

Time	Sun, Sept 17	Mon, Sept 18	Time	Tues, Sept 19	
8:00 AM		Golf	8:00 AM		
8:30 AM			8:30 AM		
8:45 AM			8:45 AM		
9:00 AM			9:00 AM	Welcome: Margaret Barrette and Laura Hoberecht, Social Media/Hashtag	
9:15 AM			9:15 AM	<b>Keynote Professor Charles Yarish - Cultivation of Economically &amp; Ecologically Important Marine Algae for Ecosystem Services, Food, Feeds, Fertilizers and Biofuels</b>	
9:30 AM			9:30 AM		
9:45 AM			9:45 AM		
10:00 AM			10:00 AM	Parker MacCready: WHAT CAUSES PREDICTABLE AND UNPREDICTABLE VARIATION OF THE TIDE, AND HOW WILL IT CHANGE IN THE FUTURE?	
10:15 AM			10:15 AM	<b>BREAK</b>	
10:30 AM			10:30 AM		
10:45 AM			10:45 AM	<b>Turning the Headlights on High: Improving an Ocean Acidification Observation System to Support Shellfish Growers</b> <b>Jan Newton, University of WA</b>	
11:00 AM			11:00 AM	<b>John Lentz Profiles in Innovation Speaker Series: Niels Lindquist, Sandbar Oyster Co</b> <b>Development of Oyster Catcher™, a biodegradable hardscape for the creation of diverse oyster-based products for aquaculture, habitat restoration and living shorelines.</b>	
11:15 AM			11:15 AM		
11:30 AM		11:30 AM			

11:45 AM			11:45 AM	Pete Malinowski: Billion Oyster Project's Community Reefs Program as a tool for Understanding Challenges and Opportunities for Oyster Restoration in an Urban Setting			
12:00 PM		Lunch on your own	12:00 PM	<b>Luncheon and Speaker: Jonathan White</b>			
1:00 PM	PCSGA Board Meeting	PCSGA AGM	2:00 PM	<b>Seaweed: The Superfood Missing From your Diet</b> <b>Moderator: Prof. Charles Yarish</b> Dr. Janet Kübler: Climate Change Effects on Seaweed Production	<b>Managing Shellfish Disease Moderator: Lisa Crosson</b> Matthew Brown: MASS MORTALITY EVENTS: A PRACTICAL GUIDE TO BUSINESS SURVIVAL. AUSTRALIAN EXPERIENCE WITH PACIFIC OYSTER MORTALITY SYNDROME		
2:00 PM			2:15 PM	Betsy Peabody: Update on Kelp OA Investigation on Hood Head	Chelsea Wood: MUD WORM (Polydora spp.) INFESTATIONS ON WASHINGTON STATE OYSTER FARMS: AN INCIPIENT INVASION?		
2:15 PM			2:30 PM	Trevor Sande: Alaska's First Commercial Harvest of Aquacultured Kelp	Timothy Green: WATER TEMPERATURE INFLUENCES THE OYSTER'S BACTERIAL COMMUNITY: IMPLICATIONS FOR HOST SURVIVAL AND IMMUNITY		
2:30 PM			2:45 PM	Brian Allen: Bull Kelp Early Life History Study; Developing Strategies for Canopy Habitat Restoration	Lisa Crosson: ELUCIDATING ABALONE WITHERING SYNDROME DISEASE DYNAMICS: LOW PATHOGEN VIABILITY & INFECTIOUS DOSE		
2:45 PM			3:00 PM		Clara Hard: Norovirus Outbreaks in Washington Shellfish		
3:00 PM			3:15 PM	<b>BREAK</b>			
3:15 PM			3:30 PM				
3:30 PM			3:45 PM	<b>Seafood Safety 101: Vibrio Moderator Dave Steele</b> Clara Hard: Vibrio (to be updated by Clara)	<b>Breeding for Aquaculture Moderator: Dennis Hedgecock</b> Natalie Lowell: POPULATION GENETICS OF NATIVE SHELLFISH AQUACULTURE SPECIES AND POTENTIAL GENETIC RISKS OF CULTIVATION		
3:45 PM			4:00 PM	Kimberly Reece: STRATEGIES TO MINIMIZE RISKS ASSOCIATED WITH HUMAN PATHOGENIC Vibrio spp. IN FARM-RAISED OYSTERS GROWN IN THE US MID-ATLANTIC REGION	Dennis Hedgecock: BOOM-AND-BUST PRODUCTION CYCLES THREATEN AQUACULTURE SUSTAINABILITY AND GLOBAL SEAFOOD SECURITY		
4:00 PM							

<b>4:15 PM</b>			<b>4:15 PM</b>	Mark Winowich: FRESHTAG READER - A SMARTPHONE/TABLET APP FOR VITSABS SMART TTI LABELS INDICATING POTENTIAL RISK OF VIBRIO GROWTH	Evan Durland: COMPARING THE EFFECTS OF DOMESTICATION AND ACIDIFIED SEAWATER ON CHANGES IN THE GENETIC COMPOSITION OF LARVAL PACIFIC OYSTERS ( <i>Crassostrea gigas</i> )
<b>4:30 PM</b>			<b>4:30 PM</b>	John Jacobs: Using NOAA observational and modeling tools to address Vibrio risk	Evan Durland: CORRELATIONS AMONG LARVAL, SPAT AND FIELD PERFORMANCE TRAITS of the PACIFIC OYSTER, <i>Crassostrea gigas</i>
<b>4:45 PM</b>			<b>4:45 PM</b>	David Madison: BACTERIOPHAGES SIGNIFICANTLY REDUCE LARVAL OYSTER MORTALITY CAUSED BY <i>Vibrio coralliilyticus</i> .	
<b>5:00 PM</b>			<b>5:00 PM</b>	<b>Tradeshow Reception</b>	
<b>5:30 AM</b>	<b>Dinner on your own</b>		<b>5:30 PM</b>		
			<b>6:30 PM</b>	<b>NSA Fundraiser</b>	

Time	Wed, Sept 20	
8:00 AM	<b>Tradeshow Vendor Spotlight</b>	<b>Nearshore Ecology: Livin' la vida loca Moderator: Julie Barber</b> Molly Jackson: THE REPRODUCTIVE CYCLE OF CULTURED PURPLE HINGED ROCK SCALLOP, <i>Crassadoma gigantea</i> , IN DABOB BAY WASHINGTON
8:30 AM	<b>Proactive Planning and Permitting: Moderator: Laura Hoberecht</b> Susan Bunsick: EVALUATION OF U.S. SHELLFISH AQUACULTURE PERMITTING SYSTEMS: RECOMMENDATIONS TO IMPROVE PERMITTING EFFICIENCIES & INDUSTRY DEV.	Andy Suhrbier: GIANT RED SEA CUCUMBER ( <i>PARASTICHOPUS CALIFORNICUS</i> ) PUGET SOUND GROWOUT TRIALS AND OTHER INTERESTING FACTS.
8:45 AM	Laura Hoberecht: WASHINGTON EELGRASS/SHELLFISH AQUACULTURE WORKSHOP SUMMARY	Jeff Hetrick: The Alutiiq Pride Shellfish Hatchery has been developing culture techniques for the California Sea Cucumber since 2008. Culture techniques will be presented.
9:00 AM	Phil Bloch: Eyes in the Sky: Using unmanned aerial vehicles (UAV's) to support shellfish aquaculture	Megan Hintz: At the whim of the tides: Larval exchange among Olympia oyster ( <i>Ostrea lurida</i> ) in Puget Sound
9:15 AM	Sophie Kelmenson: UNDERSTANDING AND PLANNING FOR LOCAL/REGIONAL OYSTER ECONOMIES	Michael Ulrich: SPECIES RESTORATION EFFORTS FOR WASHINGTON'S NATIVE PINTO ABALONE, <i>Haliotis kamtschatkana</i> .
9:30 AM	<b>WORKSHOP: Lean Practices for Your Farm</b> <b>Quentin Fong, Seafood Marketing Specialist, University of Alaska</b>	Henry Carson: SURVIVAL OF HATCHERY ORIGIN JUVENILE PINTO ABALONE ( <i>Haliotis kamtschatkana</i> ) OUTPLANTED TO SPECIES RESTORATION SITES IN THE SAN JUAN ARCHIPELAGO.
9:45 AM		P. Sean McDonald: A Tale of Two Crabbies: Temperature Effects on the Bioenergetics of Dungeness and Graceful Crabs
10:00 AM		Julie Barber: Spatial and temporal population variability in intertidal clams: Final results of a decadal analysis
10:15 AM		<b>Break</b>
10:30 AM		
10:45 AM	<b>Strategies for Community Engagement Moderator: Lisa Redfern</b> Kathryn Kurtz: Bridging the Gap Between Industry and Education	<b>Mitigating Harmful Algal Blooms Impacts on U.S. Aquaculture</b> <b>Marc Suddleson</b>
11:00 AM	Aimee Christy and Mary Middleton: K-12 Marine Science Education for the Next Generation	
11:15 AM	Aimee Christy and Mary Middleton: Science Theater - Ocean Acidification and Eutrophication Take the Stage	
11:30 AM	P. Sean McDonald: Update on Crab Team: the citizen science monitoring program for invasive green crab in Puget Sound.	

<b>11:45 AM</b>	Pete Malinowski: Public Education through Ecosystem Restoration as a Method for Improving Outcomes for Students and Ecosystems	
<b>12:00 PM</b>	<b>Lunch on your own - NSA-PCS Business Lunch 11:45 AM - 2 PM Barlow Trail Roadhouse 69580 E Hwy 26, Welches, OR. 97067</b>	
<b>2:00 PM</b>	<b>A Closer Look at Changing Ocean Conditions Moderator Julie Horowitz</b> Samantha Siedlecki: SEASONAL FORECASTS OF OCEAN ACIDIFICATION IN WASHINGTON AND OREGON WATERS	<b>Everything You Were Afraid to Ask About Oyster Herpes Viruses</b> <b>Moderators: Carolyn Friedman, Colleen Burge and Paul Olin</b> Colleen Burge: AN OVERVIEW OF OSHV-1 AND OSHV-1 UVAR WITH FOCUS ON IMPLICATIONS OF SPREAD IN THE US
<b>2:15 PM</b>	Daniel Gillon: PERSISTENT TRANS-GENERATIONAL EFFECTS OF OCEAN ACIDIFICATION ON PACIFIC OYSTER <i>Crassostrea gigas</i>	Sandy Picot: HOW THE AUTOPHAGY PATHWAY IS MODULATE IN THE PACIFIC OYSTER <i>CRASSOSTREA GIGAS</i> DURING AN OSHV-1 INFECTION?
<b>2:30 PM</b>	Laura Spencer: GEODUCK AS INDICATORS OF ENVIRONMENTAL CHANGE	Timothy Green: PRIMED FOR SUCCESS: OYSTER PARENTS TREATED WITH POLY(I:C) PRODUCE OFFSPRING WITH ENHANCED PROTECTION AGAINST OSHV-1 INFECTION
<b>2:45 PM</b>	Sylvia Yamada: LIFTING BARRIERS TO RANGE EXPANSION: THE EUROPEAN GREEN CRAB, <i>Carcinus maenas</i> , ENTERS THE SALISH SEA.	Terry Sawyer: Industry Perspective
<b>3:00 PM</b>	<b>BREAK</b>	
<b>3:15 PM</b>	Jeff Hetrick: MONITORING FOR OCEAN ACIDIFICATION NEAR COASTAL VILLAGES IN SOUTH-CENTRAL ALASKA; BUILDING CAPACITY & ASSESSING VULNERABILTY	<b>Preparing for the Worst, Hoping for the Best: A Frank Discussion &amp; Workshop on Oyster Herpes Viruses</b>
<b>3:30 PM</b>	Lindsay Alma: EFFECTS OF OCEAN ACIDIFICATION AND WARMING ON THE PHYSIOLOGY OF PURPLE-HINGE ROCK SCALLOPS: A MULTI-STRESSOR AND MULTI-METHOD APPROACH	
<b>3:45 PM</b>	Emily Roberts: ENERGY ALLOCATION TO GROWTH AND STRUCTURAL SUPPORT DIFFERS FOR TWO CONGENER MUSSELS, <i>Mytilus trossulus</i> and <i>Mytilus galloprovincialis</i>	
<b>4:00 PM</b>	Yaamini Venkataraman: EXPLORING PROTEOMIC VARIATION IN PACIFIC OYSTERS	

<b>4:15 PM</b>	Bryanda Wippel: POTENTIAL TRANSGENERATIONAL EFFECTS OF OCEAN ACIDIFICATION AND HYPOXIA ON THE FECUNDITY OF OLYMPIA OYSTERS ( <i>Ostrea lurida</i> )	<b>ISSC Workshop</b>
<b>4:30 PM</b>		
<b>4:45 PM</b>	PCSGA Member Reception	
<b>5:00 PM</b>		
<b>6:30 PM</b>	<b>Awards Banquet</b>	

Time	Thurs, Sept 21	
8:00 AM		
8:30 AM	<p><b>DOWN ON THE FARM Moderator: Ian Jefferds</b>  Bobbi Hudson: A Visit to Killary Fjord, Ireland</p>	<p><b>Shellfish as Estuarine Ecosystem Components Moderator: Brett Dumbauld</b>  Bridget Ferriss: Putting it all together: A meta-analysis of shellfish aquaculture - eelgrass interactions</p>
8:45 AM	Duane Fagergren: Tips for saving your back and optimizing small acreage farms	Anthony D'Andrea: SHELLFISH COMMUNITY PATTERNS IN THE NATIVE AND NON-NATIVE EELGRASS HABITATS OF NETARTS BAY, OREGON,
9:00 AM	John Finger: Using Drones on the Farm to Track Eelgrass	Marlene Meaders: ASSESSMENT OF INTERACTIONS BETWEEN SALMON HABITAT RESTORATION AND SHELLFISH RESOURCES
9:15 AM	Maria E. Smith: The First Aquaculture Facility in U.S. Federal Waters	Brett Dumbauld: DO FISH RECOGNIZE SHELLFISH AQUACULTURE AND EELGRASS AS INTERTIDAL ESTUARINE LANDSCAPE FEATURES AND CAN WE TELL?
9:30 AM	<p><b>WORKSHOP: Pricing Your Product</b>  <b>Quentin Fong, Seafood Marketing Specialist, University of Alaska</b></p>	Bobbi Hudson: AQUACULTURE & EELGRASS, DOES HABITAT SUITABILITY DIFFER FOR WEST COAST SPECIES OF INTEREST?
9:45 AM		Colleen Burge: OYSTERS AND EELGRASS AS POTENTIAL PARTNERS IN A HIGH CO2 WORLD
10:00 AM	<p><b>Measuring Microplastics in the Marine Environment Moderator: Tiffany Waters</b>  Rosalind Schoof: DOES PLASTIC SHELLFISH GEAR INCREASE MICROPLASTIC AND</p>	Steve Booth: Prey availability of spring migrant Red Knots at Grays Harbor and Willapa Bay:
10:15 AM	Jesse DeNike: REGULATION OF PLASTIC SHELLFISH GEAR	Marlene Meaders and Phil Bloch: COMPARATIVE HABITAT USE OF ESTUARINE HABITATS WITH AND WITHOUT OYSTER AQUACULTURE: CHALLENGES, PARTNERSHIPS, AND INITIAL LESSONS
10:30 AM	Katie Houle: MICROPLASTIC DEBRIS IN PACIFIC COAST SHELLFISH AND SHELLFISH HABITAT	Q&A
10:45 AM	<b>Break</b>	
11:00 AM	<p><b>Improving Genetic Management of Farmed Native Shellfish</b>  <i>"Help Guide the Process"</i>  <b>Moderators: Laura Hoberect, Natalie Lowell, Brent Vadopalas</b></p>	
11:15 AM		
11:30 AM		

11:45 AM		
12:00 PM		



