



PCSGA



PACIFIC COAST SHELLFISH GROWERS ASSOCIATION

LONGLINES

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MEMBERSHIP EDITION
YOUR VOICE IN PCSGA

PCSGA



PACIFIC COAST SHELLFISH GROWERS ASSOCIATION

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Comments and questions about Longlines are invited. Please email Becky: beckymabardy@pcsga.org.

What the Tide Brought In

Notes from the Director

After nearly 20 years, the PCSGA's office has moved! Moving is a tremendous chore, but can be rewarding. It gives us time to consider items we use and things we should eliminate. The other benefit of moving is that it provides the opportunity to stroll down memory lane and rediscover some less-celebrated treasures. This time around, I enjoyed moving and reuniting with wonderful memories. Here's a bit of what I found:

- Photos of my former colleagues from graduate school, the City of Warwick, RI and the WA Departments of Health and Natural Resources. I found photos of PCSGA members with smiles as big as the moon, and a rather a scary one of members crammed into a Portland photo booth. These pictures remind me of the many things I've learned from my colleagues throughout the years, and how lucky I've been to work with kind and smart people - present company included!
- Juicy correspondence relating to the use of and access to public lands from severely agitated members of the public. These help keep things in perspective, yet make for some extremely entertaining reading.
- Priceless artwork made by my kids and pictures of them long before their faces were blocked by cellphones. These images keep me grounded on even the hardest days.
- Collection of unique rocks, fossils, and shells from various locations around the world, including an extremely rare Chepiwanoxet Rock, reminding me of the wonderful places I've been.
- Reports and documents I authored on a variety of topics including: wastewater management, motorized recreation, shellfish restoration, forestland planning, forest health, public engagement, the Columbia River Estuary Program, Columbia River channel deepening (ironic, huh?), aquatic reserves, and conservation leasing.
- Comical material to keep me sane during it all - a "meeting bingo" game card, the Dr. Seuss version of Clinton-Starr investigations and the "mob" Night Before Christmas.

These mementos may only mean something to me, but all of these treasures led me, not only to who I am, but also brought me to PCSGA. Thank you for allowing me to continue my journey with all of you and for helping me create many more wonderful memories and treasures! Come visit our new offices and I'll share my treasures with you - everything except the photo booth picture.

Wishing you a joyous, peaceful, and healthy 2018.

Margaret Pilaro Barrette

GREETINGS FROM PCSGA'S NEW OFFICE!



Come by for a visit and stay tuned for Open House invitation early February!

New Physical Address: 1202 State Ave NE, Olympia WA 98506
Mailing Address (same): 120 State Ave NE #142, Olympia WA 98501

Pearls from the Prez



As the saying goes, “The world is your oyster,” I’d challenge that quote adding ... “If you can handle the sand in which to make the pearl.” In our world, we have many instances of sand: Army Corps, winter storms, public opinion, and Mother Nature as a few. While none of these are insurmountable, combined they can be overwhelming and exhausting. We all know being on the beach, doing the work that fuels our soul, is always preferred.

You are not alone in this chaos, but instead have a whole gang of fellow farmers to lean on. While sometimes that means you are leaning on

each other after too many cocktails at the Annual Conference, it also means leaning in to what advice is being offered for navigating a particular hurdle.

Making time to participate in Association activities is the best way to build that opportunity. In all these seasons of challenge, we must remind ourselves of the goal: cultivating quality, world class food, and also effectively and efficiently sustaining our business and the interests of our industry. If not, we are likely to wander away from the path or end up like the dog chasing its tail. PCSGA is in part that resource to keep us on the trail along with all our fellow farmers and friends.

The wealth of institutional knowledge and hundreds of years of combined experience across an array of subjects is a special gift we have as members both to give and receive. This gift should also be taken as a responsibility. We owe so much to the pioneers of our industry and the path they paved for us to be where we are today. And remember, they too had challenges like pulp mill pollution, seed procurement, and interest rates that made them question the future. We are not the only generation to face “the sand”.

Issues we face can heighten our state of emotion, which tends to wax and wane depending on how well we are prepared and what degree we are forced to react. During these times, we must remember that we are not alone. And to that, I urge you to engage! In order for us to continue the bounty of knowledge and lessons learned, the pathways forward and the dead ends, we have to come together.

Soon, you will see new opportunities from PCSGA on ways to engage yourself and others from your company. I strongly urge you to thoughtfully consider where your company’s talents align and how that reciprocal relationship will work for your company and our industry, just as those before us have.

We are part of a unique group of people. The ability to feed our families, communities and the world is a special gift. Our gift for that service is the pearl, for without the sand we would not have the evidence of a job being accomplished.

Miranda Ries
Coast Seafood Co., CA

Monthly Winners of Ecosystem Services Photo Contest!



OCTOBER: Weatherly Bates of Alaska Shellfish Farms snaps a photo of this juvenile sea otter she named Scuppers. Missing a front paw, Scuppers spends his days close to her farm boat eating urchins, crabs, and mussels that wash off deck as she cleans and harvests oysters. Scupper went from skinny and starving to plump and healthy. Everywhere she goes, Scuppers follows for a meal.



NOVEMBER: Nicolas de Witt of Fanny Bay Oysters shows these glistening fish eggs that caught his eye while inspecting Manila Clam beds. A fish laid several eggs in one of the panels that covers and protects the clams. They stood out from the rocky beds in the light of his headlamp, otherwise he might never have noticed them.



DECEMBER: Blaine Schoolfield captures an image of a Lemon nudibranch and mussels. They are just two of the many animals that utilize oyster cage structure for habitat on Molluscan Broodstock Program rafts in Yaquina Bay, OR.

Washington State Department of Agriculture Fills New Aquaculture Coordinator Position

Thanks to a strong effort from the aquaculture industry during the 2017 legislative session, the Washington State Department of Agriculture (WSDA) is excited to announce a new position focused on aquaculture. While it has long been recognized that aquaculture is an agricultural endeavor with many similarities to terrestrial agriculture, our agency's role in the past has been fairly limited and we are excited to welcome you to the WSDA family.

Preliminary meetings with industry members have helped WSDA develop the initial scope for this position, which is to:

- Conduct introductory and outreach meetings with growers to better understand their challenges.
- Conduct outreach, education, and technical assistance to local governments to learn about their processes and help them better understand the needs of industry.
- Conduct interagency coordination to streamline processes and identify areas of redundancy.

This position will also serve as a liaison to the Governor's Offices as well as other state agencies and external partners. In addition, this position will be coordinating many of the efforts within the Washington Shellfish Initiative (WSI) as well as co-chairing the Shellfish Interagency Permitting Team (SIP). Although this position is only funded for one year, our efforts will be a team effort and we are already underway.

Our new Aquaculture Coordinator, Laura Butler, was previously on the Director's Policy Team, acting as a legislative liaison with the state legislature. Laura is a sixth generation western Washingtonian. Northwest coastal life and culture are in her genes. Her background and education in the agricultural sciences and experience working in public policy are a perfect fit for her in this new role.

Director Derek Sandison has over 35 years of permit streamlining experience and non-point pollution management and is greatly invested in seeing this position be successful. Many of you are familiar with Patrick Capper, the Director's Senior Advisor, who has played a critical role in the development and implementation of this position.

The vast diversity of crops in Washington is one thing that makes our state unique. While there are many similarities between aquaculture farming and other forms of agriculture in our state, there are many differences and unique challenges this industry faces. We will be relying greatly on industry expertise and robust industry engagement. We look forward to working with all of you.

Contact: Laura Butler, lbutler@agr.wa.gov, (360) 902-1842



**Mark Your Calendars
For PCSGA Events**

We want to see you there!

WA Legislative Day and Reception for PCSGA Members

*January 29, Monday
222 Market Place -- Olympia, WA*

Use this opportunity to connect with elected officers who write and pass laws. Speak with them about the shellfish industry from your perspective.



Walk the Hill

*February 26 - March 2
Washington D.C.*

Spend the week meeting with agencies and Congressional officers on issues facing the shellfish industry.



PCSGA Spring Beach Cleanup

*April 12, Thursday
South Puget Sound, WA*

Shellfish growers needed!
Show your commitment to the environment by removing marine debris from shorelines where you farm.



SLURP

*May 6, Sunday
Fish Tale Brew House
Olympia, WA*

Be a part of this wildly fun day! Funds generated support education and environment restoration. Shellfish donations and volunteers needed!

Selling aquaculture to Americans: Chef Barton Seaver Advocates for the “Only Protein That is Guilty Until Proven Innocent”

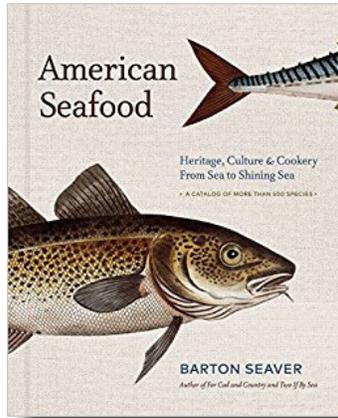
Madelyn Kearns
Published on December 7, 2017
SeafoodSource

If you ask celebrated chef and sustainability advocate Barton Seaver, the best way to sell the message of aquaculture to Americans is not to mention seafood until much later on in the conversation, if at all.

As the “only protein that is guilty until proven innocent” in the United States, seafood faces a great deal of stigma from the average American consumer, according to Seaver. That opposition seems to only intensify when the concept of farm-raised seafood comes into play – a troubling phenomenon that isn’t seen nearly as often with land-based farming operations.

“Imagining nature, most people think of a farm, and that’s perfectly allowed – we look at that with honor. Yet we think the seas should be unmarred by the hand of man or our activities,” Seaver explained during his keynote presentation at this week’s Future of Seafood conference, held from 4 to 5 December, and organized by the Gulf of Maine Research Institute and the Boston, Massachusetts-based Museum of Science.

“What we need is to create a social narrative around farming seafood,” he said. “We need to get over that social hurdle to really understand that 71 percent of our planet is not being used nearly to its capacity to sustain the people that live on a very small portion of this planet. We need to get to the point where Americans are clamoring to create jobs and create investment



Above: Seaver's latest book, “American Seafood: Heritage, Culture & Cookery From Sea to Shining Sea.”

vehicles into aquaculture operations.”

Establishing this type of successful social narrative requires simultaneously building “a market for [farm-raised seafood],” Seaver said, which may be better accomplished by talking less about fish and shellfish, and more about what Americans already care for: job creation and viable economic prospects for the future.

“There’s more of America underwater than there is above it,” Seaver noted. “When you think about that as an economic frontier, a new economic geography, it doesn’t matter what political background you’re coming from. We can have this conversation if we stop talking about seafood, which has a bias against it, and start talking about jobs, health, food security, food sovereignty, trade imbalances – things that matter to us and things that resonate on Capitol Hill.”

Seaver dives deeper into the United States’ complex relationship with seafood, both wild-caught and farm-raised, in his latest book which was published on 7 November.

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Farmers' Corner



Written for you, by you - this is a place to share all the news from your farm! Celebrations, acquisitions, new ventures... the sky's the limit. Submit your news any time! Send to pcsga@pcsga.org.

Hog Island Oyster Co. Humboldt Hatchery Opening

By Brenna Schlagenhauf -- Hog Island Oyster Co.

Hog Island Oyster Co. celebrated their new Humboldt Bay Shellfish Hatchery with a 'slightly haunted' open house on Saturday, October 28, 2017. The kick-off was a great success with over 75 community members attending from Humboldt and beyond. Guests included Samoa Peninsula neighbors, city officials and business leaders from throughout Humboldt, PCSGA, and the community of Humboldt Bay shellfish growers. The day was filled with tours, tricks, and treats.

Tours were led by John Finger, Terry Sawyer, and Erik Schlagenhauf with Juan Avellaneda (Hatchery Manager) leading guests through Hatchery science and operations. Lucas Sawyer (FLUPSY Manager) completed the tours with an overview of Hog Island's FLUPSY operations.

Afterward, guests enjoyed Humboldt Bay oysters shucked and grilled by Hog Island, along with an assortment of Humboldt County delights – cheese, charcuterie, empanadas, beer, wine, cider, and Halloween candy. Hog Island's entire Humboldt team turned out to help shuck, jive and empty the kegs! A huge thanks to Hog Island's new community for their participation & support.



Above: Hog Island Oyster Crew and supporters, listed from left to right -- Richard (formerly with Coast); Lucas Sawyer, Juan Avellaneda, Erik Schlagenhauf, John Finger (Hog Island Oyster Co.); Todd Van Herpe (Humboldt Bay Oyster Co.); Warren Moak (Hog Island Oyster Co.); Sebastian Elrite (AquaRodeo Farms); Greg Dale (Coast Seafoods); and Terry Sawyer (Hog Island Oyster Co.).

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PCSGA is updating the way we communicate with you to provide more direct access to information you care about. We built a new feature on the PCSGA website that allows you to join specific *Interest Groups*, all of which accomplish the work of PCSGA. These Interest Groups include committees, activities, issues, & events.

Interest Groups are open to employees of member companies; all are encouraged to join and participate. You will receive meeting announcements, invitations to contribute toward group goals, and opportunities to engage with other members about topics that interest and impact you and your farm. Interest Group information is shared primarily through email and periodic meetings via phone and/or internet.

Interest Groups:

- Beach Cleanup / Marine Debris
- Bylaws / Policy
- Communications
- Government Relations
- Integrated Pest Management
- Interstate Shellfish Sanitation Conference (ISSC) / Shellfish Sanitation
- NWP / Army Corps
- SLURP
- Walk the Hill / DC

Please share this message with employees in your company and encourage them to sign up for these direct communications from PCSGA.



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1. CONTACT PCSGA TO GET YOUR EMAIL IN THE DATABASE

Call or email the PCSGA office so we can add your email to the internal database.

If you are the "primary contact" for your company or you already receive regular emails from PCSGA, skip this step.

2. CREATE ACCOUNT ON THE PCSGA WEBSITE - GROWER PAGES

Go to www.pcsga.org/grower-login and click "SET UP ACCOUNT". Enter the same email address from Step 1. Your email must match what is in the PCSGA database. Follow the prompts to set up your login password.

If you already have setup your grower account, skip this step.

3. LOGIN TO GROWER PAGES WITH YOUR EMAIL AND PASSWORD

Go to www.pcsga.org/grower-login, and login. Did you forget your password? Click "I FORGOT MY PASSWORD" and follow prompts.

4. UPDATE YOUR PROFILE

Click on the right column "Update Grower Profile". Make edits to your grower profile and "Interest Group(s)." You can make changes to your grower profile and Interest Group(s) anytime!

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3 Questions ... Interview With Washington Department of Fish and Wildlife (WDFW)

In this edition of *3 Questions*, Becky Mabardy of PCSGA chats with Brady Blake and Chris Eardley of WDFW's Shellfish Disease and Pest Prevention program.

PCSGA: We've heard a lot about some scary shellfish disease issues lately, such as OsHV-1. What are some of the threats that WDFW is concerned about when it comes to shellfish health?

WDFW: Well, OsHV-1 is one threat that keeps us up at night. We are very concerned about this disease finding its way to Washington waters, and what that will mean for both cultivated and wildstock Pacific oysters and possibly populations of other species such as Manila clams (and the many stakeholders that rely on them). As a number of species may also serve as carriers, we're concerned about the potential breadth of its impact.

We've seen the significant impacts of OsHV-1 on shellfish industries elsewhere in the world, and we don't want it here. This is just one, particularly worrisome, disease issue at the moment. Our program is concerned about a number of diseases and pests finding their way into—and around—the state.

Green crab is a pest issue that continues to press us and there are internationally-recognized priority disease issues like *Bonamia* spp., *Perkinsus* spp., white spot syndrome virus, and abalone withering syndrome, as well as others like brown ring disease—just to name a few. And for us, a major risk factor of concern is that a lot of folks are

unaware of shellfish disease and pest issues, the serious risk they pose to shellfish resources, and how easily they can be accidentally introduced and spread.

PCSGA: So what is WDFW doing to keep shellfish diseases out of Washington?

WDFW: Our program puts a priority on prevention. We've long required import permits that come with screening and health history documentation requirements to bring shellfish into state waters. The aim is to keep disease issues out. We've recently begun updating our program, starting with enhancing communications and linkages between us and regulators in the other west coast states and the federal government. The goal is a more tightly-knit, well-informed community of regulators communicating across state lines.

To date, we have met with managers in Hawaii, Oregon, at USDA-APHIS and had conversations with folks in Alaska and California. We'd like to work more closely with British Columbia too. In early 2018, we will reconvene the WDFW Shellfish Import Advisory Committee—comprised of representatives from a range of stakeholders, including industry, disease experts, and Washington's Department of Agriculture—to offer expert guidance on management approaches. We are taking a look at our permitting, data management, and testing requirements with commitment to building the most effective and efficient prevention and response systems that we can.

Continued on page 9

Continued from page 8

We've stepped up our inspections and field presence and we've begun development of outreach and education strategies for informing the general public and other stakeholders. We are also making direct contact with shellfish industry leaders to find opportunities to work together on disease and pest issues, a relationship that will be very important towards our shared goal.

PCSGA: Sounds like WDFW has been busy. What can the shellfish industry do to manage disease risk?

WDFW: We recognize the commitment of the shellfish industry in the shared goal of keeping diseases out of Washington. At WDFW, we spend a lot of time staying up-to-date on national and international disease issues and we urge folks to use us as a resource.

Call us with questions, visit our website, ask for advice, share your knowledge. We urge folks to use the proper permitting channels before moving shellfish around Washington's waters so we can do our part to avert risk by making informed decisions.

Learn about the risks, stay up to date on disease issues, and prioritize biosecurity at your farm, nursery, processing plant, and your hatchery--and in all movements of shellfish, shell, and gear around Washington's waters. All it takes is one animal introduced from the wrong place by someone making the wrong decision to spread a devastating disease to the industry and Washington shellfish. The best risk management system involves all of us doing our part.

For more information, contact the Washington Department of Fish and Wildlife: http://wdfw.wa.gov/licensing/shellfish_import_transfer/
Brady Blake, (360) 302-3030 ex 301, Brady.Blake@dfw.wa.gov



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New Kumamoto Stocks and Other Developments for the Molluscan Broodstock Program (MBP) in 2017

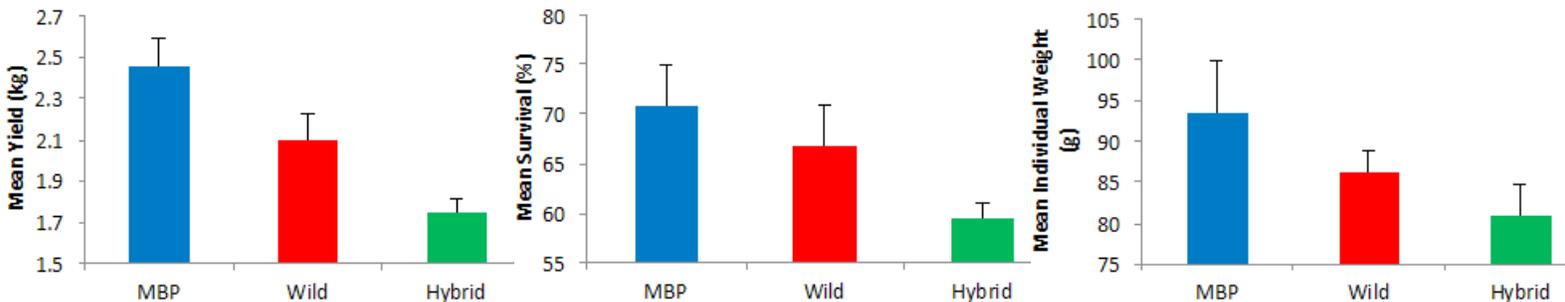
Chris Landgon
Hatfield Marine Science Center, Oregon State University

This year, MBP focused on producing a new 4th generation cohort of Kumamoto oysters that were originally derived from new stocks introduced from southern Japan in 2006. The main goal of the Kumo MBP spawns was to maintain genetic diversity of the Kumo broodstock used in commercial hatcheries. We produced about 90 families in two spawns in 2017. A sub-set of these families were planted at Oregon Oyster Inc. - a test site in Yaquina Bay for evaluation of their later harvest performance and shell shape characteristics.

Several Kumo “pods” (A, B, E) were successfully produced at the Whiskey Creek Hatchery, Netarts Bay, and at the Hatfield Marine Science Center (HMSC). These pods were distributed to interested MBP partners to be grown to maturity for eventual use as broodstock. In several years time, growers should be able to obtain seed from commercial hatcheries that use these selected broodstock.

Apart from the Kumo spawn, MBP manager Blaine Schoolfield and field crews harvested Pacific oyster cohorts 25 and 26 from Taylor Shellfish and Goose Point Oysters in Willapa Bay, and at Taylor Shellfish Farm in Oyster Bay, Puget Sound. Yields of MBP families in both cohorts were significantly greater than those from naturalized, unselected broodstock. These gains are likely due to the effects of long-term selection as well as the application of new powerful quantitative genetic analytical tools, with the help of MBP’s Brazilian partner, Dr. Claudio de Melo.

Apart from MBP’s selection for high yielding families, we plan to start examining the resistance of MBP stocks to new highly pathogenic variants of the oyster herpes virus as part of an OSU/USDA-ARS collaborative project. In addition, Mary Arkoosh and her team at NOAA/HMSC, are collaborating with MBP to determine the relative resistance of MBP stocks to *Vibrio* pathogens. These inter-agency collaborative efforts should result in more disease-resistant stocks of MBP oysters that will help reduce future uncertainties in production.



Above: Average performance of MBP families (cohort 25) planted in Willapa and Oyster Bay, Puget Sound, Washington

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Pro-Oceanus is excited to be a new member of PCSGA. Pro-Oceanus has been providing rugged and reliable dissolved gas sensors for 20 years. Elevated CO₂ concentrations in our oceans cause a shift in the carbonate system that makes water more corrosive to shellfish. The frequency and duration of acidification events continue to increase and researchers at Oregon State University definitively linked ocean acidification to oyster seed production collapse at a hatchery in Oregon.

Continuous measurements of dissolved CO₂ allow hatcheries to regulate intake water and coastal farms to monitor surrounding water quality. Pro-Oceanus offers several ranges of CO₂ sensors to meet all grower's needs. Our sensors can be integrated into monitoring and control systems, are easy to operate, and require minimal maintenance. We are looking forward to working with growers to provide monitoring solutions to keep your shellfish happy and healthy.

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Pacific Hybreed

Pacific Hybreed is developing an advanced breeding program to address both threats and opportunities of great significance to shellfish growers. Changing ocean conditions present serious threats to traditional patterns of growth and development. Moreover, disease threats are increasing, including from the virulent herpes viruses that have devastated cultivated oyster populations around the world.

For nearly a century, cross-breeding has been improving the yields of corn and other land crops through hybrid vigor. Pacific Hybreed's cross-breeding program will apply state of the art genetic science to enhance resilience in the face of environmental and disease threats while improving yield. The company's founder, Dennis Hedgecock and Joth Davis, have led decades of university-based research on the genetic and physiological mechanisms of hybrid vigor in the Pacific oyster. The company's program will include hybrid Pacific Oysters, Kumamoto Oysters, Manila Clams and Rock Scallops.



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Grower Membership Program

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Growers Membership Benefits:

Guidance navigating local and national permitting processes

Legal representation concerning industry-wide issues

Member-exclusive trainings, workshops, and educational opportunities

Legislative representation in state and federal arenas

Discounts and rebates through allied partners

Access to health care and business security with insurance partners

Scholarships and funding opportunities for enrichment development

Network for collaboration and information sharing



WHAT DOES PCSGA DO?

We are your **advocate** and work with local, state and national partners to help define policies and regulations that affect your business.

We work with a team of consultants and scientists from leading universities and marine institutes to support **cutting-edge research**.

We believe **outreach** is key. We invite you to join our beach cleanup efforts, our annual community event (SLURP), and various festivals to help build relationships with the public that are vital to our success.

We recognize **education** is essential in achieving our long-term goals. We support programs that teach the value and benefits of our industry.

We organize an annual **conference and tradeshow**. You'll learn about current and emerging issues facing our industry – all at a discounted member rate.

We urge you to **get involved**. Volunteer at local festivals, join a committee, participate in our annual lobbying trip to DC and your state, or represent your region on our Board of Directors.

Attention Grower and Allied Members!

Want to stay on board with PCSGA, or join the Association for the first time?

YOU CAN DO IT ALL ONLINE!

Renewing Members: www.pcsga.org/renew-membership-dues

New Members: www.pcsga.org/join-pcsga

Allied Membership Program

Dedicated to local, national, and international businesses that support the shellfish industry.



Allied Membership Levels and Benefits:

SUBSCRIBER \$40

- Subscription to quarterly newsletter Longlines

FRIEND \$150

- Entrance for one to PCSGA Annual Conference at membership rates
- Subscription to quarterly newsletter Longlines

ASSOCIATE \$475

- "Friend Level Benefits" and
- 2.25" w x 2" h display ad in Longlines
- Annual Resource Catalog, with 1/8 page business ad and listing
- Company name listed on PCSGA website
- Access to PCSGA membership list

SUSTAINING \$875

- "Friend Level Benefits" and
- 2.25" w x 2.75" h display ad in Longlines
- Annual Resource Catalog, with 1/4 page business ad and listing
- Free Tradeshow Exhibit space and ticket to Tradeshow Reception at PCSGA Annual Conference
- Full directory listing on PCSGA website, and link to your website
- Access to PCSGA membership list

CORPORATE \$1,575

- All company representatives pay at member rate at PCSGA Annual Conference
- 2.25" w x 3.5" h display ad in Longlines
- Annual Resource Catalog, with 1/2 page business ad and listing
- Free Tradeshow Exhibit space and ticket to Tradeshow Reception at PCSGA Annual Conference
- Full directory listing and company logo on PCSGA website, and link to your website
- Access to PCSGA membership list
- Subscription to quarterly newsletter Longlines

PATRON \$4,000

- Free entrance for two to PCSGA Annual Conference and Grand Awards Banquet; additional attendees pay at member rate
- 4.75" w x 3.25" h display ad in Longlines
- Annual Resource Catalog, with FULL PAGE business ad and listing
- Free Tradeshow Exhibit space and ticket to Tradeshow Reception at PCSGA Annual Conference
- Full directory listing and company logo on PCSGA website, and link to your website
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Area Chefs Get Fresh and Local for Dine Around Seattle's Shellfish Showcase Event

Andrea Porter
Seattle Good Business Network

Dine Around Seattle—a biannual celebration of Seattle-area cuisine—kicked off 2018 by introducing its first-ever seasonal event showcasing local shellfish. The regional dining program supports local chefs, food distributors, fishermen, and farmers while educating diners about the importance of supporting the local food economy.

Starting January 7th and running through January 25th, Shellfish Showcase welcomed diners to explore the bounty of the Pacific Northwest through plates featuring the freshest local clams, mussels, shrimp, prawns, and geoduck from Washington and Oregon. The event gave chefs at more than 40 local restaurants an opportunity to get creative and foodies a chance to try out delicious new dishes and eateries.

From Sunday through Thursday, participating locations offered menus created especially for Shellfish Showcase. Menus featured four shellfish items available for dinner at all locations (lunch menus at select restaurants).

Margaret Pilaro Barrette of PCSGA voiced her enthusiasm about the program, stating, "We are thrilled to be part of Dine Around Seattle's 2018 Shellfish Showcase! Our members are committed to growing the highest quality mussels, clams, oysters, and geoduck in the region's cleanest and healthiest water bodies. Because environmental standards are extremely high for shellfish produced on the west coast, consuming local shellfish is the right choice as opposed to seafood imported from other countries with minimal environmental considerations. PCSGA is excited that Seattle chefs are interested in exploring local shellfish."

List of participating lunch and dinner restaurants can be found here:
www.dinearoundseattle.org.

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OSU Gets NOAA Aquaculture Grants to Help Oyster Industry

Tiffany Woods
Oregon Sea Grant
Adopted from Oregon State Univ. pub

The National Oceanic and Atmospheric Administration (NOAA) has awarded scientists at Oregon State University two aquaculture grants that aim to make oysters safer to eat.

The first project, funded at \$150,000, aims to reduce bacteria known as *Vibrio parahaemolyticus* in oysters without altering their texture and consistency. Researchers plan to add naturally occurring marine probiotics, which are live or freeze-dried microbial supplements, to the seawater in depuration tanks. Researchers have already isolated various marine probiotics that inhibit the growth of pathogens.

The researchers also aim to develop a dipstick containing antibodies to quickly screen adult oysters for *V. parahaemolyticus*. The idea is that people would not need special training or equipment to use this diagnostic tool.

The leader of this two-year project is Shelby Walker, the director of Oregon Sea Grant, although the actual research will be conducted by the lab of Claudia Hase, a professor

with OSU's College of Veterinary Medicine. Partners include mAbDx, an immunodiagnostics company in Eugene, Oregon; and Reed Mariculture near San Francisco.

This is part of 32 grants totaling \$9.3 million awarded by NOAA in early November to further develop the nation's marine aquaculture industry.

"This country, with its abundant coastline, should not have to import billions of pounds of seafood each year," said Secretary of Commerce Wilbur Ross. "These grants will promote aquaculture projects that will help us reduce our trade deficit in this key industry."

All projects include public-private partnerships and will be led by university-based Sea Grant programs.

Jonathan Pennock, the director of NOAA Sea Grant, said, "Industry is working alongside researchers on each of these projects, which will help expand businesses, create new jobs and provide economic benefits to coastal communities."



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Forage Fish Spawning: ID Training

On December 14, Chris Czesla and Paul Schlenger with Confluence Environmental Co. presented a workshop focused on herring egg identification (with a brief overview of other forage fish). Thirty-three PCSGA members attended the workshop in Olympia at the LOTT Clean Water Alliance Building.

Areas of interest included:

- Overview of forage fish biology
- Allowable work windows
- Egg identification
- Survey requirements and procedures
- Actions to protect forage fish eggs
- Documentation



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Agency Grab Bag!

NOAA Fisheries West Coast Region -- WA Eelgrass & Shellfish Aquaculture Workshop Report:

This report captures the presentations and dialogue that occurred during the April 11, 2017 workshop. Visit: http://www.westcoast.fisheries.noaa.gov/publications/aquaculture/wa_eelgrass_and_shellfish_aquaculture_workshop_report_final_11-03-17.pdf

WA Eelgrass and Shellfish Aquaculture Workshop Report



A summary of presentations, discussions, and outcomes from the workshop hosted by:

National Marine Fisheries Service West Coast Region
NOAA Sand Point Campus, 7600 Sand Point Way, Seattle, WA 98115
Tuesday, April 11, 2017

Disclaimer: Please note that this report captures the presentations and dialogue that occurred during the April 11, 2017 workshop; it does not represent all data, knowledge, or discourse across the eelgrass and aquaculture landscapes, nor does it signify a consensus across agencies, tribes, researchers, and industry.



WA Eelgrass and Shellfish Aquaculture Workshop Report Page 8 of 64

WA Department of Health (DOH) -- New System for Closure Notifications:

DOH commercial shellfish closure notifications and other information are now being sent using a new email system. If you are not receiving emails, please visit <https://public.govdelivery.com/accounts/WADOH/subscriber/new> and subscribe by entering your email address. Click the "Commercial Shellfish Growing Area Management" box to receive commercial shellfish closure notifications. Contact Jean Snyder (360) 236-3349 or jean.snyder@doh.wa.gov if you have questions.

WA Department of Ecology -- New Website:

Ecology is getting ready to launch a completely new website. Their primary web address will be changing to www.ecology.wa.gov (formerly ecy.wa.gov). They will be sharing more information closer to the launch date.

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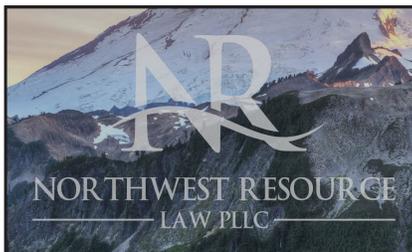
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A Picture Tells 1,000 Words...



Brian Kingzett \$500 (1st Place): Short Billed Dowitchers feed in a complex of eelgrass and oysters at Goose Point Oyster beds in Willapa Bay.



Bill Dewey \$300 (2nd Place): Macroalgae grow on the PVC nursery tubes and net tops on the Taylor Shellfish, Fisk Bar geoduck farm in Samish Bay.



Margaret Homerding \$200 (3rd Place): Oysters provide valuable structure and habitat.

Every month, you are invited to submit photos with captions to the **PCSGA Ecosystem Services Photo Contest**. The monthly winner gets \$100...and the chance to win \$500 as our annual grand prize winner!

The photos help tell a story. They illustrate how aquaculture provides services to our natural marine environment. Just as important as the photo is the **caption** that explains what ecosystem service is being demonstrated.

Not sure what we mean by ecosystem services? They are the benefits we receive by the simple act of farming shellfish. Benefits may include:

- Improved water quality
- Habitat creation
- Coastline stabilization
- Protected nursery habitat
- Forage opportunities
- Nutrient cycling

So, the next time you are on the beach, boat or float... Snap a photo, win some bucks!

See contest rules at www.pcsga.org.

Photo and caption are due the 15th of every month!



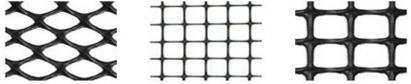
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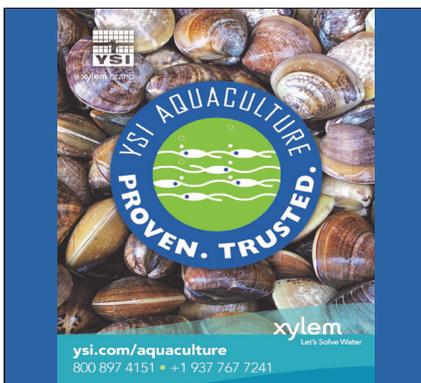
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Grant Funds Available for Regional Aquaculture Pilot Projects

As part of NOAA Fisheries efforts to foster responsible aquaculture and seafood security in the US, they are providing \$1.5 million to support aquaculture pilot projects through the nation's Interstate Marine Fisheries Commissions. These competitive grants will be managed through the Atlantic, Gulf and Pacific States Marine Fisheries Commissions.

Each Commission is making \$450,000 available to expand seafood farming operations and production to offset the \$14 billion seafood trade deficit in the US. Through these pilot projects, emphasis is being placed on promising, but less commercially developed technologies for finfish, shellfish, seaweed, and other relative newcomers to the domestic aquaculture industry. The programs also emphasize the development and deployment of economically and environmentally sustainable aquatic farming techniques and business practices.

The deadline for proposals is **February 1, 2018**. Information on eligibility and requirements can be found on here: <https://www.psmfc.org/procurements/blog>

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Please pass the newsletter along or recycle after reading.

Cheers to a healthy and prosperous 2018!

Explore www.pcsgea.org for Association calendar and events.



JANUARY

23-25: National Fisheries, Global Seafood Market Conf., Miami FL
24-25: *PCSGA Board Meeting LIVE, Portland OR*
29: WA Legislative Reception, Olympia WA

FEBRUARY

19-22: World Aqua. Society - Aquaculture America, Las Vegas NV
22-25: Newport Seafood and Wine Festival, Newport OR
26 - March 2: Walk the Hill, Washington DC

MARCH

3-4: Penn Cove MusselFest, Coupeville WA
5-6: Sea Grant's 24th Shellfish Growers Conference, Union WA
11-13: Seafood Expo North America, Boston MA
18-22: National Shellfish Assoc. (NSA) Annual Meeting, Seattle WA

APRIL

10-11: Pac Rim Conference, Semiahmoo Resort, Blaine WA
12: **PCSGA Spring Beach Cleanup, South Puget Sound WA**
15-21: **Washington State Shellfish Week**
21: Hama Hama Oyster Rama, Lilliwaup WA
21: CoastSavers Earth Day Beach Cleanup, WA Coast
27-29: Astoria Warrenton Crab, Seafood & Wine Festival, Astoria OR
28-29: Oregon Ag Fest, Salem OR

MAY

6: **SLURP, PCSGA Fundraiser, Olympia WA**
21-22: *PCSGA Board Meeting LIVE, Samish Bay*
26-27: ShrimpFest, Brinnon WA

SAVE THE DATE:

72nd Shellfish Growers Annual Conference

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