



## AGENDA

\* subject to change. Room assignments will be provided closer to the conference date.

### Monday, Sept 18

8:30 a.m.	Golf Tournament
9:00 a.m.	Pickleball Tournament
1:00 p.m.	PCSGA Board Meeting
4:00 p.m.	BREAK
4:15 p.m.	PCSGA Annual General Member Meeting

### Tues, Sept 19

9:00 a.m.	Welcome
9:15 a.m.	John Lentz Featured Speaker: Aquaculture Apprenticeship Program <b>Carissa Maurin (Gulf of Maine Research Institute)</b>
10:30 a.m.	BREAK
11:00a a.m.	Plenary panel - More info coming soon...
12:00 p.m.	OPENING LUNCHEON Featuring a special presentation by the authors of 'Heaven on the Half Shell'

Session 1		Session 2	
2:00 p.m.	Physiological and behavioural response of eastern oysters ( <i>Crassostrea virginica</i> ) and soft shell clams ( <i>Mya arenaria</i> ) to hypoxia and heatwaves <b>Jasmine, Talevi (Dalhousie University)</b> , Shelby Clarke, Michael Coffin, Luc Comeau, Takashi Sakamaki and Ramon Filgueira	2:00 p.m.	Genetic Variation in Growth of Pacific Oysters is Primarily Non-Additive <b>Dennis Hedgecock (University of Southern California)</b> , Xiaoshen Yin
2:15 p.m.	Exploring adaptation and plasticity to ocean warming in blue mussels ( <i>Mytilus edulis</i> ) from Atlantic Canada <b>Shelby B. Clarke (Dalhousie University)</b> , Tiago Hori, Luc Comeau, and Ramon Filgueira	2:15 p.m.	Development of an Alternative Sterility Method for Shellfish Aquaculture: Identification of Candidate Genes Involved in Germ Cell Specification <b>Mackenzie Gavery (NOAA Fisheries - NW Fisheries Science Center)</b> , Lauren Saunders, Lauren Vandepas, Brent Vadopalas, Adam Luckenbach, Cole Trapnell, Steven Roberts
2:30 p.m.	Examining the impacts of elevated, variable pCO <sub>2</sub> on larval Pacific razor clam ( <i>Siliqua patula</i> ) in Alaska <b>Marina Alcantar (University of Alaska Fairbanks)</b> , Jeff Hetrick, Jacqueline Ramsay, and Amanda Kelley	2:30 p.m.	Shellfish stress and chromosome copies: performance of diploid and triploid oysters under temperature, pH, and dissolved oxygen stress <b>Craig Norrie (University of Washington)</b>
2:45 p.m.	Environmental Priming for Ocean Acidification: Potential hatchery practices to build resilience for clam aquaculture in the Puget Sound <b>Larken Root (University of Washington/NOAA)</b> , Mackenzie Gavery, Ryan Crim	2:45 p.m.	Sex determination in Pacific oysters ( <i>Crassostrea gigas</i> ): Translating basic science into more efficient oyster production <b>Bernarda Calla (USDA-ARS)</b> , Neil Thompson
3:00 p.m.	BREAK		
3:15 p.m.	Potential of the macroalgae dulse ( <i>Devaleraea mollis</i> ) to mitigate effects of ocean acidification on larval Pacific oysters ( <i>Magallana gigas</i> ) in land-based co-culture <b>Leah Wessler* (University of British Columbia)</b> , Dr. Andrea Frommel, Dr. Jennifer Clark	3:15 p.m.	Understanding an oyster's "merroir" from a genomics lens <b>Laura Spencer(University of Washington &amp; NOAA AFSC/NWFSC)</b> , Katherine Silliman, Steven Roberts
3:30 p.m.	Recovery from an atmospheric heatwave in Midori and Miyagi strains of the Pacific oyster <b>Hollis Jones* (University of California, Davis)</b> , Cassidy Cooper, Anne Todgham	3:30 p.m.	Experimental assesment of POGS YC2023 to OshV-1 microvar <b>Neil Thompson (USDA- Pacific Shellfish Research Unit)</b> , Marni Rem-McGeachy, Will Schoeneck, Darren DeSilva, Nasif Sarowar
3:45 p.m.	Triploid Pacific oysters exhibit stress response dysregulation and elevated mortality following heatwaves <b>Matthew George (University of Washington)</b> , Olivia Cattau, Mollie A. Middleton, Delaney Lawson, Brent Vadopalas, Mackenzie Gavery, Steven Roberts	3:45 p.m.	Center for Aquaculture Technology Canada (CATC) developed OshV challenge model to assess family resistance in controlled laboratory condition. <b>Nasif Sarowar (The Center for Aquaculture Technologies)</b>
4:00 p.m.	Environmental effects on biological characteristics of Pacific oyster <i>Crassostrea gigas</i> cultured in the Seto Inland Sea, Japan, from 1990 to 2022 <b>Yumeng Pang (University of Washington)</b> , Tsuneo Ono, Takehiro Tanaka	4:00 p.m.	
4:30 p.m.	Tradeshow Reception and NSA Fundraiser		

### Wed, Sept 20

Session 1			Session 2			Session 3		
8:30 a.m.			8:30 a.m.	Shellfish and Human Health	Effects of the harmful alga Cochlodinium (aka Margalefedinium) polykrioides on clearance rate of the hard clam, Mercenaria mercenaria <b>Darren de Silva (USDA-ARS)</b> , Christopher J. Gobler			
8:45 a.m.	Policy and Permitting	NAHMS: A trusted data oyster with a clam-like formula and statistical mussel helping to meet information needs! <b>Diana Short (USDA APHIS VS NAHMS)</b>	8:45 a.m.	NANOOS Update	Providing ocean and coastal data access for Pacific Northwest Shellfish Growers with the NANOOS Visualization System <b>Rachel Wold (University of Washington)</b> , Jan Newton, Roxanne Carini, Nicholas Rome, Jonathan Allan, Troy Tanner, Charles Seaton, Michael Kosro			
9:00 a.m.		A Report on Work By NOAA Fisheries and Partners to Assess and Enhance The Permitting and Regulatory Landscape in Washington State <b>Jeff Bash (NOAA Fisheries)</b>	9:00 a.m.	Conservation and Restoration	Can coralline algae habitat bolster the climate resilience of Washington's endangered pinto abalone? <b>Eileen Bates (University of Washington)</b> , Josh Bouma, Ryan Crim, Jodie Toft, Jacqueline Padilla-Gamino	9:00 a.m.	USDA Pacific Shellfish Research Unit Engagement Session - POGS Breeding Program Update and Listening Session	USDA Pacific Shellfish Research Unit Engagement Session - POGS Breeding Program Update and Listening Session <b>USDA-ARS Pacific Shellfish Research Unit</b>
9:15 a.m.		ELAP: Oppurtunities and Challenges from a National Perspective <b>Charlie Culpepper (National Aquaculture Association)</b>	9:15 a.m.		Determination of gonad reproductive state using non-lethal ultrasonography in endangered black (Haliotis cracherodii) and white abalone (H. sorenseni) <b>Sara E. Boles (Bodega Marine Laboratory, University of California, Davis)</b> , Laura Rogers-Bennett, Wendy K. Bragg, Jessica Bredvik-Curran, Suzanne Graham, & Jackson A. Gross	9:15 a.m.		
9:30 a.m.		Shellfish Farming and the Endangered Species Act <b>Amanda M. Carr (Plauché &amp; Carr LLP)</b>	9:30 a.m.		Integrating aquaculture to improve Olympia oyster restoration in the Elkhorn Slough, CA <b>Jacob Harris (Moss Landing Marine Laboratories, San Jose State University)</b> , Luke Gardner, Amanda Kahn, Kerstin Wasson	9:30 a.m.		
9:45 a.m.		Legal Issues Impacting Shellfish <b>Samuel W. (Billy) Plauché (Plauché &amp; Carr LLP)</b>	9:45 a.m.		Every Breath You Take: Siphon Visibility Of Puget Sound Wild Geoducks <b>Henry S. Carson(WA Dept. of Fish and Wildlife)</b> Bethany C. Stevick and Ocean Working	9:45 a.m.		
10:00 a.m.		Quantifying and Communicating Ecosystem Services (official title TBD) <b>Chris Schillaci (NOAA Fisheries)</b>	10:00 a.m.		A Novel Social-Ecological Clam Garden Site Selection Process <b>Joe Williams (Swinomish Indian Tribal Community)</b> , Courtney M. Greiner, Julie S. Barber, Jamie Donatuto, Melissa Poe, James McArdle, Lindy Hunter, Michal Heidt	10:00 a.m.		
10:15 a.m.			10:15 a.m.		Baskets of cockles in fields of geoduck: Assessing Clinocardium nuttallii abundance in geoduck farms across Puget Sound <b>Ryan Crim (Puget Sound Restoration Fund)</b> , Emily Buckner, Elizabeth Unsell, Darbhi Durvasula, Hannah Garfield, Jodie Toft	10:15 a.m.		
10:30 a.m. BREAK								
11:00 a.m.	Policy/Permitting	Taylor Shellfish Farms - Habitat Conservation Plan <b>Jesse DeNike (Plauche &amp; Carr)</b> , Samuel W. (Billy) Plauche, Phil Bloch, Kelly McDonald, and Chris Cziesla	11:00 a.m.	Conservation and Restoration	Watching from Above – Monitoring Eelgrass Habitats in Humboldt, Samish, and Willapa Bays <b>Phil Bloch(Confluence Environmental Company)</b> , Kelly McDonald, Whelan Gikerson and Bobbi Hudson	11:00 a.m.	Workshop: Strengthening Research Support for Shellfish Health Management - OsHV-1 and The West Coast Shellfish Industry	Workshop: Strengthening Research Support for Shellfish Health Management - OsHV-1 and The West Coast Shellfish Industry <b>NOAA Fisheries Northeast Fisheries Science Center and CA Department of Public Health</b>
11:15 a.m.		Washington State Department of Health Commercial Shellfish Enforcement Program Overview <b>Dani Toepelt, R.S. (WA Dept. of Health)</b>	11:15 a.m.		Recovery mechanisms of eelgrass (Zostera marina) following dredging disturbance <b>Fiona Boardman (University of Washington)</b> , Elena Subbotin, Jennifer Ruesink	11:15 a.m.		
11:30 a.m.		An electronic aquaculture production data system for Washington <b>Chris Eardley (WA Dept. of Fish and Wildlife)</b> , Bobbi Hudson, Dani Toepelt, David Beugli, Laura Butler, Kim Thompson, Kevin Decker	11:30 a.m.		Nekton Use of Seagrass (Zostera Marina) Habitat on Oyster Flip-bag Farms <b>Katie Houle(Pacific Shellfish Institute)</b> , Kalloway Page, Fiona Boardman, Jennifer Ruesink	11:30 a.m.		
11:45 a.m.		Public Engagement Toolkit <b>Kim Thompson (Pacific Coast Shellfish Growers Association)</b>	11:45 a.m.	Lightning Talks	WDFW's Safeguard Our Shellfish Campaign <b>Nam Siu (WA Dept. of Fish and Wildlife)</b> , Katy Davis , Matt Hoehn, Chris Eardley;	11:45 a.m.		
12:00 p.m.		Shellfish Farm Permitting Toolbox <b>Kelly McDonald (Confluence Environmental Company)</b> , Marlene Meaders, Jesse DeNike, Samantha Klein	12:00 p.m.		An update on West Coast Shellfish Biosecurity Workshop Series <b>Chris Eardley (WA Dept. of Fish and Wildlife)</b> , Chris Langdon, Maria Haws;	12:00 p.m.		
			Effect of Biofouling and Stocking Density on Microclimate in off-Bottom Oyster Culture Grow-Out Bags <b>Julianne Grenn (Virginia Institute of Marine Science)</b> and William Walton					
			Is water temperature a critical factor dictating OsHV-1 SD Bay juvar infection and mortality rates in Pacific oysters? <b>Emily Kunselman (Scripps Institution of Oceanography)</b> , Daysi Manrique, Zachary Daniel, Colleen Burge, Sarah Allard, Jack Gilbert;					
12:15 p.m.	12:15 p.m.	Understanding the Spatial and Temporal Variability of Carbohydrate Compositions of Cultivated kelp in Alaska <b>Jardell Cameron (University of Alaska Fairbanks)</b> ;	12:15 p.m.					
12:15 p.m.	12:15 p.m.	Enhancing access to ocean data and information products from the Central and Northern California Ocean Observing System (CeNCOOS) to support well-informed shellfishery management <b>Marine Lebrech (Monterey Bay Aquarium Research Institute)</b> , Alex Harper	12:15 p.m.					
12:30 p.m.	LUNCH BREAK/NSA LUNCHEON							

2:00 p.m.	West Coast Federal Shellfish Research Update and Listening Session	West Coast Federal Shellfish Research Update and Listening Session NOAA Fisheries and USDA ARS	2:00 p.m.	Outreach and Education	Seaweed farming in the classroom: educational materials <b>Kristin Jones (Pacific Northwest National Laboratory)</b> , Deborah Rose, Molly Grear, Ruth Branch, Candace Briggs	2:00 p.m.	Beyond Bivalves: Crab, Seaweed, and More	Toward the qualitative modeling of Dungeness crab for management and conservation in the South Puget Sound <b>Melanie Good (University of Washington)</b> , P. Sean McDonald, Erendira Aceves Bueno, and Emily Buckner
2:15 p.m.			2:15 p.m.		Washington Shellfish Perceptions: Survey Results Examining Messages and Attitudes in Shellfish Producing Counties <b>Brett Veerhusen (Ocean Strategies)</b> , Tyler Edgar	2:15 p.m.		Effects of climate change (warming and acidification) on bull kelp ( <i>Nereocystis leutekana</i> ) microscopic stages <b>Miranda Roethler (University of Washington)</b> , Jacqueline Padilla-Gamino, Cinde Donoghue
2:30 p.m.			2:30 p.m.	Down on the Farm	The effect of including <i>Nannochloropsis oculata</i> within mixed algal diet on growth and survival of Pacific oyster <i>Crassostrea gigas</i> larvae. <b>Zachary Kowash (Oregon State University)</b>	2:30 p.m.		The Impact of Temperature on the Nutritional Composition of Dulse ( <i>Devaleraea mollis</i> ) and its Influence on Juvenile Red Abalone ( <i>Haliotis rufescens</i> ) <b>Jackson Gross (University of California, Davis)</b> , Natalie Rizzo, and Sara Boles
2:45 p.m.			2:45 p.m.		Quantifying Bed Quality: a Comparison of Oyster Yield Across Habitats and Growout Methods <b>Jennifer Ruesink (University of Washington)</b> , Fiona Boardman, Wesley Hull, Aspen Katla, Andy Suhrbier, Emma Beck, Katie Houle	2:45 p.m.		A year in the life: Tracking post-larval cohorts of Dungeness crab in an estuarine system <b>Sarah Grossman (Swinomish Indian Tribal Community)</b> , Claire Cook, Julie Barber
3:00 p.m.			3:00 p.m.		Experiences With Experimenting With and Developing Floating Oyster Bags <b>Nyle Taylor (Taylor Shellfish Farms)</b>	3:00 p.m.		Return of the Green: An update on the development of a seaweed recycling network <b>Emily Buckner (Puget Sound Restoration Fund)</b> , Hannah Garfield, Jodie Toft, Joth Davis, Bill Dewey, Duane Fagergren, Evie Fagergren, Betsy Peabody
3:15 p.m.			3:15 p.m.		Tidal Energy for Mariculture Operations <b>Candace Briggs (Pacific Northwest National Laboratory)</b> , Ruth Branch, Molly Grear, Debbie Rose, Kristin Jones	3:15 p.m.		
3:30 p.m. BREAK								

3:45 p.m.	Federal Agency Policy and Program Updates and Listening Session	Federal Agency Policy and Program Updates and Listening Session NOAA Fisheries Office of Aquaculture, US Department of Agriculture, National Aquaculture Association	3:45 p.m.	Ecosystem and Best Management Practices	Ecosystem-based management for community and industry resilience: collaboratively modeling Washington coastal estuaries <b>Nicole Naar (WA Sea Grant)</b> , Kate Little, P. Sean McDonald, Ashleigh Epps	3:45 p.m.	
4:00 p.m.			4:00 p.m.		Do Oysters Reduce or Increase Transmission of Eelgrass Wasting Disease? <b>Lindsay Alma, PhD (University of California, Davis)</b>	4:00 p.m.	
4:15 p.m.			4:15 p.m.		Environmental Codes of Practice (ECOP) Revision Update and Feedback Session <b>Kim Thompson (Pacific Coast Shellfish Growers Association)</b> , Samantha Klein, Bobbi Hudson	4:15 p.m.	
4:30 p.m.			4:30 p.m.			4:30 p.m.	

5:00 p.m. MEMORIAL HAPPY HOUR  
6:00 p.m. AWARDS BANQUET AND SILENT AUCTION

**Thurs, Sept 21**

Session 1			Session 2		
8:45 a.m.	Labor Issues	WAFLA update <b>Lisan Bannister (WAFLA)</b>	Integrated Pest Management	9:00 a.m.	Ecological impacts of the invasive European green crab ( <i>Carcinus maenas</i> ) in Washington <b>Ben Rubinoff (WA Sea Grant)</b>
9:00 a.m.		Tide's Out: Proposed Washington Shellfish Crew and Manager Training <b>Teri King (Washington Sea Grant)</b> , Ashleigh Epps, Nicole Naar		9:15 a.m.	What's Eating You: an Overview of Known Interactions and Impacts of The Invasive European Green Crab on Pacific Coast Shellfish Species. <b>Brian Turner (WA Dept. of Fish and Wildlife)</b>
9:30 a.m.	The Nature Conservancy Program Updates	TNC's Restorative Aquaculture Program Stories, Updates, and New Tools <b>The Nature Conservancy</b>		9:30 a.m.	Monitoring Recent Shifts in Burrowing Shrimp Populations in Coastal Estuaries: Are They Really New and Should a Shellfish Grower be Concerned? <b>Brett R Dumbauld (USDA-ARS)</b> , Brooke McIntyre, Nathaniel Lewis, Jennifer Ruesink, and Wesley Hull
9:45 a.m.				9:45 a.m.	IPM Update from WA Department of Agriculture <b>Laura Butler (WA Department of Agriculture)</b>
10:00 a.m.			10:00 a.m.		
10:15 a.m.			10:15 a.m.		
10:30 a.m. ADJOURN					