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<th>ROOM</th>
<th>Gulf of Maine</th>
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<tr>
<td>SESSION TITLE</td>
<td>#1 SHELLFISH AQUACULTURE BUSINESS &amp; ECONOMICS</td>
<td>Matt Parker &amp; Jonathan van Senten</td>
<td>Camino Gestal, Jeffrey Taylor Good &amp; María Prado</td>
<td>#5 OYSTER I Bill Fisher</td>
<td>#6 SHELLFISH RESTORATION &amp; CONSERVATION Peter Kingsley-Smith</td>
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<tr>
<td>8:30 AM</td>
<td>SUSTAINABLE OYSTER AQUACULTURE, WATER QUALITY IMPROVEMENT, AND ECOSYSTEM SERVICE VALUE POTENTIAL IN MARYLAND, CHESAPEAKE BAY, USA</td>
<td>Parker, Bricker</td>
<td>RECENT developments in applications of organisms (RLO) in oyster aquaculture</td>
<td>VBILL, 1863 FROM BAY. CALIFORNIA, MEXICO</td>
<td>Castellanos-Marín, Sánchez-Serrano</td>
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<td>8:45 AM</td>
<td>EFFECTS OF AQUACULTURE BUSINESS, SEASIDE PLANNING, RESILIENCY, AND DISTRIBUTION ON EASTERN MORTALITY TYPES</td>
<td>Blazer, Blatt, Bille</td>
<td>RESEARCHING THE HISTORY OF THE RELATIVELY SKEWED DISTRIBUTION OF THE EASTERN OYSTER (USSCHIA VIRGINIANA) FROM DELAWARE TO NEW JERSEY, USA</td>
<td>LOBBY, Mazar, Brink, Salerno, Estes, Soto</td>
<td>Ghino, Morson, Munse, Krustner</td>
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<td>9:00 AM</td>
<td>THE EFFECTS OF PERMITTING DELAYS ON RETURN ON INVESTMENT FOR PACIFIC COAST SHELLFISH AQUACULTURE ON EASTERN MARYLAND</td>
<td>Braxton, Blatt, Bille</td>
<td>RESEARCHING THE HISTORY OF THE RELATIVELY SKEWED DISTRIBUTION OF THE EASTERN OYSTER (USSCHIA VIRGINIANA) FROM DELAWARE TO NEW JERSEY, USA</td>
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<td>9:15 AM</td>
<td>EFFECTS OF DIFFERENT OYSTER CATEGORIES ON MARYLAND OYSTER FARMS PROFITABILITY AND ECO-RESPONSE</td>
<td>Parker, Blatt, Bille</td>
<td>RESEARCHING THE HISTORY OF THE RELATIVELY SKEWED DISTRIBUTION OF THE EASTERN OYSTER (USSCHIA VIRGINIANA) FROM DELAWARE TO NEW JERSEY, USA</td>
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<td>9:30 AM</td>
<td>ECONOMICS OF OYSTER CULTURE IN KULILANDU, KALAMBA</td>
<td>Sullivan, Busch, Calus, Boehner, Harnon, Hollinger</td>
<td>REDUCING THE IMPACT OF OYSTER CULTURE IN THE NORTHERN PACIFIC</td>
<td>SULLIVAN, BUSCH, CALUS, BOEHNER, HARNON, HOLLINGER</td>
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<td>9:45 AM</td>
<td>THE ECONOMIC IMPACT OF OYSTER AQUACULTURE IN MARYLAND</td>
<td>van Souten, Eng, Parker, Webster</td>
<td>REDUCING THE IMPACT OF OYSTER CULTURE IN THE NORTHERN PACIFIC</td>
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<td>10:00 AM</td>
<td>ECO-TRADE-OFFS BETWEEN TRADITIONAL OYSTER AND CONTAINER CULTURE OF OYSTERS ON MARYLAND FARMS</td>
<td>Parker, Blatt, Bille</td>
<td>REDUCING THE IMPACT OF OYSTER CULTURE IN THE NORTHERN PACIFIC</td>
<td>PARKER, BILLE, BILLE</td>
<td>REDUCING THE IMPACT OF OYSTER CULTURE IN THE NORTHERN PACIFIC</td>
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<td>10:15 AM</td>
<td>OYSTER SHELL PRODUCTION AND REEF ACREATION RATES: A CASE STUDY OF SMALL-SCALE OYSTER RESTORATION IN BARTINGHAM BAY, NEW JERSEY, USA</td>
<td>Thompson, Parson, Event, Ambrose</td>
<td>REDUCING THE IMPACT OF OYSTER CULTURE IN THE NORTHERN PACIFIC</td>
<td>THOMPSON, PARSON, EVENT, AMBROSE</td>
<td>REDUCING THE IMPACT OF OYSTER CULTURE IN THE NORTHERN PACIFIC</td>
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**SESSION TITLE**

### (8) EASTERN OYSTER GENOME CONSORTIUM WORKSHOP

**Marta Gomez-Chiarri & Erin Roberts**

1. **2:30 PM**
   - **PATTERNS AND DRIVERS OF FEMALE BLUE CRAB (CALLINECTES SAPIDUS) SIZE AT MATURITY IN SOUTH CAROLINA, USA**
     - Thienes*, Kendrick
   - **PHAGOC-HOST INTERACTIONS SHAPED THE NATIVE ST36 POPULATION SUCCESSION IN THE PACIFIC AND GOVERNED SUCCESSFUL INVASIONS INTO THE NORTH ATLANTIC**
     - Whistler, Means, Foxall, Hartwick, Jones
   - **ASSESSING OYSTER RESTORATION AS A REMEDIATION STRATEGY IN GEORGIA POND, SOUTHAMPTON, NEW YORK, USA**
     - Morrell, Douth, Goble

2. **2:45 PM**
   - **INFLUENCES OF BROOD-DEPENDENT BEHAVIORAL VARIATION ON BLUE CRAB (CALLINECTES SAPIDUS) LARVAL TRANSPORT IN A WIND-DRIVEN TIDAL ENVIRONMENT**
     - Caracappa, Munroe, Chant, Fuchs
   - **APPLICATION OF MULTIPLE METHODS FOR THE DETECTION AND ENUMERATION OF PATHOGENIC VIBRIO SP. IN MID-ATLANTIC SEAWATER AND OYSTERS**
     - Parven, Jacobs, Oehay, Chintapenta, Amin-Halideh, Meredith, Osal, Grant, Abbott, ChiBi, Brohawn, Richards

3. **3:00 PM**
   - **ASSESSING THE ROLE OF BLUE CRAB PREDATION IN DRIVING TOP-DOWN REGULATION OF A SALT MARSH TROPHIC CASCADE**
     - Small*, Johnson
   - **IMPROVING QUANTIFICATION OF VIBRIO VULNIFICUS AND VIBRIO PARASEMAMOLITICUS TO SUPPORT THE SHELLFISH INDUSTRY OF NORTH CAROLINA, USA**
     - Noble, Blackwood, Clerkin, Stoops, Foster, Froelich
   - **MASS DIE-OFF OF ADULT BAY SCALLOPS IN NEW YORK FOLLOWING SUCCESSFUL RESTORATION: THE LOOMING SPECTER OF CLIMATE CHANGE**
     - Tettelbach, Allam, Hughes, Peterson, Smith

4. **3:15 PM**
   - **ASSOCIATION OF CLIMATE AND SEASON WITH THE PREVALENCE AND DISTRIBUTION OF A PAThOGENIC VIRUS AFFECTING THE ATLANTIC BLUE CRAB ACROSS ITS TRANS-HEMISPHERIC RANGE**
     - Zhao*, Behringer, Bujko, Kough, Plough, Schott
   - **ESTIMATING ILLNESS RISK ASSOCIATED WITH VIBRIO PARASEMAMOLITICUS FROM PACIFIC OYSTERS HARVESTED IN SOUTHERN CALIFORNIA USING A QUANTITATIVE MICROBIAL RISK ASSESSMENT FRAMEWORK**
     - Cooksey*, Hamilton, Zimmer-Faust, Reynolds, Burgess, Verhousga
traet
   - **THE EFFECTS OF TIDAL LOCATION ON THE BORING SPONGE-OYSTER INTERACTION: IMPLICATIONS FOR MANAGEMENT**
     - Carroll, Dieudonne

5. **3:30 PM**
   - **A CASE STUDY OF TRACER INVESTIGATIONS FOR VIBRIOSES AND PRE-HARVEST ENVIRONMENTAL CONDITIONS IN WASHINGTON STATE, 2013-2018**
     - Davis, Curri
gan, Sun, Atherly, DePaula, Curriera
   - **IN SITU CLEARANCE RATES OF OYSTERS, OYSTER LIVER, HABITAT AND PACIFIC OYSTER, CRASSOSTRANGULOS GIGAS, AQUACULTURE IN CALIFORNIA, USA**
     - Marks*, Zacher

### (1) EASTERN OYSTER GENOME CONSORTIUM WORKSHOP

**Marta Gomez-Chiarri & Erin Roberts**

1. **3:45 PM**
   - **CRACKING THE GENOME OF THE BLUE CRAB, CALLINECTES SAPIDUS**
     - Bachvaroff, Plough, Chung
   - **MANAGEMENT OF VIBRIO RISK FROM OYSTERS Jones, Miller, Marchant, Jailet-Neil, Prunte, Walton**
   - **CAN YOU EAT THEM TO SAVE THEM? FARMING THE WEST COAST NATIVE OYSTER, OYSTER LIVER, FOR FOOD AND RESTORATION IN TOMALES BAY, CA, USA**
     - Flemer, Cortez, Grosholz

2. **4:00 PM**
   - **ESTABLISHING PARASEMAMOLITICUS IN TEMPERATURE-ABUSED AND RESUMERGED OYSTERS AT SUB-TIDAL AND INTER-TIDAL AQUACULTURE SITES**
     - Petitpas, Lundgren, Boehler, Shanks, Ragan
   - **EXPERIMENTAL STUDY OF TOTAL AND POTENTIALLY PATHOGENIC VIBRIO PARASEMAMOLITICUS IN TEMPERATURE-ABUSED AND RESUMERGED OYSTERS AT SUB-TIDAL AND INTER-TIDAL AQUACULTURE SITES**
     - Barber, McArt
de, Grossman, Hunter, Greiner, Cook, Nelson

3. **4:15 PM**
   - **THE SEASONAL ECOLOGY OF VIBRIO PARASEMAMOLITICUS IN A NEW ENGLAND ESTUARY**
     - Hartwick*, Berenson, Whistler, Naunova, Jones
   - **THE SEASONAL ECOLOGY OF VIBRIO PARASEMAMOLITICUS IN A NEW ENGLAND ESTUARY**
     - Hartwick*, Berenson, Whistler, Naunova, Jones
   - **A BIVALVE MARICULTURE IN BAJA CALIFORNIA: A CONSERVATION AQUACULTURE PROJECT**
     - Baur*, Lorda, Beas-Luna, Malpica-Cruz, Rogers-Bennett, Micheli, Lafarga-De La Cruz, Neary-Horn

4. **4:30 PM**
   - **METABOLICALLY-ENHANCED HAPLOTYPE SUGGEST GENETIC ADAPTATION FOR HABITAT PREFERENCE IN BLUE CRABS**
     - Moran, Schulz, Rittschof
   - **COOL WATERS RUN DEEP - PHYLOGENETIC CHARACTERIZATION OF VIBRIO VULNIFICUS FROM THE GREAT BAY ESTUARY OF NEW HAMPSHIRE REVEALS UNIQUE ENVIRONMENTAL SEQUENCE TYPES**
     - Launen, Foxall, Early, Moore, Killey, Sanders, Jones, Whistler
   - **MUSCLE FATTY ACIDS DIFFERENTIATE WILD VS. FARMED PSEUDEI PRAWNS WORLDWIDE**
     - David

5. **4:45 PM**
   - **TRANSIROMIC AND EXPRESSION ANALYSIS OF THE GENES INVOLVED IN ECYSTOSTEROIDGENESIS AND MOLLESTEROID UPTAKE IN THE Y-ORGAN OF THE BLUE CRAB, CALLINECTES SAPIDUS**
     - Legrand, Bachvaroff, Schuck, Chung
   - **CANCELLATION**

6. **5:00 PM**
   - **UNDERSTANDING EYESKIN NEUROPEPTIDES INFLUENCING VITELLOGENESIS OF THE RED DEEP-SEA CRAB, CHACONIA QUINQUEDENS**
     - Green*, Bachvaroff, Chung
   - **VIBRIO PARASEMAMOLITICUS STRAIN-LEVEL DIVERSITY IN SEDIMENT, WATER, AND OYSTERS IN AN AQUACULTURE EMBAYMENT**
     - Santamarina, Lyons, Thusty, Hamad-Sheffi, K.Shiari

7. **5:15 PM**
   - **IS THERE A RELATIONSHIP BETWEEN SEXUAL MATURITY AND EXPRESSION LEVELS OF CRUSTACEAN MALE HORMONE, EOSULIN-LIKE ANDROGENIC GLAND HORMONE (LH)?**
     - Lawrence*, Green, Wang, Bachvaroff, Chung
   - **QUESTION AND ANSWER (LIVE CHAT SESSION)**

8. **5:30 PM**
   - **QUESTION AND ANSWER (LIVE CHAT SESSION)**

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* denotes student presenter
P denotes non first-author presenter
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<td>(#12) OYSTER II</td>
<td>(#13) SEAGRASS BIVALVE INTERACTIONS</td>
<td>(#15) HATCHERIES</td>
<td>(#16) OFFSHORE WIND ENERGY DEVELOPMENT &amp; COMMERCIAL FISHERIES</td>
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<td>Bill Fisher</td>
<td>Kay McGraw &amp; Brett Dumbauld</td>
<td>Don Webster</td>
<td>Daphne Munroe, Jennifer Beckensteiner, Andrew Scheld</td>
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<td>8:30 AM</td>
<td>OVERCOMING THE TRAGEDY OF THE OYSTER: A GLOBAL REVIEW ON PRODUCTION AND GOVERNANCE</td>
<td>META-ANALYSIS AND REVIEW OF RECIPROCAL INTERACTIONS BETWEEN BIVALVES AND SEAGRASS</td>
<td>HARD CLAM HATCHERY DEVELOPMENT IN THE BEGINNING</td>
<td>INTERACTIONS AND IMPACTS OF OFFSHORE WIND DEVELOPMENT ON EAST COAST SHELFISH FISHERIES</td>
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<td>Sorensen*, Camp, Botta, Asche</td>
<td>Fales, Boardman, Ruesink*</td>
<td>Kraeuter</td>
<td>Munroe, Powell, Hofmann, Kling, Scheld, Beckensteiner</td>
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<td>CANCELLED</td>
<td>OBLIGATORY AND FACULATIVE FACILITATION OF SEAGRASSES BY CHEMOSYNTHETIC BIVALVES</td>
<td>THE PRODUCTION OF SEED SHELLFISH DOES NOT NEED TO BE ROCKET SCIENCE: THE CASE FOR SMALL HATCHERIES USING SIMPLE TECHNOLOGIES</td>
<td>Munroe, Powell, Solinger, Hofmann, Kling, González-Díaz</td>
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<td>9:00 AM</td>
<td>SUPPORTING OYSTER AQUACULTURE AND RESTORATION, PROGRAM PROGRESS, AND FUTURE DIRECTIONS</td>
<td>IDENTIFICATION OF CHEMOSYNTHETIC SYMBIOTIC IN THE LUCINID CLAM, PELCUNA PSEUDUM, INHABITING A LAGODON SEAGRASS BED IN JEU ISLAND ON THE SOUTH COAST OF KOREA</td>
<td>ENSURING SEED AVAILABILITY FOR THE HARD CLAM AQUACULTURE INDUSTRY IN CEDAR KEY, FLORIDA</td>
<td>Spatial and temporal variations of Atlantic surfclam Apvolia sp.: Population demographics, larval characteristics along the Mid-Atlantic Bight González-Díaz*, Hofmann, Kling, Munroe, Powell, Scheld</td>
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<td>9:15 AM</td>
<td>EFFECTS OF INTERTIDAL CULTIVATION PRACTICES ON THE EFFECTS OF SORBO PARALAMINTICUS IN FARMLY OYSTER (CRASSOSTRAGA DIGA) FROM THE PACIFIC NORTHWEST</td>
<td>THE EFFECTS OF TEMPERATURE ON PACIFIC OYSTER FILTERATION AS A SINK AND POTENTIAL SOURCE OF AN EELGRASS PATHGEN, LARJACUTHUS ZELUTAE</td>
<td>CANCELLED</td>
<td>The effects of marine environmental change and the developing windfarm industry on the northeast continental shelf of North America Stokessbury</td>
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<td>9:30 AM</td>
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<td>A SHELLFISH INDUSTRIE PERSPECTIVE ON SHELLFISH-EGGELRASS INTERACTIONS – A PICTURE IS WORTH A THOUSAND WORDS AND A VIDEO WORTH A MILLION Dews</td>
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<td>9:45 AM</td>
<td>CHARACTERIZING EASTERN OYSTERS, CRASSOSTRAGA VIRGINICA, BREED FROM NATIVE LOUISIANA BROOMSTOCK UNDER DIFFERENT SALINITY REGIMES: EFFECT OF STOCK AND COHORT</td>
<td>ASSESSMENT OF ECOLOGICAL FUNCTION AND INTERACTIONS OF OYSTER CULTURE AND EELGRASS</td>
<td>NURTURING THE INDUSTRY-ACADEMIA COLLABORATION EXPERIENCES AND PERSPECTIVE FROM A PRIVATE HATCHERY WITH AN EYE TOWARD R&amp;D</td>
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<td>Bodenstein*, Tersch, Callam, Walton, LaPryer</td>
<td>Hudson, Ruesink, Boardman, Houle, Dumbauld, Bloch, Lunnis, Kroeck</td>
<td>Congressman</td>
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<td>10:00 AM</td>
<td>BREEDING EASTERN OYSTERS (CRASSOSTRAGA VIRGINICA) FOR HIGH-SALINITY ENVIRONMENTS</td>
<td>HABITAT USE BY NEKTON IN STRUCTURALLY COMPLEX OYSTER AQUACULTURE AND SEAGRASS HABITATS</td>
<td>CANCELLED</td>
<td>Social and economic impacts of the US commercial surfclam fishing industry from offshore wind energy development Scheld, Beckensteiner, Munroe, Powell, Solinger, Hofmann, Kling, González-Díaz</td>
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<td>Gao, Whiteside, Wang, Ratliff, Woodruff, Zeng, Haggard, Munroe, Calvo, Bushek, De Luca</td>
<td>Boardman*, Ruesink, Hudson, Houle, Subhrier, Lunnis, Kroeck</td>
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<td>10:15 AM</td>
<td>STRESS TOLERANCE IN INVERSE LINES OF EASTERN OYSTER (CRASSOSTRAGA VIRGINICA)</td>
<td>SMALL INVETEREBRATES IN BIVALVE-CULTIVATED AND UNMODIFIED HABITATS OF NEARSHORE ECOSYSTEMS</td>
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<td>EFFECTS OF INBREEDING AND OUTBREEDING ON EARLY PERFORMANCE OF THE EASTERN OYSTER (CRASSOSTRAGA VIRGINICA)</td>
<td>EFFECTS OF SEAGRASS AND CULTURE METHOD ON THE GROWTH OF JUVENILE OYSTER SEEDS ACCELERATED IN A TWO-PSYCHOCOATED ENVIRONMENT, CRASSOSTRAGA DIGA</td>
<td>QUEEN CONCH AQUACULTURE IN PUERTO RICO: HATCHERY AND NURSERY PIESHES</td>
<td>Tom Soniat &amp; Eric Powell</td>
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<td>Wang*, Zeng, Guo</td>
<td>Dumbauld, Mcintyre*, Durland, Boha</td>
<td>Davis, Espinosa, Casar</td>
<td>Tom Soniat &amp; Eric Powell</td>
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<td>11:00 AM</td>
<td>DEVELOPMENT OF A COST EFFECTIVE AND PORTABLE AERATION FREEZING SYSTEM FOR HIGH-THROUGHPUT SPERM CRYOPRESERVATION IN THE EASTERN OYSTER, CRASSOSTRAGA DIGA</td>
<td>IS A PRECAUTIONARY APPROACH TO PERMITTING TOO CONSERVATIVE? QUANTIFYING THE IMPACTS OF OYSTER AQUACULTURE ON SUBMERGED AQUATIC VEGETATION (SAV)</td>
<td>HYDROTHERMOSPHERE CONDITIONED RECIRCULATION SYSTEM FOR BIVALVE LARVAL CULTURE</td>
<td>Environmental controls on withering syndrome in abalone: A modeling study Hofmann, Friedman, Powell, Kling, Neuman, Moore, Taniguchi, Kuscher, Min, Hensem, Pousard, Solinger</td>
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<td>Hua, Yee, Yang</td>
<td>Kellogg, Shields, Dreyer, Luckenbach, Orth, Wilcox</td>
<td>Bentley, Snyder*, Ovispouz, Schwarz, Shiroodi, Urick, van Sensen, Congrove, Bond</td>
<td>Hofmann, Friedman, Powell, Kling, Neuman, Moore, Taniguchi, Kuscher, Min, Hensem, Pousard, Solinger</td>
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<td>11:15 AM</td>
<td>THE USE OF SELECTIVE BREEDING TO UNDERSTAND THE GENETIC UNDERPinnings OF RESILIENCE TO OCEAN ACIDIFICATION IN THE PACIFIC OYSTER (CRASSOSTRAGA DIGA)</td>
<td>ON THE CO-EXISTENCE OF SUBMERGED AQUATIC VEGETATION AND EELGRASS BASED OYSTER AQUACULTURE IN VIRGINIA, USA</td>
<td>USE OF CITIZEN SCIENTISTS TO MONITOR HABITAT CHANGES IN ENVIRONMENTAL CONDITIONS, AND ITS UTILIZATION IN AQUACULTURE</td>
<td>Influences of environmental factors on temporal and spatial variation in Atlantic surfclam, Spatula solidissima, recruitment in New York State waters Cjaa, Jr.*, Hennen, Cerrato, Lwira, Espinosa, O'Dwyer, Allam</td>
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<td>SESSION TITLE</td>
<td>OYSTER II</td>
<td>(#14) AQUACULTURE &amp; THE PRESS: A NEW WAY FORWARD</td>
<td>(#15) HATCHERIES</td>
<td>(#17) BIVALVES, MODELING, &amp; CLIMATE CHANGE</td>
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<td>Don Webster</td>
<td>Tom Soniat &amp; Eric Powell</td>
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<td>11:30 AM</td>
<td>CANCELLED</td>
<td>OBSERVATIONS ON THE USE OF A MCDONALD FAST HATCHING JAR FOR OYSTER SEED CULTURE AND IMPROVEMENTS IN BOTTLE ISO DESION</td>
<td>QUEST AND ANSWER (LIVE CHAT SESSION)</td>
<td>Tom Soniat &amp; Eric Powell</td>
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<td>11:45 AM</td>
<td>DEVELOPING TECHNOLOGIES TO INCREASE REPRODUCTIVE STABILITY IN EASTERN OYSTERS WITHOUT CHROMOSOME SET MANIPULATION</td>
<td>FORECASTING FUTURE RANGE OF SEA SCALLOPS USING A TROPHICALLY-LINKED SPECIES DISTRIBUTION MODEL: WILL CLIMATE CHANGE CRANK A SCROLL OF DIOGENES IN THE MID-ATLANTIC BIGHT?</td>
<td>ACCOUNT AND ANSWER (LIVE CHAT SESSION)</td>
<td>Chang, Hart, Munroe, Cuchitr, Rudders</td>
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<td>QUESTION AND ANSWER (LIVE CHAT SESSION)</td>
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<td>12:15 PM</td>
<td>AIDED BY THE IDENTIFICATION OF LARVAL AND POST-LARVAL DONIC-PIPER-SAY (BIVALVE: DONIC-AIDED)</td>
<td>THE CONFUSION OF COMPLEXITY Versus DYNAMICS: HABITAT MANAGEMENT AND SUBCLAMPS OOP (NANTUCKET, MASSACHUSETTS, USA)</td>
<td>Spatial distribution of Guineas Delaware in salt marshes of Georgia, USA</td>
<td>Question and Answer (LIVE CHAT SESSION)</td>
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<td>1:00-1:30 PM</td>
<td>LUNCH BREAK WITH SPONSOR &amp; TRADESHOW PRESENTATIONS</td>
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_ denotes non first-author presenter
# PLENARY:

João Ferreira – *The coming of age precision aquaculture – how sensors and models are changing the way we grow shellfish* (LIVE with Q&A to follow)

Chesapeake Bay

## SESSION

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| 2:30 PM | (#18) **DIVERSITY & INCLUSIVE EXCELLENCE LECTURE AND DISCUSSION (LIVE)**  
Randy Williams – *How might a shellfisheries society operate with a DEI lens*  
Moderator: Aswani Volety |

The 2020 events of racial injustice in the United States spawned a widespread reaction across the globe and in various sectors of society. Many organizations have increased or started their efforts to create more diverse and inclusive settings for members, even those spaces where social identity issues are not part of the routine lexicon. This presentation will provide an introductory exploration of how human diversity, equity, and inclusion issues have a place in the sciences.

## POSTER SESSION, TRADE SHOW, AND HAPPY HOUR (BYOBeverage) (LIVE)

Gulf of Mexico

<table>
<thead>
<tr>
<th>TIME</th>
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</table>
| 4:00 – 6:00 PM | **RECRUITS JOB PANEL (LIVE)**  
Monterey Bay |
### Gulf of Maine

#### SESSION

**#19** SHRIMP GENOME AND EPIGENOME STUDIES (SHRIMPENCODER PROJECT)

**Acacia Alcivar-Warren & Kathy Tang**

**TITLE**

The Global Climate of Disease: Using microarray to understand the epidemiology of disease in the Gulf of Maine shrimp (Penaeus virginalis)

**DATE**

WEDNESDAY, March 24, 2021

**WEBSITE**

#19

**ROOM**

Gulf of Maine

**TIME**

8:30 AM

**DISEASE**

Penaeus virginalis

**CLASSES**

6:30 AM - 8:30 AM

**LOCATION**

Gulf of Maine

**SPEAKER**

Acacia Alcivar-Warren, Kathy Tang

**ABSTRACT**

The project seeks to understand the climate of disease in the Gulf of Maine shrimp (Penaeus virginalis). This includes identifying and characterizing the pathogenic bacteria and viruses present in the shrimp population, as well as understanding the environmental factors that contribute to disease outbreaks. The study will involve the use of microarray technology to analyze gene expression patterns in shrimp samples collected from different locations in the Gulf of Maine. The results will help in developing strategies to prevent and control disease outbreaks in the shrimp industry.

---

### Gulf of Mexico

#### SESSION

**#20** DISEASE

**Roxanna Smolowitz & Ryan Carnegie**

**TITLE**

Comparative genomics of the white shrimp pathogen Mortierella beticola

**DATE**

WEDNESDAY, March 24, 2021

**WEBSITE**

#20

**ROOM**

Gulf of Mexico

**TIME**

8:30 AM

**DISEASE**

White shrimp disease

**CLASSES**

6:30 AM - 8:30 AM

**LOCATION**

Gulf of Mexico

**SPEAKER**

Roxanna Smolowitz, Ryan Carnegie

**ABSTRACT**

The project seeks to understand the genetics of the white shrimp pathogen Mortierella beticola. This includes identifying and characterizing the genes and gene expression patterns that contribute to the pathogenicity of the bacterium. The study will involve the use of comparative genomics and transcriptomics to analyze the bacterium's genome and transcriptome from different shrimp populations. The results will help in developing strategies to control and prevent white shrimp disease outbreaks in the Gulf of Mexico.

---

### Puget Sound

#### SESSION

**#21** CLAMS

**Brian Beal**

**TITLE**

The role of genomics in understanding the microbiome of the southern clams (Mercenaria mercenaria)

**DATE**

WEDNESDAY, March 24, 2021

**WEBSITE**

#21

**ROOM**

Puget Sound

**TIME**

8:30 AM

**DISEASE**

Clam disease

**CLASSES**

6:30 AM - 8:30 AM

**LOCATION**

Puget Sound

**SPEAKER**

Brian Beal

**ABSTRACT**

The project seeks to understand the role of the microbiome in the southern clams (Mercenaria mercenaria). This includes identifying and characterizing the bacterial communities present in the clams and understanding their functions and interactions. The study will involve the use of genomics and metagenomics to analyze the bacterial communities from different clam populations. The results will help in developing strategies to manage and control disease outbreaks in the southern clams.

---

### Chesapeake Bay

#### SESSION

**#22** COMMERCIAL SHELF FISHERIES

**Kevin Stovabae & David Rudder**

**TITLE**

The impact of climate change on the Chesapeake Bay oyster fishery

**DATE**

WEDNESDAY, March 24, 2021

**WEBSITE**

#22

**ROOM**

Chesapeake Bay

**TIME**

8:30 AM

**DISEASE**

Oyster disease

**CLASSES**

6:30 AM - 8:30 AM

**LOCATION**

Chesapeake Bay

**SPEAKER**

Kevin Stovabae, David Rudder

**ABSTRACT**

The project seeks to understand the impact of climate change on the Chesapeake Bay oyster fishery. This includes identifying and characterizing the environmental factors that contribute to the decline of the oyster population and understanding the adaptive strategies of the oysters to cope with the changing environment. The study will involve the use of climate modeling and ecosystem modeling to simulate the effects of climate change on the oyster fishery. The results will help in developing strategies to manage and control the decline of the oyster population in the Chesapeake Bay.

---

### Monterey Bay

#### SESSION

**#23** NAEMO WORKSHOP: DEFINING BARRIERS AND IDENTIFYING SOLUTIONS FOR MUSSEL AQUACULTURE EXPANSION

**Asha Strand, Julie Webb, & Alessandro Landelidia**

**TITLE**

Defining barriers and identifying solutions for mussel aquaculture expansion

**DATE**

WEDNESDAY, March 24, 2021

**WEBSITE**

#23

**ROOM**

Monterey Bay

**TIME**

8:30 AM

**DISEASE**

Mussel disease

**CLASSES**

6:30 AM - 8:30 AM

**LOCATION**

Monterey Bay

**SPEAKER**

Asha Strand, Julie Webb, Alessandro Landelidia

**ABSTRACT**

The project seeks to define the barriers and identify solutions for mussel aquaculture expansion. This includes identifying and characterizing the factors that limit the growth and survival of mussel cultures and understanding the potential strategies to overcome these barriers. The study will involve the use of expert interviews, workshops, and stakeholder consultations to gather insights from the mussel aquaculture industry. The results will help in developing strategies to promote and expand the mussel aquaculture industry in different geographical regions.

---

### Luncheon Break

#### SESSION

**#1** LUNCH BREAK WITH SPONSOR SHOW PRESENTATIONS

**SPEAKER**

* denotes student presenter  
** denotes non-first-author presenter

**TIME**

1:00-1:30 PM

**LOCATION**

Lunch Break with Sponsor & Trade show presentations

**ABSTRACT**

This session will feature a luncheon break followed by sponsor show presentations. The presentations will cover various topics related to the aquaculture industry and provide a platform for sponsors to showcase their products and services.

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### Additional Information

The workshop will include 12 short presentations addressing the status and practices of the mussel industry in different geographical regions, breakout groups where specific questions will be addressed, and an interactive plenary session to summarize the main findings. (Live)
<table>
<thead>
<tr>
<th>ROOM</th>
<th>Gulf of Maine</th>
<th>Gulf of Mexico</th>
<th>Puget Sound</th>
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<tbody>
<tr>
<td>SESSION TITLE</td>
<td>(#19) SHRIMP GENOME AND EPIGENOME (SHRIMPENCODE) PROJECT</td>
<td>(#20) DISEASE</td>
<td>(#24) UNDERGRADUATE RESEARCH COLLOQUIUM</td>
<td>(#22) COMMERCIAL SHELLFISHERIES</td>
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<tr>
<td></td>
<td>Acacia Alcivar-Warren &amp; Kathy Tang</td>
<td>Roxanna Smolowitz &amp; Ryan Carnegie</td>
<td>Edward Catapane &amp; Margaret Carroll</td>
<td>Kevin Stokesbury &amp; David Rudders</td>
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<tr>
<td>2:30 PM</td>
<td>SIMPLE SEQUENCE REPEATS DRIVE GENOME PLASTICITY AND PROMOTE ADAPTIVE EVOLUTION IN PENAED SHRIMP</td>
<td>PROBIOTICS FOR EASTERN OYSTER HATCHERIES: COMMERCIAL FORMULATIONS AND EFFECT ON MICROBIAL COMMUNITIES</td>
<td>DOPAMINE RECEPTORS: A GENOMIC STUDY OF THE BIVALVE MOLLUSC CRASSOSTREA VIRGINICA</td>
<td>DOPAMINE RECEPTORS: A GENOMIC STUDY OF THE BIVALVE MOLLUSC CRASSOSTREA VIRGINICA</td>
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<td></td>
<td>Yuan*, Zhang, Li, Xiang</td>
<td>Takay*, Roberts, Gregg, Cherler-Poule, Small, Rowley, Nelson, Hashman, Giray, Gomez-Chiarrri</td>
<td>Small*, Eid, Hinkley, Carroll, Catapane</td>
<td>Small*, Eid, Hinkley, Carroll, Catapane</td>
</tr>
<tr>
<td>3:00 PM</td>
<td>CHROMOSOME LOCATIONS OF NONLTR-1 LVA NON-LONG TERMINAL REPEAT (NON-LTR) RETROTRANSPOSON FROM THE FIRST SPECIFIC PATHOGEN-FREE (SPF) PENAEUS (LITOPENAEUS) VANNAMEI PRODUCED BY THE UNITED STATES</td>
<td>IDENTIFICATION OF A NEW REOVIRUS IN CALLINECTES CANAENSIS WHAT DOES IT MEAN FOR SOFT-SHELL CRAB PRODUCTION IN BRAZIL?</td>
<td>GENOMIC STUDY OF GABA RECEPTORS IN THE BIVALVE CRASSOSTREA VIRGINICA</td>
<td>GENOMIC STUDY OF GABA RECEPTORS IN THE BIVALVE CRASSOSTREA VIRGINICA</td>
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<td>Alcivar-Warren, Yuan, Espinoza, Kauonuthaisiri, Umeesetwani, Sittikankaen, Alcivar-Artorta</td>
<td>Tavares*, Zhao, Vogl, Model, Vinagre, da Silva, Ostrensky, Schott</td>
<td>Foster*, Eid, Hinkley, Carroll, Catapane</td>
<td>Foster*, Eid, Hinkley, Carroll, Catapane</td>
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<tr>
<td>3:15 PM</td>
<td>THE HEDGEHOG SIGNALING PATHWAY IN PENAEID SHRIMP: DEVELOPMENTAL EXPRESSION AND EVOLUTION OF SPlice FUNCTIONS IN P4H, PTC, SMO, AND CI</td>
<td>QUESTION AND ANSWER (LIVE CHAT SESSION)</td>
<td>HISTAMINE RECEPTORS: A GENOMIC STUDY OF THE BIVALVE CRASSOSTREA VIRGINICA</td>
<td>HISTAMINE RECEPTORS: A GENOMIC STUDY OF THE BIVALVE CRASSOSTREA VIRGINICA</td>
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<td>Hertzler, Dello</td>
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<td>Larios*, Mansfield, Eid, Hinkley, Carroll, Catapane</td>
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<td>3:30 PM</td>
<td>QUESTION AND ANSWER (LIVE CHAT SESSION)</td>
<td>QUESTION AND ANSWER (LIVE CHAT SESSION)</td>
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<td>4:00-4:30 PM</td>
<td>NSA AWARD PRESENTATIONS (LIVE)</td>
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<td>Monterey Bay</td>
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<td>4:30-6:00 PM</td>
<td>POSTER SESSION, TRADE SHOW, AND HAPPY HOUR (BYOBeverage) (LIVE)</td>
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<td>Gulf of Mexico</td>
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<td>6:00-7:00 PM</td>
<td>RECRUTIS SETTLEMENT SUITE-CHAT ROOM (LIVE)</td>
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<td>Gulf of Maine</td>
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<tbody>
<tr>
<td>SESSION TITLE</td>
<td>#32 FUNCTIONAL GENOMICS Tim Bean</td>
<td>#33 SUMMER MORTALITY Tim Green</td>
<td>#34 GENERAL CONTRIBUTED II Gulnailh Ozbay</td>
<td>#35 ECHINOIDS Chris Pearce &amp; Stephan Watts</td>
</tr>
<tr>
<td>2:30 PM</td>
<td>CHROMOSOME-LEVEL ASSEMBLIES OF THE NORTHERN QUAHOG (or HARD CLAM) AND ITS PARASITE QPX Farhat, Espinosa, Tanguy, Boutet, Alam</td>
<td>THE FIRST DETECTION OF A NOVEL OShV-1 MICROVARIANT IN SAN DIEGO, CALIFORNIA, USA Burge, Friedman, Kachmar, Humphrey, Moore, Elton</td>
<td>ANALYSIS OF CARBON AND NITROGEN ISOTOPES TO ASSESS NUTRIENT LOADING AND ITS EFFECTS ON OYSTER ACTIVITIES IN REHOBOTH BAY, DELAWARE, USA Gadde*, Nakazwe, Bland, Ozbay</td>
<td>EFFECTS OF FEED RATION ON GROWTH AND GONAD PRODUCTION IN SMALL SEA URCHINS, ECHINOIDES HARTIEGATUS Gibbs, Heffin, Taylor, Lawrence, Watts</td>
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<tr>
<td>2:45PM</td>
<td>HARNESSING THE POWER OF SINGLE-CELL RNA SEQUENCING TO CONTROL REPRODUCTIVE DEVELOPMENT IN RIVALVES Gavery, Saunders, Vadopalas, Luckenbach, Trapnell, Roberts</td>
<td>VARYING RESPONSES OF DIFFERENT OYSTER SPECIES DURING FIELD TRIALS AND INJECTION CHALLENGES WITH OShV-1 VARIANTS Friedman, Reece, Wippel, Agnew, Dégremont, Dhar, Kirkland, McIntyre, Morga, Robison, Burge</td>
<td>REESTABLISHMENT OF A POPULATION OF ADULT QUEEN CONCH, ALIGER GIGAS, POPULATION IN A MARINE PROTECTED AREA IN THE BAHAMAS Norton, Booker, Ajemian, Davis</td>
<td>EFFECT OF TRANSPORT METHOD ON SUBSEQUENT SURVIVORSHIP AND GONAD YIELD AND QUALITY IN THE RED SEA URCHIN (MYSOCENTROTUS FRANCISCANUS) Pearce, Warren</td>
</tr>
<tr>
<td>3:00 PM</td>
<td>QUESTION AND ANSWER (LIVE CHAT SESSION)</td>
<td>INITIATION OF A SENTINEL PROGRAM TO MONITOR HERPES VIRUS IN JUVENILE PACIFIC OYSTERS (CRASSOSTREA GIGAS) AT COMMERCIAL FARMS ALONG THE US WEST COAST Evans, Dumbauld, Burge, Langdon, Schoolfield, Dayal, Schoeneck, McIntyre, Divilo</td>
<td>THE GENUIS OF AGAVE LECHUGUILLA AS SOURCE OF NUTRITIONAL BIOMOLECULES TO PROMOTE SHRIMP PRODUCTIVITY Peña-Rodríguez, Pelletier-Morreeuw, Garcia-Luján, Rodríguez-Jaramillo, Guzmán-Villanueva, Escobedo-Fregos, Tovar-Ramírez, Reyes*</td>
<td>EXPANDING PRODUCTION METHOD INFORMATION FOR SEA URCHINS Suckling</td>
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<td>3:15 PM</td>
<td>2018 SUMMER MORTALITY EVENT OF PACIFIC OYSTERS IN BAYNE'S SOUND IS LINKED TO A SEAWATER TEMPERATURE SPIKE AND INFECTION WITH VIBRO SP Green, Cowan, Pearce, Meyer</td>
<td>EXPLORING MECHANISMS UNDERLYING THE RANGE LIMITS OF A MARINE CRAB IN A WARMING HOTSPOT Barley*, Cheng</td>
<td>EFFECTS OF DIET AND TEMPERATURE ON GONAD ENHANCEMENT OF GREEN (STROMOLOCENTROTUS ODOEBAECHINUS) AND RED (MYSOCENTROTUS FRANCISCANUS) SEA URCHINS Warren*, Flaherty, Cross, Pearce</td>
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<td>3:30 PM</td>
<td>IMPACTS OF SEAWATER PH BUFFERING ON LARVAL STAGE PACIFIC OYSTERS AND REPERCUSSIONS FOR SUSCEPTIBILITY OF SPAT TO SUMMER MORTALITY STRESSORS Mackenzie, Green, Leduc, Roth, Pearce</td>
<td>RESPONSES OF RIBBED MUSSELS TO ENVIRONMENTAL STRESSORS Chester*, Volkenborn</td>
<td>QUESTION AND ANSWER (LIVE CHAT SESSION)</td>
<td>QUESTION AND ANSWER (LIVE CHAT SESSION)</td>
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<td>3:45 PM</td>
<td>QUESTION AND ANSWER (LIVE CHAT SESSION)</td>
<td>QUESTION AND ANSWER (LIVE CHAT SESSION)</td>
<td>CLOSING HAPPY HOUR &amp; SILENT AUCTION RESULTS (LIVE)</td>
<td>Gulf of Mexico</td>
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