

# Padilla Bay Newsletter

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

Summer 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.

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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.

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## The International Brant Monitoring Project - Three Countries, One Determined Little Goose -

by Kara Bloch

*Gliding through the cool sea air  
Slicing through the breeze like the notes of a trumpet  
Black like the night sky with a gentleman's collar around their neck  
Floating on the gentle current of the bay  
Taking flight against the slowly fading sun*

-local 8th grade student



What is it about a brant that instantly intrigues people? Is it the migration pattern that spans three countries or their graceful flight? Is it the fact that they mate for life and stick together as family? Could it be their distinguished white necklace? There is a definite mystique for all who know this special bird.

The International Brant Monitoring Project has been a unique and successful project involving participants from Canada, the United States and Mexico. Anyone from a wildlife biologist in the Yukon Kuskokwim Delta to a student in Baja California can post brant sightings on an online observation form. Brant enthusiasts and researchers throughout the Pacific Flyway share exciting stories and observations with people from different cultures. A wonderful example of the connectivity of this project is when the brant begin to leave Izembek Lagoon in Alaska and head south for the winter. An observer from Izembek reports seeing thousands of brant leaving the lagoon and a few days later, a birder in Humboldt Bay, California observes the first Brant of the season flying in on the northerly winds!

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As part of this project, educators from the Padilla Bay Interpretive Center have teamed up with students from Conway Middle School's sixth grade science classes. Throughout the brant season, about three students each week have the opportunity to go out on an all day field trip to look for brant in Padilla and Samish Bays. They fill out an observation form noting the date, time and location they have seen brant, as well as any interesting habits or interactions they find important. This information then gets posted on the International Brant Monitoring web site. This is an amazing opportunity to get students out of the classroom, collecting data and learning about ecosystems and biodiversity of our local environment. They are excited to contribute real data to an international monitoring project.



The enthusiasm that these students have shown has been the most rewarding part of this project. Many of the local students have family living in Mexico and they can't wait tell them about everything they are learning. One student expressed his new-found desire to become a marine biologist! As a means to express these newfound passions, a brant "Care Package" was created. Students contribute anything from photos and artwork to poems and stories about brant.

This package is then sent to groups and communities along the Pacific Flyway for others to add to the fun!



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
Benefactor	\$2000

Send your contribution to:

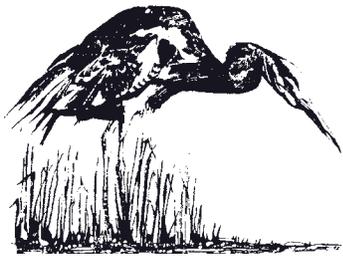
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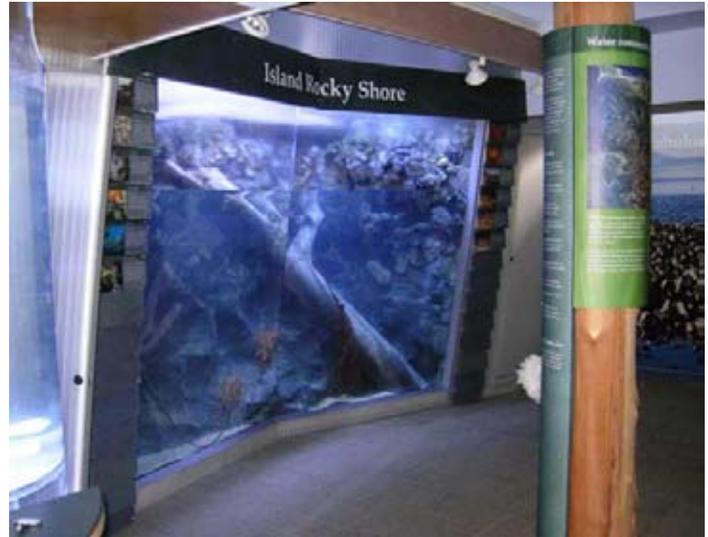
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# PADILLA BAY FOUNDATION NEWS

## New and Exciting!

Padilla Bay Foundation Members were treated to a behind-the-scenes tour of the new aquarium room on Members Day, May 22. Now, everyone's welcome to enjoy the latest Padilla Bay exhibits, recently opened and teeming with estuary life. Hours are 10:00-5:00, Wednesday through Sunday. Admission is free, as always.



Name _____	Membership Category _____
Address _____	(see reverse)
City/State/Zip _____	Membership Amount \$ _____
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**Book Review: *The Natural History of Puget Sound Country* by Arthur R. Kruckeberg**

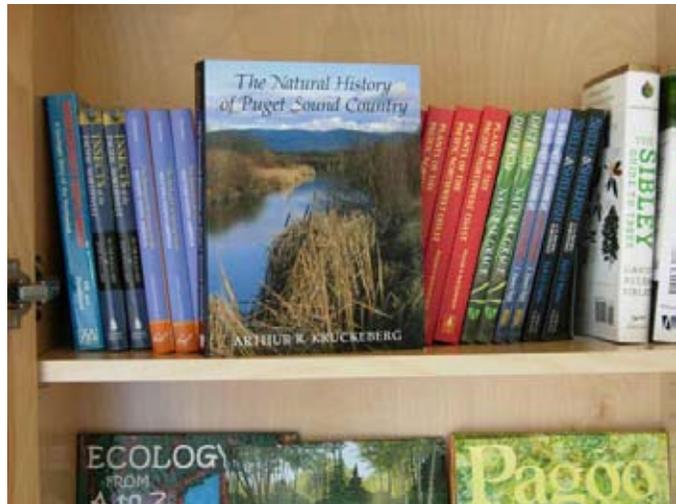
Our corner of the world, from Cascadian heights to Puget Sound depths, receives encyclopedic attention in this classic by Arthur Kruckeberg. Published 19 years ago, its goal was to reveal the “vital interconnectedness of things,” not omitting people from natural history or ignoring negative effects we have had and too often continue to have on the rest of nature. It remains both compelling and highly relevant today.

Kruckeberg, University of Washington professor emeritus of botany, shares his unbounded curiosity about plants, animals, geology, climate, ecology, history. What happens in the sea and on the land are equally of interest, and on each page Kruckeberg reveals vital interconnectedness. Slugs, we learn, annually recycle 11% of forest biomass. Current natural history here dates back just 13,000 years to the huge ice sheet’s withdrawal. Red flowers in the Cascades and Olympics evolved to attract their pollinators - migrating hummingbirds. Kruckeberg situates facts in the context of research and includes tables, charts, and descriptions of methods to give readers a sense of scientists at work.

For illustrations Natural History offers many high quality black and white photos, maps, and fine drawings, including ones by Padilla Bay instructor Libby Mills. Newer topics such as global warming, the current status of orcas, and watershed and coastal restoration projects are, of course, not presented, but no other volume is nearly so complete. In an update, the interesting chapter on native people before Europeans arrived could include their continued presence today.

“The inseparability of humans and the rest of the natural world,” Kruckeberg writes, “has been the central theme ...” He aspires to something this fine volume can help us all attain: “An appreciation of natural processes and phenomena in Puget Sound country can lead to wiser, more peaceful coexistence between people and the elements of their natural environments. ... Only then, when those living in a region develop an awareness of their natural heritage, will they be in a position to preserve it.” Look for *The Natural History of Puget Sound Country* at the Breazeale Interpretive Center (\$45.00). You’ll be glad you did!

- 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

# Summer Events

## Presentations for June, July and August, 2010



### Beach Excursions

#### Mud Flat Safari

Padilla Bay's summer low tides uncover an amazing world of estuary animals and plants just waiting to be discovered. Come and explore with Padilla Bay Reserve's mud flat experts. This program is designed for all ages. Whether you're more comfortable on a firm, sandy beach, or squishing through the ooze, program leaders will accommodate your level of adventure. Bring a jacket for the windy beach and snug boots or old shoes. We will meet at the Interpretive Center and end at Bay View State Park.

**Tuesday, June 29, 1:00-3:00**

**Friday, July 23, 10:00-12:00**

**Saturday, August 7, 10:00-12:00**

**Tuesday, August 24, 10:00-12:00**

#### Beach Seine Programs

This popular program will introduce you to the fish and invertebrates in Padilla Bay's eelgrass meadow. Using a small rowboat, educators set a seine net in the eelgrass. You can help pull the net onto the beach and see why estuaries are called nurseries of the sea. There is no need to register for this program. Just meet on the beach at Bay View State Park.

**Friday, July 2, 11:00**

**Saturday, July 17, 1:00**

**Saturday, August 14, 12:30**

**Friday, August 27, 11:00**

#### Songs of Summer Birds

Enjoy listening to summer bird song before it fades with the breeding season. Take a Padilla Bay jaunt and learn about your avian neighbors. Naturalist Libby Mills will lead a morning of watching and listening for birds—great for experienced and beginning birders alike. This excursion involves a slow walk around the reserve uplands, so you may want to bring a folding chair. Bring binoculars, field guides, and snack or lunch. Limited to 15 participants. Please call or register online. **Friday, July 2, 8:00-12:00.**

#### Sketching the Natural World

Bring your journal or sketchbook and favorite pen or pencil, and take time to look more deeply at the world. Artist and naturalist, Libby Mills, will teach the basic techniques of quick field sketching while walking slowly and carefully, sitting quietly, and observing closely. Bring folding chair and lunch. Please call or register online. **Saturday, July 3, 9:00-1:00.**

#### A Shorebird Primer

Probe the world of shorebirds with David Drummond, wildlife research biologist and naturalist with the Merlin Falcon Foundation. This presentation and field trip will explore the biology, ecology, and field identification of these amazing Padilla Bay migrants. The field trip portion of the class is limited to 20, so please register early. **Saturday, July 17, 1:00-3:00.** Please register online or call the Interpretive Center.

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

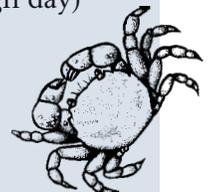
Staff are available 7 days a week.

Closed July 4 and August 6 (furlough day)

Register online or by phone.

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

(360) 428-1558



# Aquarium Notes

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## Bay Pipefish

One star of Padilla Bay's aquariums is not, in fact, a sea star, but the low-profile, blend-in-with-the-crowd bay pipefish. Long, skinny, and green like the eelgrass it hides in, the pipefish is very common but seldom seen. It seems to float gracefully with its head up, using small, fluttering fins to navigate the eelgrass forest.

This seahorse relative lives in protected bays and sloughs all along the western coast of North America—from Sitka Alaska to Baja California, Mexico. It eats tiny crustaceans, which it sucks into its tubular, toothless mouth.

Pipefish family life is unusual. The female courts the male, and lays her eggs in the male's pouch. Dad then protects and feeds the eggs for about two weeks until live babies emerge.

Look for bay pipefish in Padilla Bay's new, round eelgrass tank.



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## Monthly Youth Programs Offer Fun Learning

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**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.

**June 23 & 24, 10:30-11:30**

*Estuary Babies - Padilla Bay is home to all kinds of animals when they are young. We'll look at tiny plankton and try to match up parents with their babies.*



**July 14 & 15, 10:30-11:30**

*Mud Flat Safari - Head for the mud to see what lives beneath the tide in Padilla Bay. Come with a jacket and snug boots or old shoes that tie for this trek to the beach.*



**August 11 & 12, 10:30-11:30**

*Awesome Algae—Sometimes green, sometimes red or brown, algae offers food and shelter to estuary animals.*

**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.

**June 25 & 26, 10:30-12:00**

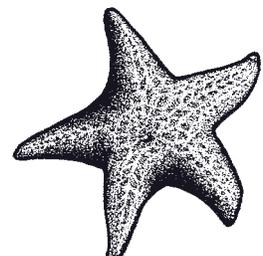
*Elegant Eelgrass—Padilla Bay's pride and joy is 9000 acres of wonderful eelgrass. June's low tides will let us explore the meadow up close.*

**July 9 & 10, 10:30-12:00**

*Mud Flat Safari—Come explore all the plants and animals that the tide leaves behind.*

**August 20 & 21, 10:30-12:00**

*Echinoderms: the Sea Star Clan—Stars, urchins, cucumbers and more, these relatives have amazing secrets to share.*





The sand lance is known locally as the candlefish. Sand lance spawn in the high intertidal zone on sandy beaches. Puget Sound has at least 140 miles of sand lance spawning habitat, with many areas still unsurveyed. Newly laid eggs are often coated with tiny sand grains, making them nearly invisible.

Because sand lance spawn in the intertidal zone, local spawning populations are vulnerable to shoreline development. Construction of bulkheads and other shoreline armoring can bury the upper intertidal zone. Bulkheads and other armoring may also damage spawning habitat by causing increased erosion and interruption of sediment transport.

The spawning habitat of sand lance is considered a “marine habitat of special concern” in Washington.

## Sand Lance Research

A flash of silver in the shallows, moonlit feeding frenzies, tiny eggs hidden between grains of sand on Puget Sound beaches. The biology of Pacific sand lance remains shrouded in mystery. These little fish are food for salmon, whales, seabirds and more. Along with herring and surf smelt, sand lance are considered “forage fish” that fuel the marine food web, schooling in huge groups often referred to as “bait balls”. But surprisingly little information is available on their numbers, where they live, where they go, or even how old they are at various sizes. The Northwest Straits Commission (Commission) is helping to change this, by supporting work that will expand what we know about Pacific sand lance in this region.

Jamey Selleck, the Commission’s forage fish research assistant, has spent the past three months compiling and analyzing intertidal survey data generously provided by multiple public and private sources. His report will help researchers determine where, when, and how to do future intertidal surveys on sand lance. Another project, led by Dr. Gary Greene and Dr. Tina Wyllie-Echeverria, will sample deep water habitat and pelagic areas in the San Juan Archipelago, documenting the presence of sand lance and developing a model to predict where else they are likely be found.

This is a critical time for these research efforts. Forage fish depend on healthy shorelines, and contribute to the diets of iconic and economically-important wildlife; yet natural resource agency budgets are being cut, fisheries and habitat programs are collapsing, and several of the region’s leading scientific experts are moving on. An extraordinary network of people is lending time, energy, and knowledge to the Commission and seven county Marine Resources Committees, contributing to a broad effort to understand the life history of Pacific sand lance and other forage fish species.

In addition to funding research, the Commission serves as a hub for information about Pacific sand lance. Supporting scientific literature and GIS maps are available on our web site at [www.nwstraits.org](http://www.nwstraits.org).



Photo by MJ Doughty

## Feed the Worms

Before Tanner Faubion came along, the compost bin at the Padilla Bay Reserve consisted of an old wooden worm box that was much too small for the public facility. Now we have a brand new composting station. Taking this project on as his Eagle Scout project, Tanner researched different types of composting systems, constructed the components at home, and installed it behind the barn. Three bins compost can rotare grass clippings and leaves. A heavy duty worm box handles food scraps, and a recycled barrel from the Blaine cereal company, Nature's Path makes a tumbling, aerating composter. Tanner constructed the whole project at home and then brought it to Padilla Bay for installation. We are happily putting it to use!



## Keeping Organics Out of Landfills

Every day, American communities send tens of thousands of truckloads of biodegradable materials to our landfills—where they slowly decompose and emit methane, a powerful greenhouse gas.

Keeping things like paper products, food scraps and yard trimmings out of landfills is one of the easiest, quickest, and most cost effective ways of reducing a community's greenhouse gas emissions. A bit of effort to separate "waste" into recyclables, compostables, and waste can save money, reduce our carbon footprint, cut down on garbage odors and unwanted pests, and build up our local soils. It just makes sense.

More and more communities are joining the effort to manage their waste more efficiently and responsibly. See the COOL 2012 campaign for more information. [www.cool2012.com](http://www.cool2012.com)



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