

**SUNDAY, SEPTEMBER 29**

**9:00 – 1:00** Golf at Sunriver Resort, Meadows Course

**2:00 – 6:00** PCSGA Board Meeting

**MONDAY, SEPTEMBER 30**

**9:00 – 2:00** Paulina Plunge – Downhill Mountain Bike & Waterfall Tour (\$70/person)

**3:00 – 6:00** PCSGA Annual General Membership Meeting

**8:00 – 10:00** Observatory Tour/Star Party

**TUESDAY, October 1**

**9:00** Welcome Address, Margaret P. Barrette, PCSGA & Brett Dumbauld, NSA/PCS

**9:15** *The High Value of Shoreline Natural Capital*, David Batker (keynote), Earth Economics

**10:00 BREAK**

**Ecosystem Services**

**Moderator: Aimee Christy**

**10:15** *Applying Net Ecosystem Services Analysis (NESA) Applications to the Shellfish Industry*, Marlene Meaders, ENVIRON International Corp.

**10:35** *Ecosystem Services: Using Public/Private Partnerships to Stimulate Market Development*, Peter Dykstra, Plauché & Carr LLP

**10:55** *Shellfish at Work: A Nutrient Bioextraction Project in Budd Inlet, WA*, Aimee Christy, Pacific Shellfish Institute

**11:15** *Video Analysis of Seasonal Habitat Utilization on Shellfish Farms in South Puget Sound: A Student Project*, Lisa Abdulghani, TESC

**11:35** Question and Answer Panel

**12:00 Luncheon and Presentation: Duane Fagergren & Dan Cheney – Photo Journey and Informal Overview of the World Oyster Congress in France**

**Ocean Change**

**Moderator, Alan Barton**

**2:00** *Ocean Conservancy Ocean Acidification Video*

**2:05** *Sylvia Hayes, First Lady of Oregon*

**2:25** *Turning on the High Beams: An Update on the PCSGA Monitoring Program and Some Recent Work Conducted at Whiskey Creek*, Alan Barton, Whiskey Creek Shellfish Hatchery

**2:40** *Burke Hales*

**3:00** *Climate and Paralytic Shellfish Poisoning: What Can the Past Tell us About the Future?*, Kirsten Feifel, University of Washington

**3:15** *Exploring Perceptions and Experiences of the US West Coast Shellfish Industry Dealing with Ocean Acidification*, Becky Mabardy, Oregon State University

**3:30** *A Novel Technique for Determining the Impact of Ocean Acidification on the Feeding Physiology of Bivalve Larvae*, Matthew Gray, Oregon State University

**3:45 BREAK**

**Estuarine Habitat and Shellfish Culture Ecosystem Interactions**

**Moderator: P. Sean McDonald**

**3:55** *Production and Environmental Effects of Manila Clam Farming in North Puget Sound, Washington: Application of the Farm Model to Determine Optimal Culture Conditions and Production Carrying Capacity*, Dan Cheney, Pacific Shellfish Institute

**4:15** *Production and Environmental Effects of Manila Clam Farming in North Puget Sound: Responses of Benthic and Epibenthic Communities, and Microfauna to Mechanical and Hand Harvest*, Andy Suhrbier, Pacific Shellfish Institute

**4:35** *Use of Intertidal Oyster Aquaculture, Eelgrass, and Unstructured Mudflat by Juvenile Salmon in Willapa Bay, WA*, Brett Dumbauld, USDA – Agricultural Research Service

**4:55** *Oyster Diet*, Tish Conway-Cranos, NOAA

**5:15** *Evaluating Spillover Effects of Geoduck Aquaculture Practices on Selected Resident Invertebrates of Southern Puget Sound*, P. Sean McDonald, University of Washington

## 6:30 Tradeshow Reception, Shellfish Spartan Sprint

### WEDNESDAY, October 2

#### **Concurrent Session A:**

**Resource-User Conflicts, Permitting and Regulatory Issues**

**Moderator: Brian Sheldon**

**8:30** *An Overview of Aquaculture Permitting in California, Oregon and Washington:*

- Robert Smith, Plauche & Carr
- Peter Mohr, Jordan Ramis PC
- Jesse DeNike, Plauche & Carr

**9:30** *Update on the Washington Shellfish Initiative and the Shellfish Interagency Permitting Team*, Laura Hoberecht, NOAA Fisheries

**9:50** *Marine Planning and its Utility for Shellfish Farmers*, Paul Dye, The Nature Conservancy

**10:10 BREAK**

#### **IOOS WORKSHOP:**

**Moderator: Jan Newton, Univ of WA**

**10:20** *Recent Developments in Ocean Acidification Observing and Data Delivery Capacities*

**10:40** Workshop: *Delivering the Goods! An Enhanced NANOOS Data Portal for Shellfish Growers*

#### **Vibrio Update**

**11:40** *2013 Vibrio Season Update*, Rick Porso, WA State Department of Health

**12:00** Ken Moore, ISSC

#### **Concurrent Session B:**

**Burrowing Shrimp Ecology and Management on Shellfish Beds: Progress Towards IPM?**

**Moderator: Brett Dumbauld**

**8:30** *Building an Age-Based Population Dynamics Model for Burrowing Shrimp in Yaquina Bay, Oregon: A Predictive Tool for Management in PNW Estuaries*, Katelyn Bosley, Oregon State University

**8:50** *Burrowing Shrimp Recruitment Monitoring: Effects of Survey Method and Season*, Jacob Moore, Willapa Grays Harbor Oyster Growers Association

**9:10** *Survival of Ghost Shrimp in Sediment Exposed to Imidacloprid in the Laboratory: Implications for Control of Shrimp on Oyster Beds in Willapa Bay, WA*, Josh Abel and Sara Wang, University of Washington

**9:30** *Toxicity of Carbaryl to Ghost Shrimp within Seawater vs Sediment*, Josh Abel and Sara Wang, University of Washington

**9:50** *Impact of Imidacloprid Applications to Control Burrowing Shrimp on Benthic Organisms: 2012 Results*, Steven Booth, PSI

**10:10** *Burrowing Shrimp IPM with Imidacloprid – A) Management of New Recruits and B) Improving Control in Sites with Dense Eelgrass*, Kim Patten, Washington State University

**10:30 BREAK**

#### **Resource Assessment and Management**

**Moderator: Bethany Stevick**

**10:40** *Investigating Strait of Juan de Fuca Geoduck Population Dynamics: Preliminary Aging Results*, Bethany Stevick, Washington Department of Fish and Wildlife

	<p><b>11:00</b> <i>Preliminary Results on Genetic Differentiation and Shell Morphology of the Pacific Geoduck <i>Panopea generosa</i> in California</i>, Gabriela Navas, Moss Landing Marine Laboratories</p> <p><b>11:20</b> <i>Rock Scallop Culture Prospects</i>, Brent Vadopalas, UW</p> <p><b>11:40</b> <i>Sea Cucumber Abundance in the San Juan Islands, Washington Using Remotely-Operated Vehicle Surveys</i>, Henry Carson, Washington Department of Fish and Wildlife</p> <p><b>12:00</b> <i>Decadal Change in Native Bivalve Populations on Kiket Island, WA</i>. Julie Barber, Swinomish Indian Tribal Community</p> <p><b>12:20</b> <b>POSTER SESSION:</b> <i>Using GIS as a Tool to Assess the Risk of Illegal Geoduck Harvest in Puget Sound, WA</i>, Ocean Eveningsong, WDFW</p>
<p><b>12:30 Lunch, on your own</b></p>	<p><b>12:30 - 2:00 Lunch on your own NSA Annual Meeting, Location TBA</b></p>
<p><b>SEED WORKSHOP: Life in the Nursery</b>  <b>Moderator: Sue Shotwell</b>  <b>2:00</b> Keith Cox's Seed Video  <b>3:05</b> <i>Importance of Water Quality When Setting Larvae</i>, Alan Barton, Whiskey Creek Hatchery  <b>3:20</b> <i>Guidelines for Setting Singles Successfully</i>, Rob Saunders, Island Scallops</p> <p><b>3:40 BREAK</b></p> <p><b>3:50</b> <i>Nursery Grow Out</i>, Ray RaLonde, University of Alaska  <b>4:10</b> <i>Building a FLUPSY</i>, Earl Steele, Bellingham Technical College  <b>4:30</b> <i>A Small Farm Flupsy Experience</i>, Tom Bloomfield  <b>4:50</b> <i>ABC's of Algae Production</i>, Roberto Quintana, Ekone Oyster  <b>5:10 Q&amp;A Panel</b></p>	<p><b>Restoration and Protection Efforts (Species and Habitat)</b>  <b>Moderator: Josh Bouma</b>  <b>2:00</b> <i>Evaluation of Larval Outplanting as a Restoration Technique for Pinto Abalone, <i>Haliotis kamtschatakana</i>, in the San Juan Archipelago</i>, Josh Bouma, Puget Sound Restoration Fund  <b>2:20</b> <i>Optimizing the Concentration and Exposure Duration of GABA as a Settlement Cure for Pinto Abalone, <i>Haliotis kamtschatakana</i></i>, Paul Pratt, Puget Sound Restoration Fund  <b>2:40</b> <i>Status of Pinto Abalone Abundance at Index Stations in the San Juan Islands Archipelago</i>, Bob Sizemore, Washington Department of Fish and Wildlife  <b>3:00</b> <i>Patterns of Natural Recruitment of the Native Oyster, <i>Ostrea lurida</i>, in Fidalgo Bay, Washington Following Restoration Seeding</i>, Kailey Gabriel-Voorhees, Western Washington University  <b>3:20</b> <i>The Spatial and Temporal Distribution of <i>Olympia</i> Oyster (<i>Ostrea lurida</i>) Larvae and Settles around a Restored Population in Puget Sound, WA</i>, Bonnie J Becker, University of Washington</p> <p><b>3:40 BREAK</b></p> <p><b>3:50</b> <i>Putting an Aphrodisiac to Sleep</i>, Katherine Jackson, University of Washington  <b>4:10</b> <i>The Use of Geochemical Signatures to Track the Larval Dispersal of Bivalves</i>, Henry Carson, Washington Department of Fish and Wildlife</p>

**6:30 Grand Awards Banquet**  
**Student and Industry Awards and Entertainment – NSA Tough Mudder Fundraiser**

**THURSDAY, October 3**

**Concurrent Session A:**

**Down on the Farm: Shellfish Growers Trials, Tribulations, Achievements, Failures**

**Moderator: Ian Jefferds**

**9:00** *Alaskan Shellfish Aquaculture: Current Activities and Future Plans*, Raymond RaLonde, AK Sea Grant Marine Advisory Committee

**9:20** *2012/2013 Summary of PSP Closure in Discovery Bay*, Peter Downey, Discovery Bay Shellfish

**9:40** *Reinventing the Oyster Industry on the Chesapeake Bay*, Johnny Shockley, Chesapeake Gold Oyster Co.

**10:00** *Refrigeration Needs and Possible Solutions*, Steve Bloomfield, Seattle Shellfish

**Public Engagement, Education and Outreach**

**Moderator: Bobbi Hudson**

**10:10** *Engaging and Communicating with the Public: A Review of Creative Seafoods and Fisheries-Related Outreach Tools, Technologies, and Activities*, Bobbi Hudson, Pacific Shellfish Institute

**10:30** *Supplementing Knowledge of Existing Grant Opportunities to Leverage Public Funds for the Protection of Shellfish Habitat and the Improvement of Water Quality in the Puget Sound Region*, Tom Bugert, Washington Wildlife and Recreation Coalition

**10:50** *The Alaska NOAA Sea Grant Aquaculture Extension Project: Accomplishments and Farmer Resources*, Raymond RaLonde, Alaska Sea Grant Marine Advisory Program

**11:10** *Ecological Economics: Connecting Students to Careers*, Breanna Trygg, Pacific Education Institute

**11:30** *Oil Spill (Mock) Steps*, Linda Pilkey-Jarvis, Washington State Department of Ecology

**Concurrent Session B:**

**Playing God with Gametes - Trials and Tribulations in Shellfish Breeding**

**Moderator: Joth Davis**

**9:00** *Field Performance of Triploid Geoducks*, Brent Vadopalas, University of Washington

**9:20** *Industry-Supported Molluscan Broodstock Program (iMBP)*, Chris Langdon, Oregon State University

**9:40** *Local Adaptation in Olympia Oysters*, Brent Vadopalas, University of Washington

**10:00** *Strip Spawning Manila Clams for Commercial Triploid Production*, Brent Vadopalas, University of Washington

**Shellfish Health Management**

**Moderator: Ralph Elston**

**10:20** *Progress Toward Commercialization of a Bacteriophage Treatment Against *Vibrio tubiashii* for Shellfish Hatcheries*, Gary Richards, USDA Agricultural Research Service

**10:40** *Development of Monoclonal Antibody-Based Assays for the Detection of *Vibrio tubiashii* Zinc-Metalloprotease (VtpA)*, Frances Beil, Oregon State University

**11:00** *Shellfish Health Management and Regulation - News and Update*, Ralph Elston, AquaTechnics

**11:20** *Seasonal Effects of Heat Shock on Bacterial Populations, Including Artificial *Vibrio parahaemolyticus* Exposure, in the Pacific Oyster, *Crassostrea gigas**, Alisha Agesen, Oregon State University