who fly halfway around the globe, estuary animals are often on the move. Come find out more!*



## Want to Learn More?

For more information on eelgrass, check these works cited by James Parrott:

Capital Regional District, What threatens eelgrass, <http://www.crd.bc.ca/watersheds/protection/wildlife-plants/eelgrass.htm>

Department of Ecology, Puget Sound Shorelines, Eelgrass, <http://www.ecy.wa.gov/programs/sea/pugetsound/species/eelgrass.html>

Stewardship Centre, Eelgrass Management Practices, How can they be damaged?, What can We do?, <http://www.stewardshipcentre.bc.ca/static/eelgrass/eelgrassrestoration.html>

Gaeckle, Jeff, Department of Natural Resources, Puget Sound Vital Signs, <http://www.psp.wa.gov/vitalsigns/eelgrass.php>

North Carolina Coastal Reserve, 2007, <http://www.nccoastalreserve.net/resources>

Friends of the San Juans, Friday Harbor, [http://www.sanjuans.org/Eelgrass\\_Protection\\_Program.html](http://www.sanjuans.org/Eelgrass_Protection_Program.html)

Alexander, Glen, Contact, [alex@padillabay.gov](mailto:alex@padillabay.gov)

Ocean Discovery Centre, Nov 13, 2011, Eelgrass Ocean-cast, <http://www.youtube.com/watch?v=Mmn8SY2mvo>

Rhode Island's coastal habitats, Coastal Resources Management Council, Narragansett Bay Estuary Program, Save the Bay, Seagrass, <http://www.edc.uri.edu/restoration/html/intro/sea.htm>

CICEET Project Spotlight, University of Rhode Island, Scott Nixon, Steve Granger and Brian Maynard, <http://ciceet.unh.edu/spotlight/nixon.html>

PWLF- The Pacific Wildlife Foundation, Get Involved, 2011, <http://www.pwlf.org/getinvolved.htm>

## We Can Protect Eelgrass Habitats

by James Parrott, fifth grade student at Annie Wright School in Tacoma

Eelgrass is an important habitat and food source because it shelters and feeds a lot of marine life. Each blade of eelgrass can be considered a food factory. It shelters and grows phytoplankton that in turn feeds other animals. A lot of fish, like baby salmon, use eelgrass as shelter when they are young as a nursery and feeding ground. An eelgrass bed protects and nurtures scallops, crabs, baby fish, salmon, and even nudibranchs. That's why eelgrass is important to the Puget Sound.

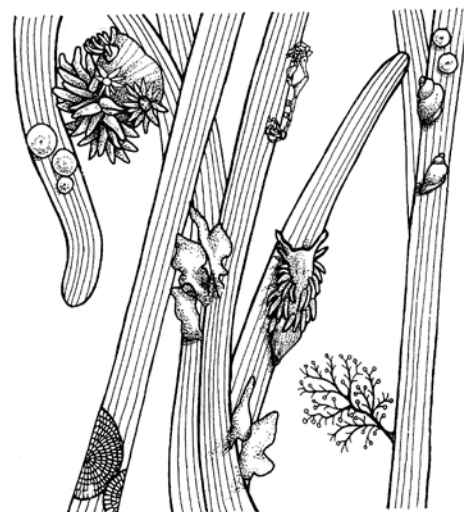
Healthy eelgrass really makes me smile. In Puget Sound there should be more eelgrass restoration to start new eelgrass beds and help sick eelgrass beds recover. Scientists can move eelgrass, protect areas with eelgrass, and other things too. Pollution and human activity can degrade eelgrass. That is why people need to stop polluting.

There are and probably will always be human dangers to eelgrass. One of the big dangers is propellers. When propellers tear through eelgrass, they rip up the beds leaving permanent damage. Anchors are the same danger to eelgrass.

Another threat is cloudy water that can come from too much nutrients or dirt from people digging and building. This can harm eelgrass by making shade.

Another threat is dredging, when people dig up dirt and sand from the ocean bottom to make room for boats and structures. Construction often involves dredging. Even a simple dock can kill eelgrass by casting shadows over it and blocking sunlight.

Eelgrass can also provide big money for us. A single bay of eelgrass provides thousands of dollars of seafood. If we protect eelgrass, it will protect us. Eelgrass slows down waves and stops them from eroding land. Because of all of this, in Washington, eelgrass is considered a priority habitat.



If you are a boater like me, you need to pay strict attention to eelgrass. There are also things that you should do and also avoid. If you are placing a buoy, keep it out of eelgrass. Always, when around eelgrass, anchor at deeper than 15 feet because eelgrass doesn't grow that deep. You should clean up even tiny oil leaks from your boat. When building docks, avoid eelgrass. You can also share a dock with your neighbor and try to make your dock as small as possible.

Follow these simple steps and we'll all be just fine. Good luck!

## Trail Tales interpretive walks

Established by Friends of Skagit Beaches, these walks are leisurely and informative, focusing on history, ecology and current activities in the Fidalgo Bay. Walks are led by trained volunteer docents and approximately 1.5 hours long. They are free and on a flat, paved trail. For more information go to the Trail Tales link at [www.skagitbeaches.org](http://www.skagitbeaches.org)

**Weaverling Spit to March Point. Wednesday, September 5th 10:00 -11:30am.** - Fidalgo Bay RV Park, Take a step back in time and join our Trail Tales docents for an interpretive walk to the Tommy Thompson trestle. Learn about the rich history of Weaverling Spit, Fidalgo Bay and March Point from earliest European contact to the 21st century.

**Custom Plywood Mill History & Clean Up, Fidalgo Bay Day, Saturday, September 15th, 10:00 – 11:30 am** - 34th Street sign. Learn about history and cleanup of the old plywood mill site at the east end of 34th Street, Anacortes. Our docents will share the story of a century of mill operations, logging in Skagit County and log booming in Fidalgo Bay. You'll also learn about WA Ecology's current cleanup project to remove toxins and restore a healthy shoreline and marine environment.

**Native & Introduced Plants – Where Did They Come From? How Were They Used? Fidalgo Bay Day, Saturday, September 15th, 3:00 – 4:30 pm,** Fidalgo Bay RV Park. We'll identify and discuss about a dozen important plants along the Trail, how they fit into the environment, and how they were used by humans of different backgrounds. There will be pictures, an herbal medicine discussion with an emphasis on nutrition, and stories. And it will be berry season! The walk is suitable for children and history buffs, Anacortes residents and visitors alike.

## Fidalgo Bay Day 2012

**Saturday, September 15, 11:00 to 3:00**

Enjoy: Chowder samples from local restaurants \* Clams and oysters from Taylor Shellfish Farms \* Real live scientists \* Lots of cool kids' activities  
\* Beach seine \* Presentations \* Trail Tale Interpretive Walks

Free Admission - Family Friendly

Fidalgo Bay Resort & RV Park  
4701 Fidalgo Bay Road  
Anacortes, WA 98221



## New - Padilla Bay on Facebook

Check out our latest events and news on Padilla Bay's Facebook page. You've always liked us, but here's your chance to "like" us! <http://www.facebook.com/pages/Padilla-Bay/103458626376806>



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