



THURSDAY, August 12

PLENARY SESSION

Thursday, August 12 8:30 AM - 10:20 AM Salon B

Chair: Aaron Watson

8:30 Opening

8:35 Matt Parker

U.S. AQUACULTURE SOCIETY

8:50 Jim Parsons

National Aquaculture Association

9:05 Kurt Grinnell

AQUACULTURE SCHOLARSHIP FOUNDATION

9:10 Student Spotlight

Please vote on the app

Aaron Pilnick

DEVELOPMENT OF LARVICULTURE PROTOCOLS FOR REARING THE ECOLOGICALLY IMPORTANT LONG-SPINED SEA URCHIN *Diadema antillarum* WITHIN A NOVEL RECIRCULATING SYSTEM

Marina M. Rubio Benito

MONITORING THE DEVELOPMENT AND MITIGATION OF SOYBEAN MEAL INDUCED ENTERITIS (SBMIE) IN TWO DIFFERENT STRAINS OF RAINBOW TROUT *Oncorhynchus mykiss* OVER A 30 -WEEK LONG TERM FEEDING TRIAL

Bryan Candelaria

EVALUATING THE EFFECTS OF DIETARY COTTONSEED OIL ON GROWTH PERFORMANCE OF JUVENILE RED DRUM *Sciaenops ocellatus* AND HYBRID STRIPED BASS *Morone chrysops* × *M. saxatilis*

9:25 Peterson Farm Brothers

TELLING THE STORY OF AGRICULTURE

10:00 Carole Engle

U.S. AQUACULTURE AND THE PANDEMIC: IMPACTS, NEAR MISSES, THE FUTURE?

10:20 FINISH

PALO ALTO RESEARCH CENTER

Thursday, August 12 11:15 AM - 12:30 PM Salon D

Chairs: Brien Buckman, Tim Curley

THURSDAY

Help us create a new aquaculture sensor product! The Palo Alto Research Center (PARC) is looking to speak with aquafarmers and researchers to understand your most critical pain-points, get a sense of how you might value a good solution, and generally learn where technology can have the biggest impact on the industry. Join us for an interactive and engaging session.

NUTRIENT REQUIREMENTS

Thursday, August 12 11:15 AM - 1:00 PM Salon A

Chair: Sahar Mejri

- 11:15 David A. Klett**, Aaron M. Watson, Fabio Casu, Justin Yost, Gabrielle Fignar, Mary Ann Taylor, Anna Radchenko
NUTRITIONAL PERFORMANCE OF JUVENILE RED DRUM *Sciaenops ocellatus* FED VARIOUS FISH, SHRIMP, AND SQUID DIETS
- 11:30 William Stites**, Alexis Weldon, Joao Torres Reis, Samuel Walsh, Melanie Rhodes, D. Allen Davis
DIETARY LYSINE REQUIREMENT FOR JUVENILE FLORIDA POMPANO *Trachinotus carolinus* FED FISHMEAL FREE DIETS
- 11:45 Omolola Betiku**, Marty Riche, H-Michael Habte-Tsion, Sahar Mejri, Brandon McHenry, Joseph Myers, Paul S. Wills
NUTRIENT AVAILABILITY FROM CLAM MEAL AND HEMP MEAL IN FLORIDA POMPANO *Trachinotus carolinus*
- 12:00 Victoria Uribe**, Paul S. Wills, Jonathan M. Shenker, Aaron J. Adams, Sahar Mejri
A COMPREHENSIVE BIOCHEMICAL AND HISTOLOGICAL CHARACTERIZATION OF WILD SETTLEMENT STAGE LEPTOCEPHALUS LARVAE OF BONEFISH *Albula vulpes*
- 12:15 Herbert Quintero**, Angel Rojo, David Heikes, Nicholas Romano, Nathan Egnew, Michelle Thompson
PRELIMINARY RESULTS FROM A LARGEMOUTH BASS *Micropterus salmoides* BROODSTOCK NUTRITION TRIAL
- 12:30 Angel Rojo-Cebreros**, Herbert Quintero, David Heikes, Juan D. Pyco, A.J. Sanchez-Ramirez
PRELIMINARY RESULTS FROM A LARGEMOUTH BASS *Micropterus salmoides* JUVENILE PRODUCTION
- 12:45 Allen Davis**, William Stites, Alexis Weldon, Joao Reis, Samuel Walsh, Robert Davis, Melanie Rhodes
QUANTITATIVE LYSINE REQUIREMENT FOR JUVENILE FLORIDA POMPANO *Trachinotus carolinus* FED PLANT-BASED DIETS

AQUATIC ANIMAL HEALTH

Thursday, August 12 11:15 AM - 5:00 PM Room 20

Chair: Tim Bruce

- 11:15** **Whitney Ortiz**, Camila Carlos-Shanley, Mar Huertas
THE IMPACTS OF SUBLETHAL NITRITE EXPOSURE ON GOLDFISH MICROBIOMES
- 11:30** **Timothy Bruce**, Luke Oliver, Jie Ma, Evan Jones, Brent Vuglar, Kenneth Cain
ASSESSMENT OF BURBOT *Lota lota maculosa* IMMUNE RESPONSES FOLLOWING EXPERIMENTAL INFECTION WITH *AEROMONAS* SPP.
- 11:45** **Diem Thu Nguyen**, Adrián López-Porras, David Marancik, Leighanne Hawkins, Timothy J. Welch, B. Denise Petty, Cynthia Ware, Matt J. Griffin, Esteban Soto
GENETIC CHARACTERIZATION OF HETEROLOGOUS *Edwardsiella piscicida* ISOLATES FROM DIVERSE FISH HOSTS AND VIRULENCE ASSESSMENT IN A CHINOOK SALMON *Oncorhynchus tshawytscha* MODEL
- 12:00** **Diem Thu Nguyen**, Khalid Shahin, Mark Adkison, Esteban Soto
VIRULENCE DIVERSITY OF *Flavobacterium columnare* GENETIC GROUP I AND III TO DIFFERENT CULTURED RAINBOW TROUT *Oncorhynchus mykiss* STRAINS IN CALIFORNIA, USA
- 12:30** **LUNCH**
- 1:30** **David Hammond**, Ashley Haring, Tim Ford
EVALUATION OF IONIC COPPER FOR CONTROL OF ICH *Ichthyophthirius multifiliis* AT A COMMERCIAL CATFISH FARM
- 1:45** **Joy Campbell**, Niti Chuchird, Watwarat Janjariyakul, Javier Polo, Yanbin Shen, Joe Crenshaw
IMMUNOLOGICAL EFFECTS OF SPRAY DRIED PLASMA IN DIETS FOR JUVENILE WHITE SHRIMP *Litopenaeus vannamei* DURING LABORATORY CONDITIONS
- 2:00** **Suja Aarattuthodi**, Vandana Dharan
FISH CELL CULTURES AND THEIR APPLICATIONS
- 2:15** **Vandana Dharan**, Lester Khoo, Nicholas B.D. Phelps, Ganesh Kumar, Suja Aarattuthodi
INVESTIGATION INTO THE PATHOGENESIS OF BLUE CATFISH ALLOHERPESVIRUS (BCAHV)
- 2:30** **Ashmita Poudel**, Ganesh Kumar, Lester Khoo, Mark Lawrence, Suja Aarattuthodi
FACTORS TRIGGERING DISEASE OUTBREAKS IN AQUACULTURE PRODUCTION SYSTEMS
- 2:45** **Tetsuzan Ron**, Tamir Ofek, Margarita Smirnov
FISH WELFARE: THE USE OF CO₂ TO AVOID FISH SUFFERING DURING PREPARATION TO PROCESSING
- 3:00** **Raquel T. Pereira**, María García Suárez, Danièle Marzin, María Ángeles Rodríguez
MACROALGAL SULPHATED POLYSACCHARIDES MODULATE IMMUNE RESPONSE AND IMPROVE PATHOGEN RESISTANCE IN TILAPIA
- 3:15** **Raquel T. Pereira**, María García Suárez, Danièle Marzin, María Ángeles Rodríguez
MACROALGAL SULPHATED POLYSACCHARIDES MODULATE IMMUNE RESPONSE AND IMPROVE PATHOGEN RESISTANCE IN OLIVE FLOUNDER
- 3:30** **Saraya Tavornpanich**, Alain Le Breton, Nadia Chérif, Anna Toffan, Valentina Panzarin, Francesco Pascoli, Snježana Zrncic, Panos Varvarigos, Bernardo Basurco, Hosam Saleh, Mona Dverdal Jansen, Edgar Brun
RISK ASSESSMENT OF VIRAL ENCEPHALOPATHY AND RETINOPATHY INTRODUCTION AND SPREAD IN MEDITERRANEAN SEABASS FARMS

TILAPIA

Thursday, August 12 11:15 AM - 5:00 PM Room 1

Chair: Kevin Fitzsimmons

THURSDAY

- 11:15 Abdul Mateen**
VARIABILITY IN GROWTH AND IMMUNE RESPONSE OF *Oreochromis niloticus* UNDER THE DIETARY SUPPLEMENTATION OF BLACK SEED *Nigella sativa*
- 11:30 John Scarpa**, Samreen Siddiqui, Jeremy Conkle
SHOULD THERE BE A CONCERN FOR TILAPIA CULTURISTS REGARDING CONTAMINANTS OF EMERGING CONCERN
- 11:45 Tetsuzan Ron**, Margarita Smirnov, Tamir Ofek
FORTY YEARS OF FLUCTUATION IN THE OCCURRENCE OF TWO VARIOUS METAZOAN PARASITES: *Contraecum multipapillatum* (NEMATODA) AND *Digenean metacercaria* N1 IN WARM WATER FISH CULTURE IN THE ISRAELI FARMS
- 12:30 LUNCH**
- 1:30 Kevin Fitzsimmons**
2021 GLOBAL REVIEW OF TILAPIA PRODUCTION AND MARKETS

TILAPIA BUSINESS MEETING

TEXAS AQUACULTURE

Thursday, August 12 11:15 AM - 5:00 PM Room 16

Chairs: Todd Sink, Chris Mace

- 11:15 Tyler Sclodnick**, Abigail Bockus, Kent Satterlee, Brian Snyder, Kenneth Riley
STATION PADRE: EXPLORING THE ENVIRONMENTAL AND GEOSPATIAL FEASIBILITY OF A PLATFORM-BASED OFFSHORE AQUACULTURE FARM IN THE SOUTHWEST GULF OF MEXICO
- 11:30 Brian Ray**, Delbert M. Gatlin III
THE TEXAS A&M AQUACULTURAL RESEARCH AND TEACHING FACILITY
- 11:45 Jessica Sannwaldt**, Jennifer Butler, Jeff Bayer, Paul Cason
LUNAR PERIODICITY IN REPRODUCTION OF RED DRUM IN AQUACULTURE
- 12:00 Todd Sink**
TRIPLETAIL, BERMUDA CHUB, SPADEFISH, AND ATLANTIC CROAKER: NEW SPECIES UNDER INVESTIGATION FOR CULTURE AT TEXAS A&M UNIVERSITY
- 12:15 John Scarpa**
CHANGING ATTITUDES FOR OFF-BOTTOM OYSTER AQUACULTURE IN TEXAS
- 12:30 LUNCH**
- 1:30 Todd Sink**, Elizabeth Silvy
EVALUATION OF A NOVEL SLOW-RELEASE SPAWNING AID, OVAPLANT-L® IN MARINE FINFISH REPRODUCTION
- 1:45 Fritz Jaenike**
TEXAS AQUACULTURE UPDATE

- 2:00 Korina Ramirez**, Robert Vega, John Scarpa
ANALYSIS OF WILD UNDERSIZED OYSTER HARVEST IN TEXAS FOR DETERMINING FARM SIZE REGULATIONS
- 2:15 Christopher Hollenbeck**, John Scarpa, David Portnoy
DEVELOPING CAPACITY FOR GENETIC IMPROVEMENT OF EASTERN OYSTER IN TEXAS
- 2:30 Mario Marquez**
TEXAS CULTIVATED OYSTER MARICULTURE FARMER TRAINING
- 2:45 Bailey E. Schacht**, Ellis L. Chapman, Jr., Caitlin Drummond, Joe M. Fox
INSTALLATION AND MANAGEMENT OF A SEMI-COMMERCIAL SCALE PILOT OYSTER FARM IN TRES PALACIOS BAY, PALACIOS, TEXAS
- 3:00 Ryan Rubino**
A PRELIMINARY EVALUATION OF THE EFFECTS OF OYSTER CAGE AQUACULTURE ON SEAGRASS *Halodule wrightii* COLONY HEALTH
- 3:15 Joe M. Fox**, Brad Lomax, Gail Sutton, Victoria Pruenete
DEVELOPMENT AND POTENTIAL FOR A NEW AQUACULTURE INDUSTRY IN TEXAS - OYSTER FARMING

FEED INGREDIENTS AND GUT HEALTH

Thursday, August 12 1:30 PM - 5:00 PM Salon A

Chair: Vikas Kumar

- 1:30 Timothy Bruce**, Jacob Bledsoe, Kenneth Cain
INVESTIGATION OF GROWTH PERFORMANCE AND GUT MICROBIOTA IN CULTURED BURBOT *Lota lota maculosa* FED PLANT-BASED DIETS
- 1:45 Marina Benito**, Nicholas Romano, Kenneth Overturf, Vikas Kumar
MONITORING THE DEVELOPMENT AND MITIGATION OF SOYBEAN MEAL INDUCED ENTERITIS (SBMIE) IN TWO DIFFERENT STRAINS OF RAINBOW TROUT *Oncorhynchus mykiss* OVER A 30 -WEEK LONG TERM FEEDING TRIAL
- 2:00 Mosope Abanikanda**, Victoria Daniel, Jonathan Eya
EFFECTS OF PLANT-DERIVED AQUAFEED AND TEMPERATURE ON GROWTH, NUTRIENT UTILIZATION EFFICIENCIES, AND MITOCHONDRIAL FUNCTION IN RAINBOW TROUT *Oncorhynchus mykiss*
- 2:15 Isaac Buyinza**, Rebecca Lochmann, Amit Sinha, Grace Ramena, Nicholas Romano
COMPARING THE EFFECTS OF INORGANIC IRON (FESO₄) AND ORGANIC IRON (CHELATED WITH METHIONINE) AT DIFFERENT CONCENTRATIONS IN PLANT-BASED DIETS ON PERFORMANCE OF CHANNEL CATFISH *Ictalurus punctatus*
- 2:30 Brian Small**, Seunghan Lee, Ronald Hardy, M.A. Kabir Chowdhury, Vikas Kumar
APPARENT NUTRIENT AND ENERGY DIGESTIBILITY OF COMMERCIAL FEED INGREDIENTS WITH OR WITHOUT PROTEASE (JEFO) IN RAINBOW TROUT
- 2:45 Kequan Chen**, Delbert Gatlin III
EFFECT OF PHYTASE ON GROWTH PERFORMANCE, MINERAL COMPOSITION, AS WELL AS PHOSPHORUS AND NITROGEN EXCRETION OF JUVENILE RED DRUM *Sciaenops ocellatus*
- 3:00 Nicholas Romano**, Hayden Fischer, Amit Sinha, Vikas Kumar
COMPARING BLACK SOLDIER FLY *Hermetia illucens* LARVAE VS PREPUPAE AS SUPPLEMENTS IN THE DIETS OF LARGEMOUTH BASS JUVENILES

- 3:15** **Vikas Kumar**, Kimia Kajbaf, Denina Simmons
HEPATIC PROTEOMICS REVEALS THE EFFECTS OF COMPENSATORY FEEDING REGIME ON FEED EFFICIENCY IN RAINBOW TROUT
- 3:30** **Joy Campbell**, Niti Chuchird, Watwarat Janjariyakul, Javier Polo, Yanbin Shen, Joe Crenshaw
GROWTH EFFECTS OF SPRAY DRIED PLASMA IN DIETS FOR JUVENILE WHITE SHRIMP *Litopenaeus vannamei*
- 3:45** **Mosope Abanikannda**, Victoria Daniel, David Huber, Jonathan Eya
INTERACTIVE EFFECTS OF TEMPERATURE REGIMENS AND DIETARY COMPOSITION ON RAINBOW TROUT *Oncorhynchus mykiss* GUT MICROBIOME
- 4:00** **Amit Yadav**, Amit Sinha, Nicholas Romano, Vikas Kumar
THE DIETARY SUPPLEMENTATION OF VITAMIN C AND BENTONITE IMPROVE THE FISH GROWTH AND ALLEVIATE IRON TOXICITY IN RAINBOW TROUT
- 4:15** **Janet Genz**, Trevor Hindman, Chazz Edwards
DIFFERENCES IN WATER CHEMISTRY BETWEEN HATCHERY AND RIVERINE CONDITIONS IMPACT NUTRIENT ABSORPTION BY JUVENILE LAKE STURGEON
- 4:30** **Sergio Nates**, Aaron Muehler, Luke Fredrickson, Brandon White
EFFECTS OF FEEDING A NOVEL FERMENTED SOYBEAN MEAL IN LOW INCLUSION FISHMEAL DIETS FOR PACIFIC WHITELEG SHRIMP *Litopenaeus vannamei*
- 4:45** **Tewodros Abate Alemayehu**, Abebe Getahun, Akewake Geremew, Dawit Solomon, John Recha, Dawit Solomon, Gebermedihin Ambaw
SINGLE OR COMBINED EFFECTS OF INULIN OR MANNAN-OLIGOSACCHARIDE (MOS) ON GROWTH, FEED UTILIZATION, FATTY ACID PROFILES, AND GUT MORPHOLOGY OF CHAMO STRAIN NILE TILAPIA FRY REARED AT SUB-OPTIMAL TEMPERATURE

DIVERSITY AND INCLUSION IN US AQUACULTURE

Eric A. Saillant*, Angela Caporelli, D. Allen Pattillo, Abigail Bockus, Steven Hughes, Adam Daw, Imani Black, Rebecca Lochmann, Carla Schubiger

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This session is organized by members of the Diversity and Inclusion (DI) committee of the United States Aquaculture Society (USAS) and welcomes all USAS members and conference participants. It seeks to provide a safe and inclusive environment and forum where questions related to diversity, equity, and inclusion in the society can be discussed freely. The first part of the session will include a presentation of the results of a recent diversity survey conducted by the committee and an open discussion of practical issues related to DI experienced by USAS members throughout their careers. This part of the session will also consist of a round table discussion on possible actions that could be taken at the level of USAS. The second part of the session will include presentations of ongoing initiatives to increase DI in US Aquaculture and a round table discussion of coordination and opportunities for collaborations.

Session part 1 - Diversity in the USAS

(moderators: Angela Caporelli, Steven Hughes)

Results from the 2021 USAS diversity survey - David Pattillo and Eric Saillant

Christopher Kennedy, Missouri Department of Conservation, Assistant to the Director for Inclusion and Diversity

In their own words: members discuss events and experiences related to Diversity and Inclusion (D & I) during the course of their career and in the context of their participation in USAS activities/events - open discussion with the audience led by Steven Hughes, Angela Caporelli

Round table - Discussion of possible actions and next steps for USAS to enhance D & I

Session part 2 - Initiatives targeting DEI in US Aquaculture

(moderators: Eric Saillant, Rebecca Lochmann)

The "LEAding cultural change through Professional Societies (LEAPS)" project

Minorities In Aquaculture- Imani Black

Diversity initiatives in the Department of Aquaculture and Fisheries, University of Arkansas Pine Bluff - Rebecca Lochmann

Initiatives to increase diversity in the University of Southern Mississippi School of Ocean Science and Engineering - Eric Saillant

Round table - Coordination and collaborations

GETTING IT RIGHT WHILE MANAGING THROUGH COVID: HITTING TARGETS EVEN WHEN THEY'RE MOVING

Thursday, August 12 1:30 PM - 5:00 PM Salon D

Chairs: Mick Walsh, Nathan Wilke

- 1:30 **Michelle L. "Mick" Walsh**, The College of the Florida Keys
- 1:45 **Janet Genz**, University of West Georgia
- 2:00 **Carl Kittel**, Texas Parks and Wildlife
- 2:15 **Mike Matthews**, Texas Parks and Wildlife
- 2:30 **Dan Mosier II**, Kansas Dept. of Wildlife, Parks & Tourism (submitted a formal abstract)
- 2:45 **Allan Brown**, USFWS Fisheries - Southeast US
- 3:00 **Jesse Trushenski**, Riverence
- 3:15 **Group Discussion**

TECHNOLOGY/ENGINEERING

Thursday, August 12 1:30 PM - 5:00 PM Room 3

Chair: Rose Upton

THURSDAY

- 1:30 James Brown**, Ken Semmens
EVALUATING SCREEN MESH SIZE AND GRID DEPTH ON FLOW RATE OF A FLOATING RACEWAY
- 1:45 Sujan Bhattarai**, Jacob Jones, Nilima Renukdas, Dayan Perera
ISOLATION AND *IN VITRO* CULTURE OF PRIMARY GERM CELLS DERIVED FROM OVARIAN TISSUES OF WHITE AND BLACK CRAPPIE
- 2:00 Tyler Sclodnick**, Jennie Korus
ARTIFICIAL INTELLIGENCE AND AQUACULTURE: HOW DIGITAL TOOLS ARE SHAPING THE FUTURE OF THE INDUSTRY
- 2:15 Sarah Bodenstein**, Isabelina Nahmens, Brian R. Callam, William C. Walton, Jerome F. LaPeyre, Terrence R. Tiersch
USING GERMLASM REPOSITORIES TO SUPPORT EASTERN OYSTER AQUACULTURE: TRACKING THE FLOW OF MATERIALS AND INFORMATION
- 2:30 Rose Upton**, Jack Koch, M. Teresa Gutierrez-Wing, Terrence Tiersch
SCALABLE AND GENERALIZED APPROACHES FOR STOCK-CENTER-BASED REPOSITORY CAPABILITIES

U.S. TROUT FARMERS ASSOCIATION TROUT FORUM

Thursday, August 12 1:30 PM - 5:00 PM Salon C

Chair: Ron Johnson

- 1:30 Ken Cain**, University of Idaho
CHARACTERIZATION OF MATERNAL IMMUNITY FOLLOWING VACCINATION OF BROODSTOCK AGAINST IHNV OR FLAVOBACTERIUM PSYCHROPHILUM IN STEELHEAD TROUT (*Oncorhynchus mykiss*)
- 2:00 Jesse Trushenski**, Riverence
EFFORTS TO REVISE THE AFS BLUE BOOK TO PROVIDE GREATER CLARITY AND STRONGER BIOLOGICAL RATIONALES IN DIAGNOSTIC AND INSPECTION TESTING
- 2:30 Hugh Mitchell**, AquaTactics
CLINICAL IMPRESSIONS AND VACCINATION AGAINST LACTOCOCCOSIS IN RAINBOW TROUT IN CALIFORNIA
- 3:00 Carole Engle**, Engle-Stone Aquatic\$, LLC
FARM-LEVEL COST DRIVERS OF SALMONID FISH HEALTH INSPECTIONS
- 3:30 UNITED STATES TROUT FARMERS ASSOCIATION BUSINESS MEETING**

FRIDAY, August 13

SHRIMP HEALTH

Friday, August 13 8:30 AM - 10:00 AM Room 3

Chair: Arun Dhar

- 8:30 Kevin Fitzsimmons**
DR. DONALD V. LIGHTNER: A LEGENDARY SHRIMP PATHOLOGIST
- 9:00 Arun Dhar, Roberto Cruz-Flores, Hung Mai**
EXPEDITING VIRAL DISCOVERY IN SHRIMP AQUACULTURE BY COMBINING CONVENTIONAL HISTOPATHOLOGY AND GENOMICS
- 9:15 Aya Hussain, Kaelyn Fogelman, Hisham A. Abdelrahman, Luke A. Roy, James A. Stoeckel**
RELATIONSHIP BETWEEN AEROBIC SCOPE AND THERMAL TOLERANCE OF WHITE-LEGGED SHRIMP *Penaeus vannamei* IN LOW-SALINITY CULTURE SYSTEMS
- 9:30 Paul Schofield, Frances Marcos, Luis Fernando Aranguren, Tanner Padilla, Arun Dhar**
RAPID AMPLIFICATION OF *Enterocytozoon hepatopenaei* (EHP) INOCULUM IN SHRIMP *Penaeus vannamei*
- 9:45 Luis Fernando Aranguren, Hung Mai, Paul Schoefield, Rusel Alenton, Arun Dhar**
DEVELOPMENT OF AN *Enterocytozoon hepatopenaei* (EHP) CHALLENGE MODEL IN SCREENING GENETIC LINES OF *Penaeus vannamei* SHRIMP
- 10:00 Hung Mai, Rod-Russel Alenton, Arun Dhar**
IDENTIFICATION OF RECEPTORS OF PIRABVP BINARY TOXIN RELEASED BY *Vibrio parahaemolyticus* CAUSING ACUTE HEPATOPANCREATIC NECROSIS DISEASE (AHPND) IN *Penaeus vannamei* SHRIMP

ENVIRONMENTAL ISSUES

Friday, August 13 8:30 AM - 12:30 PM Salon C

Chair: Claude Boyd

- 8:30 Robert Davis, Claude E. Boyd**
A COMPARISON OF THE TECHNICAL EFFICIENCY OF AQUACULTURE STEWARDSHIP COUNCIL SHRIMP FARMS TO NON-CERTIFIED FARMS
- 8:45 Bailey Moritz**
SCALING SEAWEED AND SHELLFISH FARMING – IMPLICATIONS FOR RESOURCE USE
- 9:00 Antonie Schuur, Aaron A. McNevin, Claude E. Boyd**
FEASIBILITY ASSESSMENT FOR INTENSIFICATION OF THE SMALL-HOLDER EXTENSIVE SHRIMP FARM AREA
- 9:15 Claude E. Boyd, Aaron A. McNevin, Robert P. Davis**
ROLE OF AQUACULTURE IN WORLD PROTEIN PRODUCTION
- 9:30 Patricia Duncan**
ECOLOGICAL MANAGEMENT OF NUISANCE ALGAL BLOOMS AND AQUATIC WEEDS IN STREAMS AND PONDS
- 10:00 BREAK**

- 10:30 Nitesh Kasera**, Praveen Kolar, Steven Hall
ADSORPTION OF AQUACULTURE WASTEWATER CONTAMINANTS ON N-DOPED BIOCHARS
- 10:45 Timothy Brewer**, Peter Vonk, Joshua Hatfield, Wesley Welch
SUBAQUATIC CLASSIFIER FOR REAL-TIME ACOUSTIC DETECTION OF MARINE MAMMALS
- 11:00 Emily Moberg**, Claude Boyd, Aaron McNevin, Ji Min Lee
PATHWAYS TO NET-ZERO: BRINGING CLIMATE ACTION INTO SHRIMP AQUACULTURE
- 11:00 Olatayo Michael Ogunbanwo**, Modercai Miponjesu Abraham
COMPARATIVE STUDY OF PHYSICO-CHEMICAL PARAMETERS AND TRACE METALS OF TWO DIFFERENT BOREHOLES IN TWO FARMS IN IKORODU, LAGOS STATE, SOUTHWEST NIGERIA
- 11:15 Olatayo Michael Ogunbanwo**
COMPARATIVE ANALYSIS OF WATER QUALITY PARAMETERS OF TWO COASTAL WATER BODIES (BAYEIKU AND OFFIN RIVERS) IN IKORODU DIVISION OF LAGOS STATE, SOUTHWEST NIGERIA

FINFISH NUTRITION

Friday, August 13 8:30 AM - 12:30 PM Room 20

Chair: Del Gatlin

- 8:30 Tsung-Yu Tsai**, Hector Hernandez, Kenneth E. Overturf, Brian Small, Madison S. Powell
COMPARATIVE ANALYSIS OF SOYBEAN MEAL EFFECTS IN COMMERCIAL STRAINS OF RAINBOW TROUT *Oncorhynchus mykiss*
- 8:45 Sidra Nazeer**, Darci Carlos Fornari, Harsha S.C. Galkanda-Arachchige, Scott Tilton, Allen Davis
USE OF HIGH PROTEIN DISTILLER'S DRIED GRAIN PRODUCT TO REPLACE POULTRY MEAL AND SOYBEAN MEAL IN PRACTICAL DIETS FOR THE CHANNEL CATFISH *Ictalurus punctatus*
- 9:00 Kimia Kajbaf**, Vikas Kumar
THE UNDERLYING MOLECULAR MECHANISM FOR UTILIZING THE SOY PROTEIN DURING COMPENSATORY FEEDING REGIME IN RAINBOW TROUT
- 9:15 John Buchanan**, Prabhakar Mannem, André Dumas
THE VALUE OF EXTRUSION TECHNOLOGY IN FISH AND SHRIMP NUTRITION
- 9:30 Marty Riche**, Frederic T. Barrows, Zachary Niles, Kelly Alfrey, Paul S. Wills
UTILIZATION OF OPEN-FORMULA DIETS FED TO FLORIDA POMPANO *Trachinotus carolinus* TO EVALUATE MICROALGAE OIL SUBSTITUTION FOR FISH OIL
- 9:45 Kimia Kajbaf**, Kenneth Overturf, Vikas Kumar
GENETIC AND NUTRITIONAL APPROACHES TO ENHANCE THE EFFICIENCY OF SOYBEAN MEAL UTILIZATION IN RAINBOW TROUT
- 10:00 BREAK**
- 10:30 Jeongwhui Hong**, Jacob W. Bledsoe, Kenneth E. Overturf, Ronald W. Hardy, Brian C. Small
BALANCING DIETARY LIPID AND CHOLESTEROL TO INCREASE FILLET OMEGA-3 DEPOSITION IN RAINBOW TROUT FED A SOY-BASED DIET
- 10:45 Md. Sakhawat Hossain**, Mo Peng, Brian C. Small
OPTIMIZING THE FATTY ACID PROFILE OF NOVEL TERRESTRIAL OIL BLENDS IN LOW FISHMEAL DIETS OF RAINBOW TROUT *Oncorhynchus mykiss* YIELDS COMPARABLE FISH GROWTH, FATTY ACID COMPOSITION AND HEALTH RELATIVE TO FISH OIL

- 11:00 Robert Davis**, D. Allen Davis, Guillaume Salze, Erica Fanning, Constance Silbernagel, David Rotstein, Mark Drawbridge
A COMPARISON OF GROWTH AND TAURINE RETENTION BETWEEN PLANT AND ANIMAL PROTEIN-BASED DIETS IN JUVENILE WHITE SEABASS *Atractoscion nobilis*
- 11:15 Yang Jin**, Rolf Erik Olsen, Thomas Nelson Harvey, Mari-Ann Ostensen, Keshuai Li, Nina Santi, Vadstein Olav, Atle Bones, Jon Olav Vik, Simen Rod Sandve, Yngvar Olsen
COMPARATIVE TRANSCRIPTOMICS REVEALS DOMESTICATION-ASSOCIATED FEATURES OF ATLANTIC SALMON LIPID METABOLISM
- 11:30 Elizabeth Mwikali Nyanchiri**, Phillip O. Raburu, Joseph O. Rasowo
EFFECT OF DIETARY PROTEIN ON SPAWNING PERFORMANCE OF SINGIDIA TILAPIA *Oreochromis esculentus* (GRAHAM 1929) BROODFISH-KENYA

FINFISH REARING

Friday, August 13 8:30 AM - 12:30 PM Salon A

Chair: Sahar Mejri

- 8:30 Sahar Mejri**, Martin Riche, David Bradshaw, Victoria Uribe, Nicole Kirchhoff, Carlie Perricone, Paul S. Wills
CHANGES IN FATTY ACIDS PROFILES OF FLORIDA POMPANO *Trachinotus carolinus* REARED AT DIFFERENT SALINITIES
- 8:45 David Bradshaw**, Laura King, Brandon McHenry, Brent Rupnick, Victoria Uribe, Nicole Kirchhoff, Carlie Perricone, Martin Riche, Sahar Mejri, Maria Sepúlveda, Paul Wills
TRANSCRIPTOME AND FATTY ACID ANALYSIS OF FLORIDA POMPANO *Trachinotus carolinus* CULTURED AT DIFFERENT SALINITIES
- 9:00 Carlie Perricone**, David Bradshaw, Laura King, Brandon McHenry, Brent Rupnick, Victoria Uribe, Nicole Kirchhoff, Sahar Mejri, Martin Riche, Paul Wills
ASSESSMENT OF SALINITY IMPACTS ON MICROBIAL COMMUNITIES ASSOCIATED WITH THE FLORIDA POMPANO *Trachinotus carolinus* IN LARVICULTURE
- 9:15 Casey A. Murray**, Sarah Hutchins, Fred Shopnitz, Cortney Ohs, Joshua Patterson, Angela Collins, Matthew A. DiMaggio
UTILIZING THE ONTOGENY OF DIGESTIVE ENZYME ACTIVITY AND DIGESTIVE TRACT MORPHOLOGY TO GUIDE LARVAL CULTURE PROTOCOLS FOR HOGFISH *Lachnolaimus maximus*
- 9:30 John Stieglitz**, Ronald Hoenig, Carlos Tudela, Daniel Benetti, Kevan Main, Mark Drawbridge, Federico Rotman, Kevin Stuart, Martin Riche, Sahar Mejri, Paul Wills
BIOENERGETICS OF YELLOWTAIL JACKS *Seriola* spp. TO IMPROVE PRODUCTION EFFICIENCIES IN AQUACULTURE
- 9:45 Luke Oliver**, Joseph Evavold, Kenneth Cain
OUT OF SEASON SPAWNING OF BURBOT *Lota lota* THROUGH TEMPERATURE AND PHOTOPERIOD MANIPULATION
- 10:00 BREAK**
- 10:30 Moureen Matuha**, Luke Oliver, Kenneth Cain
OPTIMIZING EARLY WEANING OF BURBOT *Lota lota maculosa* LARVAE
- 10:45 Sarah Hutchins**, Laura Smith, Matthew DiMaggio
REFINING CULTURE METHODS FOR THE CYCLOPOID COPEPOD *Oithona colcarva*

- 11:00** **Brittany Chesser**, Peter J. Allen
COMPARISON OF STOCKING TIME AND DENSITY ON GULF KILLIFISH GROWTH IN FRESHWATER PONDS
- 11:15** **Christopher Good**, Tom Ole Nilsen, Travis May, Asa Maria Espmark
ASSESSING THE EFFECTS OF WATER TEMPERATURE ON PRECOCIOUS MATURATION IN ATLANTIC SALMON *Salmo salar* POST-SMOLTS
- 11:30** **John Stieglitz**, Ronald Hoenig, Carlos Tudela, Shubham Mathur, Luiz Anchieta Da Silva, Daniel Benetti
DEVELOPMENT OF PILOT-SCALE YELLOWTAIL SNAPPER *Ocyurus chrysurus* AQUACULTURE GROWOUT TECHNOLOGY TO INCREASE RESILIENCE FOR FISHING COMMUNITIES OF THE SOUTHEAST U.S.
- 11:45** **Jenna Baggett**, Ronald Hoenig, Carlos Tudela, Shubham Mathur, Daniel Benetti, John Stieglitz
LAND BASED CULTURE OF OLIVE FLOUNDER *Paralichthys olivaceus*: OPPORTUNITY FOR INCREASING MARINE FISH AQUACULTURE PRODUCTION IN THE UNITED STATES
- 12:00** **Hunter Bailey**, Ashley Fincannon, Lee Fuiman
EGG QUALITY AND THE TIMING OF BROODSTOCK DIET SHIFTS IN SOUTHERN FLOUNDER *Paralichthys lethostigma*
- 12:15** **Md Jakuiul Islam**, Andreas Kunzmann, Joachim Henjes, Matthew James Slater
CAN DIETARY MANIPULATION AMELIORATE EXTREME HEATWAVE STRESS IN FISH? THE CASE OF EUROPEAN SEABASS *Dicentrarchus labrax*

AQUACULTURE WITHOUT FRONTIERS

Friday, August 13 8:30 AM - 12:30 PM Room 1

Chair: Marty Riche

- 8:30** **Angela Caporelli**, Marty Riche
AQUACULTURE WITHOUT FRONTIERS: ROLE IN DEVELOPMENT, OPPORTUNITIES AND OBSERVATIONS
- 8:45** **Omolola Betiku**
FRESHWATER AQUACULTURE BUSINESS IN NIGERIA: PERSPECTIVES, PROCESS, AND PROSPECTS FOR YOUTH EMPOWERMENT
- 9:00** **Antonio Garza de Yta**
#SalvemosNuestraLagunaMadre, A NEW MODEL TO POSITION AQUACULTURE AS A KEY INSTRUMENT TO DEVELOP VULNERABLE POPULATIONS IN COASTAL AREAS
- 9:15** **Marty Riche**, Jerome Gayman, Samuel Monwell, Wisseh-Weah Bestman, Roy Palmer
DEVELOPING A WEST AFRICAN REGIONAL AQUACULTURE LEARNING CENTER IN GRAND BASSA COUNTY, LIBERIA: AN UPDATE
- 9:30** **Kevin Fitzsimmons**, Soe Tun
AQUACULTURE DEVELOPMENT IN MYANMAR
- 9:45** **Antonio Garza de Yta**, Angela Caporelli, Marty Riche, Roy Palmer
AQUACULTURE WITHOUT FRONTIERS: PAST, PRESENT & FUTURE

FARMING IN THE TIME OF A PANDEMIC: IMPACTS, RESPONSE, AND PLANNING

Friday, August 13 8:30 AM - 12:30 PM Salon B

Chair: Jonathan van Senten

- 8:30 Carole Engle**
FARM FINANCIAL HEALTH
- 9:00 Paul Zajicek**
FEDERAL DISASTER ASSISTANCE AND INSURANCE
- 9:30 Jonathan van Senten**
MARKETING STRATEGIES FOR FINANCIAL SHOCKS
- 10:30 Matt Smith**
LIVE SALES AND SPORTFISH
- 10:45 Ganesh Kumar**
CATFISH AND OTHER FOOD FISH
- 11:00 Matt Parker**
SHELLFISH
- 11:15 OPEN DISCUSSION**

ECONOMICS

Friday, August 13 8:30 AM - 4:30 PM Room 16

Chair: Frank Asche

- 8:30 David Love**, Frank Asche, Ruth Young, Elizabeth Nussbaumer, James Anderson, Robert Botta, Zach Conrad, Halley Froehlich, Taryn Garlock, Jessica Gephart, Andrew Ropicki, Joshua Stoll, Andrew Thorne-Lyman
RETAIL SEAFOOD SALES IN THE UNITED STATES
- 8:45 Charles Clark**, Jonathan van Senten, Matthew Smith, Carole Engle, Shannon Fluharty, Michael Schwarz, Ganesh Kumar, Shraddha Hegde
IMPACTS OF COVID-19 ON U.S. MOLLUSK AQUACULTURE
- 9:00 Taryn Garlock**, Frank Asche, James Anderson
AQUACULTURE PERFORMANCE INDICATORS
- 9:15 Carole Engle**, Ganesh Kumar, Jonathan van Senten
COST DRIVERS AND PROFITABILITY OF U.S. POND, RACEWAY, AND RAS AQUACULTURE
- 9:30 Ganesh Kumar**, Carole Engle, Shraddha Hegde, Jonathan van Senten
ECONOMICS OF U.S. CATFISH FARMING PRACTICES: PROFITABILITY, ECONOMIES OF SIZE, AND LIQUIDITY
- 9:45 Jordan Moor**, Andrew Ropicki, Frank Asche, James Anderson
STOCHASTIC MODELING AND FINANCIAL VIABILITY OF MOLLUSK AQUACULTURE
- 10:00 BREAK**

- 10:30 Shraddha Hegde**, Ganesh Kumar
PRODUCTION ECONOMIC RELATIONSHIPS IN INTENSIVE CATFISH PRODUCTION SYSTEMS
- 10:45 Carole Engle**, Ganesh Kumar, Jonathan van Senten
RESOURCE USE EFFICIENCY IN U.S. AQUACULTURE: FARM-LEVEL COMPARISONS ACROSS FISH SPECIES AND PRODUCTION SYSTEMS
- 11:00 Christian Brayden**, Carole Engle, Jonathan van Senten, Sebastian Belle, Science Crunchers
MAINE AQUACULTURE FINANCIAL BENCHMARKING AND RISK MANAGEMENT REPORTS – USING INFOGRAPHICS TO EXPAND REACH AND ENGAGEMENT
- 11:15 Andrew Ropicki**, Noah Boldt, Laura E. Smith, Sarah W. Hutchins, Matthew A. DiMaggio
COST ANALYSIS OF MARINE COPEPOD NAUPLII PRODUCTION AS A FIRST FOOD SOURCE FOR MARINE FINFISH LARVAE
- 11:30 Marissa Drake**, Shirley Baker, Cortney Ohs, Matthew DiMaggio, Andrew Ropicki
EVALUATION AND BUSINESS PLAN FOR PINFISH *Lagodon rhomboides* PRODUCTION UTILIZING A RECIRCULATING AQUACULTURE SYSTEM IN FLORIDA
- 11:45 Fernando H. Goncalves**, Jonathan van Senten, Michael H. Schwarz
CHARACTERIZATION OF THE VIRGINIA SEAFOOD SUPPLY CHAIN
- 12:00 Scott Borsum**, Robert Botta, Frank Asche, Edward Camp
OVERCOMING THE TRAGEDY OF THE OYSTER: A GLOBAL REVIEW ON PRODUCTION AND GOVERNANCE
- 12:15 Robert Botta**, Taryn Garlock, James Anderson, Frank Asche
AN ANALYSIS OF U.S. RESTAURANT MENUS TO DETERMINE THE IMPORTANCE OF PRODUCT ATTRIBUTES FOR FARMED OYSTERS
- 12:30 LUNCH**
- 1:30 Frank Asche**, Taryn Garlock, Edward Camp, Jordi Guillen, Ganesh Kumar, Ignacio Llorente, Gina Shamshak
MARKET OPPORTUNITIES FOR U.S. AQUACULTURE PRODUCERS: THE CASE OF BRANZINO
- 1:45 Kwamena Quagrainie**, Chinonso Etumnu, April Athnos, Simone Valle de Souza, Bill Knudson, Ron Kinnunen, Paul Hitchens
MEASURING CONSUMER WILLINGNESS-TO-PAY FOR LIVE SEAFOOD
- 2:00 Wyllys “Chip” Terry**
TIDE TO TABLE TRACEABILITY AND MARKETING: OUR EXPERIENCES BUILDING A TRACEABILITY SOLUTION WITH A NOAA GRANT
- 2:15 Pratheesh Sudhakaran**, ANISA ELIZONDO, MADAN DEY
DETERMINING INFLUENTIAL FACTORS IN CONSUMERS SEAFOOD PURCHASING DECISIONS
- 2:30 Afton Hupper**
THE MAINE OYSTER TRAIL
- 2:45 Yingkai Fang**, Frank Asche, Zhifeng Gao
CAN ECOLABEL CERTIFICATION FOR RESTAURANTS INFLUENCE CONSUMER CHOICES AWAY FROM HOME?
- 3:00 Pratheesh Sudhakaran**, Prasanna Surathkal, Madan Dey
DYNAMICS OF PRICE VOLATILITY SPILLOVER IN THE U. S. CATFISH MARKET

- 3:15 Richard Bryant**, Marcus Bernard
EXPANDING AQUACULTURE TO REDUCE ECONOMIC DISPARITIES AFFECTING MINORITY AND LIMITED-RESOURCE FARMERS
- 3:30 Kelly Winningham**, Thomas Laird, Benjamin Batten
NEW LIVE FISH TRADE REGULATIONS FOR THE STATE OF ARKANSAS
- 3:45 Abisola Akinyemi**, Bernadette Fregene, Bolarin Omonona
GENDER DIMENSION, ACCESS TO AND CONTROL OVER LAND RESOURCE AMONG AQUACULTURE MARKETERS IN SOUTHWESTERN NIGERIA
- 4:00 Babatunde Adeleke**, Deborah Robertson-Andersson, Gan Moodley, Simon Taylor
A QUANTITATIVE SWOT ANALYSES OF KEY AQUACULTURE PLAYERS IN AFRICA

IS THE NEXT REGULATION, THE BEST REGULATION?

Friday, August 13 8:30 AM - 4:30 PM Salon D

Chair: Paul Zajicek

- 8:30 Paul Zajicek**, National Aquaculture Association
FEDERAL AQUACULTURE REGULATIONS
- 8:45 Carole Engle**, Engle-Stone Aquatic\$, LLC
SETTING THE SCENE: WHAT FARM DATA REVEAL ABOUT PATHS FORWARD
- 9:15 Michelle L. Walsh**, Robert Jones, College of the Florida Keys
COMPARATIVE ANALYSIS OF U.S. AQUACULTURE MANAGEMENT TO THE FAO CERTIFICATION GUIDELINES: AN ASSESSMENT
- 9:45 Paul Zajicek**
ENGAGING WITH REGULATORY AGENCIES
- 10:00 BREAK**
- 10:30 Don Kent**, Hubbs-SeaWorld Research
NOAA AND NEPA: LIGHT AT THE END OF THE TUNNEL?
- 11:00 Dennis Peters**, Gulfstream Aquaculture, LLC
PERMITTING OFFSHORE AQUACULTURE IN FEDERAL WATERS - PERSISTENCE PREVAILS?
- 11:30 Sebastian Belle**, Maine Aquaculture Association
WHY TRADE ASSOCIATIONS MATTER
- 12:00 Robert M. Smith**, K&L Gates, LLP
DEVELOPING SUCCESSFUL PERMITTING STRATEGIES - A LEGAL PERSPECTIVE
- 12:30 LUNCH**
- 1:30 Nathan Stone**, Engle-Stone Aquatic\$, LLC
THE ROLE OF EXTENSION - WHAT CAN AND SHOULD BE THE ROLE
- 1:45 Noah C. Boldt**, Carole R. Engle, Jonathan van Senten, Eric J. Cassiano, Matthew A. DiMaggio, University of Florida, Tropical Aquaculture Laboratory
QUANTIFYING REGULATORY COSTS - AN OVERVIEW OF THE FLORIDA ORNAMENTAL INDUSTRY

- 2:15 Craig Watson**, University of Florida, Tropical Aquaculture Laboratory
UPDATE ON DRUG INDEXING
- 2:45 Geno Evans**, Evans Farms
LEGISLATIVE SUCCESS IN FLORIDA - 10+ YEARS TO SELL LARGEMOUTH BASS TO SEAFOOD MARKETS; 14+ YEARS TO AQUACULTURE IS AGRICULTURE
- 3:00 Bill Dewey**, Taylor Shellfish
PROGRAMMATIC PERMITTING PITFALLS: A HARD LESSON FOR WASHINGTON STATE'S SHELLFISH INDUSTRY
- 3:15 Jim Parsons**, Jamestown S'Klallam Tribe
COMMERCIAL AQUACULTURE HEALTH PROGRAM STANDARDS: A NON-REGULATORY APPROACH
- 3:45** AUDIENCE AND SPEAKERS Q&A

ZEBRAFISH

Friday, August 13 11:30 PM - 4:30 PM Room 3

Chairs: Bobbi Baur, Caitlin Coronel

Sponsored by Aquaneering

- 12:00 AUGUST THEN & NOW SEMINAR**
- 1:00 Bobbi Baur**
INTRODUCTION
- 1:05 Lauren Pandalfo**, Baylor College of Medicine
CUTTING EDGE CARE: REFINEMENTS IN ZEBRAFISH HEALTH REPORTING AND CASE MANAGEMENT AT BAYLOR COLLEGE OF MEDICINE
- 1:25 Khaled Nassar**
CHARACTERIZATION OF DENND5A/B DURING EARLY EMBRYONIC ZEBRAFISH DEVELOPMENT
- Luisa Villarreal**, Texas A&M
FUNCTIONAL STUDY OF DENND5A/B DURING EARLY EMBRYONIC ZEBRAFISH DEVELOPMENT
- 1:45 Calvin Javier**, Aquaneering
ASK A TECH
- 2:05 BREAK**
- 2:15 Christine Archer**, U Colorado Anschutz
HUSBANDRY ROUND TABLE SESSION
- 2:45 Yue Liu, Aquatic Germplasm and Genetic Resources Center**
OPEN HARDWARE TO FACILITATE DEVELOPMENT OF GERMLASM REPOSITORIES FOR AQUATIC BIOMEDICAL MODELS
- 3:05 Pudur Jagadeeswaran**, U North Texas
KNOCKDOWNS IN ADULT ZEBRAFISH
- 3:25 Eyad Shihabeddin**
REGENERATION OF ROD PHOTORECEPTOR NEURONS IN A ZEBRAFISH MODEL OF RETINITIS PIGMENTOSA

Anna Naglis, U Texas Houston TMC
TRANSCRIPTIONAL REMODELING OF MICROGLIA IN ZEBRAFISH RETINAL DEGENERATION AND REGENERATION

3:50 Group Discussion
RECEPTION AFTER

SHELLFISH AQUACULTURE

Friday, August 13 1:30 PM - 4:30 PM Room 1

Chair: Matt Grey

- 1:30 Eric Saillant**, Heather King, E Hu, Jason Stannard, Megan Gima, Scott Rikard, William Walton, Huiping Yang
PEDIGREE RECONSTRUCTION AND ESTIMATES OF GENETIC PARAMETERS FOR EARLY GROWTH TRAITS IN GULF OF MEXICO EASTERN OYSTER FAMILIES REARED COMMUNALLY
- 1:45 Ellis Chapman**, Bailey Schacht, Joe Fox
COMPARISON OF GROWTH AND MORTALITY OF THE EASTERN OYSTER *Crassostrea virginica* BY BROODSTOCK SOURCE, GEAR TYPE AND STOCKING DENSITY IN MATAGORDA BAY, TEXAS
- 2:00 Roberto Cabello**, Fariha Ahmad, Clarissa Garcia, Jack Summers, Kamal Sarkar, Joanne Rampersad
MECHANIZED OYSTER *Crassostrea virginica* SETTING USING THE SEA CRADLE
- 2:15 Matthew Gray**, Vyacheslav Lyubchich
SHELLFISH HATCHERY PRODUCTION ANALYSIS: A CASE STUDY AT HORN POINT LABORATORY OYSTER HATCHERY
- 2:30 John Scarpa**, Curtis Hemmel
SUBSTRATE PREFERENCE FOR SETTLEMENT OF PONDEROUS ARK *Noetia ponderosa* LARVAE
- 2:45 Olagoke Daramola**, Vishwamithra Sunkara, Megan Gima, Sanjib Sarkar, Christopher Webb, Gero Nootz
AUTOMATED BIOFOULING CONTROL OF AQUACULTURE OYSTER CAGES AND CROP
- 3:00 Benjamin Doshier**, Megan Gima, Anirban Ray, Egan Rowe, Wesley Weidemann, Jerrid Boyette, Bradley DeLeon, Laura Brown, Kelly Lucas, Leila Hamden
MICROBIAL COMMUNITY, STRUCTURE, AND FUNCTION IN A RECIRCULATING EASTERN OYSTER *Crassostrea virginica* HATCHERY PRODUCTION SYSTEM USING ARTIFICIAL SEA WATER
- 3:15 Michael Schwarz**, Christopher Bentley, Richard Snyder, Reza Ovissipour, Stephen Urick, Jonathan van Senten, Michael Congrove, Kasey Bond
DEVELOPMENT OF A RECIRCULATING AQUACULTURE SYSTEM FOR BIVALVE LARVAL CULTURE
- 3:30 Sarah Bodenstein**, Sandra M. Casas, Terrence R. Tiersch, Brian R. Callam, William C. Walton, Jerome F. LaPeyre
EFFECT OF COHORT ON PHYSIOLOGICAL PARAMETERS OF EASTERN OYSTERS *Crassostrea virginica* BRED AT SEPARATE HATCHERIES IN THE GULF OF MEXICO
- 3:45 Rachael Klose**
EVALUATION OF VARIOUS APPROACHES TO MANAGEMENT OF BIOFOULING OF OYSTER CAGES IN COPANO BAY, TEXAS

FRIDAY

ALTERNATIVE FEEDS

Friday, August 13 1:30 PM - 4:30 PM Salon A

Chair: Gibson Gaylord

- 1:30** **Scott Snyder**, Craig Browdy, Tim Markey
DEVELOPMENT OF IMPROVED COMMERCIAL FEEDS FOR RAINBOW TROUT *Oncorhynchus mykiss*.
A CASE STUDY ON BALANCING COST, PERFORMANCE, AND SUSTAINABILITY
- 1:45** **Emmanuel Villanueva-Gutierrez**, Martin Perez-Velazquez, Mayra L. González-Félix
PERFORMANCE OF JUVENILE TOTOABA *Totoaba macdonaldi* FED HYDROLYZED SOY PROTEIN AND
BLACK SOLDIER FLY *Hermetia illucens* LARVAE MEALS, IN PLACE OF DIETARY FISHMEAL
- 2:00** **Blaine Suehs**, Fernando Y. Yamamoto, Matthew Ellis, Michael E. Hume, Jeff K. Tomberlin,
Delbert M. Gatlin III
NUTRITIONAL VALUE OF BLACK SOLDIER FLY *Hermetia illucens* REARED IN TWO DIFFERENT
SUBSTRATES, AND THEIR EFFECT ON GROWTH PERFORMANCE, IMMUNE RESPONSES, AND
INTESTINAL MICROBIOTA WHEN PARTIALLY REPLACING FISHMEAL IN DIETS FOR JUVENILE RED
DRUM *Sciaenops ocellatus*
- 2:15** **Harsha Galkanda-Arachchige**, Aya Hussain, Allen Davis
EFFECTS OF FERMENTED CORN PROTEIN CONCENTRATE TO REPLACE FISHMEAL IN PRACTICAL
DIETS FOR PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 2:30** **Aya Hussain**, Silvio Peixoto, Roberta Soares, D. Allen Davis
NUTRITIONAL CONTRIBUTION OF FERMENTED SOYBEAN MEAL AS A FEED REPLACEMENT FOR THE
PACIFIC WHITE SHRIMP *Penaeus vannamei*
- 2:45** **Blaine Suehs**, Kelly Alfrey, Frederick Barrows, Delbert Gatlin III
EVALUATION OF GROWTH PERFORMANCE, CONDITION INDICES AND BODY COMPOSITION OF
JUVENILE RED DRUM *Sciaenops ocellatus* FED FISHMEAL- AND FISH OIL-FREE DIETS
- 3:00** **Bryan Candelaria**, Fernando Y. Yamamoto, Delbert M. Gatlin III
EVALUATING THE EFFECTS OF DIETARY COTTONSEED OIL ON GROWTH PERFORMANCE OF JUVENILE
RED DRUM *Sciaenops ocellatus* AND HYBRID STRIPED BASS *Morone chrysops* × *M. saxatilis*
- 3:15** **Carlos Maldonado-Othón**, Mayra L. González-Félix, Martin Perez-Velazquez
REPLACEMENT OF FISH OIL BY CAMELINA AND BLACK SOLDIER FLY LARVAE OILS IN DIETS FOR
JUVENILE TOTOABA *Totoaba macdonaldi*
- 3:30** **Jeremiah Minich**, Todd Michael
METAANALYSIS OF DUCKWEED AS AN ALTERNATIVE FEED FOR FINFISH AQUACULTURE

ACCUMULATED AQUACULTURE KNOWLEDGE AND WISDOM FROM OLD COOTS

Friday, August 13 1:30 PM - 4:30 PM Salon B

Chair: Bob Robinson

- 1:30 Kevin Fitzsimmons**, University of AZ
RECYCLING IDEAS: PROJECTS AHEAD OF THEIR TIME ARE NOW STATE OF THE ART
- 2:00 Bob Robinson**, Kasco Marine
IF I WOULD HAVE KNOWN THEN WHAT I KNOW NOW
- 2:30 Craig Watson**, University of Florida
THE THREE RULES
- 3:00 Sebastian Belle**, Maine Aquaculture Association
YOU AIN'T RANKED UNTIL YOU HAVE KILLED A MILLION: HOW TO EARN YOUR STRIPES IN AN UNFORGIVING FIELD
- 3:30 Mike Freeze**, Keo Fish Farm
HOW TO MAKE A SMALL FORTUNE IN FISH FARMING: START WITH A LARGE FORTUNE (ALL I THOUGHT I HAD TO DO WAS RAISE FISH)
- 4:00 Antonie Schuur**, Aquaculture Management Services
THE JOURNEY TO (ALMOST) RETIREMENT: WHAT A WILD RIDE IS HAS BEEN

SHRIMP PRODUCTION AND NUTRITION

Friday, August 13 1:30 PM - 4:30 PM Room 20

Chairs: Andrew Ray, Allen Davis

- 1:30 Harsha Galkanda-Arachchige**, Luke Roy, Allen Davis
MAGNESIUM OR MAGNESIUM TO CALCIUM RATIO? EFFECTS OF DIFFERENT LEVELS IN LOW SALINITY WATER ON GROWTH AND SURVIVAL OF PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 1:45 Shrijan Bajracharya**, Leo J. Fleckenstein, Jill C. Fisk, Nathan A. Kring, Andrew J. Ray
THE EFFECTS OF SYSTEM TYPE, SALT FORMULATION, AND SUGAR ADDITIONS ON PACIFIC WHITE SHRIMP *Litopenaeus vannamei* PRODUCTION, DIGESTIVE ENZYME ACTIVITY, AND DISSOLVED MINERAL COMPOSITION
- 2:00 Jack Crockett**, Richard Carpenter, Loc Tran, Josh Ison, Yang Sim Sih
EVALUATION OF POST LARVAL *Litopenaeus vannamei* HATCHERY PRODUCTION USING WATER QUALITY AND HEALTH STIMULATING PROBIOTICS
- 2:15 D. Allen Davis**, Alexis Weldon, Samuel Walsh, William Stites, Melanie Rhodes, Joao Reis
PASSIVE ACOUSTIC FEEDERS AS A TOOL TO ASSESS FEED RESPONSE AND GROWTH IN SHRIMP POND PRODUCTION
- 2:30 Claude E. Boyd**, Robert T. Davis, And Others
RESOURCE USE IN ECUADORIAN SHRIMP FARMING
- 2:45 Caleb Amacker**, Mark Smith, Brian Dorr, Luke Roy
AVIAN PREDATION ON LOW-SALINITY SHRIMP AQUACULTURE

FRIDAY

- 3:00 Nathan Kring**, Andrew Ray, Leo Fleckenstein
EFFECTS OF SALINITY AND WATER DEPTH ON PREFORMANCE OF *Litopenaeus vannamei* AND WATER QUALITY IN RAS
- 3:15 Alexis Weldon**, D. Allen Davis, Melanie Rhodes, Joao Reis, William Stites, Paulo Ito
FEED MANAGEMENT OF *Litopenaeus vannamei* IN A HIGH DENSITY BIOFLOC SYSTEM
- 3:30 Alexis Weldon**, D. Allen Davis, Melanie Rhodes, Joao Reis, William Stites, Samuel Walsh
USE OF METABOLICALLY MODIFIED CANOLA OIL AS A REPLACEMENT FOR FISH OIL IN PRACTICAL DIETS OF PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 3:45 Lukas Manomaitis**, Arunothai Keetanon, Niti Chucherd, Daranee Seguin, Rutchanee Chotikachinda, Chuchai Kanjanamayoon, Preecha Ektummasuit, Thayada Plyhirun
SOYBEAN MEAL USE IN SHRIMP FORMULATION IS NOT A CAUSE OF WHITE FECES DISEASE IN PACIFIC WHITE SHRIMP *Litopenaeus vannamei*

CONSERVATION AND RESTORATION AQUACULTURE

Friday, August 13 1:30 PM - 4:30 PM Salon C

Chair: Ann Gannam

- 1:30 Ryan Schloesser**, Paula Caldentey, Nathan Brennan, Kenneth Leber
TIMELY ESTIMATION OF POST-RELEASE SURVIVAL FOR HATCHERY-REARED JUVENILE FISHES: APPLICATION TO COMMON SNOOK *Centropomus undecimalis*
- 1:45 Eric E. Pedersen**
ENHANCEMENT STOCKING OF JUVENILE TOTOABA *Totoaba macdonaldi* IN THE GULF OF CALIFORNIA
- 2:00 Aaron Pilnick**, Keri O'Neil, Matthew DiMaggio, Joshua Patterson
DEVELOPMENT OF LARVICULTURE PROTOCOLS FOR REARING THE ECOLOGICALLY IMPORTANT LONG-SPINED SEA URCHIN *Diadema antillarum* WITHIN A NOVEL RECIRCULATING SYSTEM
- 2:15 Renee Angwin**, Brian Hentschel, Todd Anderson
ROE ENHANCEMENT OF THE PURPLE SEA URCHIN *Strongylocentrotus purpuratus* COLLECTED FROM BARREN GROUNDS AND FED PREPARED DIETS
- 2:30 Ashley Seagroves Ruppel**
FRESHWATER MUSSEL CONSERVATION AT THE SAN MARCOS AQUATIC RESOURCES CENTER IN TEXAS
- 2:45 Justin Crow**
THE ROLE OF AQUACULTURE IN THE CONSERVATION OF AMPHIBIANS AT THE SAN MARCOS AQUATIC RESOURCES CENTER, UNITED STATES FISH AND WILDLIFE SERVICE
- 3:00 Rose Upton**, Yue Liu, Jack Koch, M. Teresa Gutierrez-Wing, Terrence Tiersch
HOW CAN WE INTEGRATE GERMPLASM REPOSITORIES INTO THE CONSERVATION LANDSCAPE?
- 3:15 Odunayo Adetuyi**, Damilola Awoku, Basharu Taibat, Adewale Oladapo
THE MANAGEMENT OF ALDABRA MARINE PROTECTED AREA (MPA) OF REPUBLIC OF SEYCHELLES

SATURDAY, August 14

-OMICS APPROACHES

Saturday, August 14 8:30 AM - 12:30 PM Salon B

Chairs: Fabio Casu, Aaron Watson

- 8:30 Fabio Casu**, Dong-Fang Deng, Emma K. Kraco, Xing Lu, Lorena R. Mendoza, Brian Shepherd, Aaron Watson
EFFECTS OF POLYETHYLENE MICROPLASTIC-CONTAINING FEEDS ON THE METABOLITE PROFILES OF JUVENILE YELLOW PERCH *Perca flavescens*
- 8:45 Aaron Watson**, Fabio Casu, Kevin Kolmos
INITIAL ASSESSMENT OF NUCLEAR MAGNETIC RESONANCE-BASED METABOLOMICS AS A TOOL FOR THE IDENTIFICATION OF SKIP-SPAWNING BIOMARKERS
- 9:00 Adriana Artiles**, E Hu, Anu Frank-Lawale, Melissa Allen, Richard Towner, Salvador Gezan, John Buchanan
GENETIC OVERVIEW TO REVEAL HOW THE CAPTIVE POPULATION WAS, IS, AND SHOULD BE MANAGED
- 9:15 Ivonne Blandon**, Frances Gelwick, Robert Vega, Christopher Mace
TRANSCRIPTOMIC ANALYSIS OF PRE-METAMORPHIC SOUTHERN SOUTHERN FLOUNDER *Paralichthys lethostigma* LARVAE: APPLICATIONS FOR AQUACULTURE AND STOCK ENHANCEMENT
- 9:30 Jeremiah Minich**, Nolan Hartwick, Joseph Vechinski, Zack Skelton, Ben Frable, Rob Knight, Eric Allen, Todd Michael
COMPARATIVE GENOMICS AND MICROBIOMES OF A HIGH VALUE FISH, PACIFIC CHUB MACKEREL *Scomber japonicus*: A MODEL FOR MARINE FISH AQUACULTURE
- 10:00 BREAK**
- 11:00 Laura King**, Carlie S. Perricone, David J. Bradshaw, Nicholas J. Dickens, Paul S. Wills
USING COMPARATIVE GENOMICS TO ENHANCE THE AQUACULTURE OF THE FLORIDA POMPANO: COMPARING THREE *Trachinotus* SPECIES
- 11:15 John Buchanan**, Spencer Herbert, Takeshi Umazume, Xavier Lauth
MONOSEX AND STERILE FISH PRODUCED USING GENOME EDITING
- 11:30 Nour El Hussein**, Walaa Shaalan, Ali Ali, Rafet Al-Tobasei, Mohamed Salem
TRANSCRIPTOMIC ANALYSIS OF PROTEIN-CODING AND NON-CODING GENES OF STARVATION-INDUCED ATROPHIED MUSCLE IN NILE TILAPIA *Oreochromis niloticus*
- 11:45 Nour El Hussein**, Walaa Shaalan, Ali Ali, Rafet Al-Tobasei, Mohamed Salem
TRANSCRIPTOMIC ANALYSIS OF PROTEIN-CODING AND NON-CODING GENES OF STARVATION-INDUCED ATROPHIED MUSCLE IN NILE TILAPIA *Oreochromis niloticus*

CATFISH

Saturday, August 14 8:30 AM - 12:30 PM Room 3

Chairs: Luke Roy, Ian Butts

- 8:30 Ganesh Kumar**, David Wise, Menghe Li, Suja Aarattuthodiyil, Shraddha Hegde, Billy Rutland, Sean Pruitt, Matt Griffin, Lester Khoo
EFFECT OF UNDERSTOCKING DENSITY OF CHANNEL CATFISH FINGERLINGS IN INTENSIVELY AERATED MULTIPLE-BATCH PRODUCTION
- 8:45 Shraddha Hegde**, Ganesh Kumar, Carole Engle, Terry Hanson, Jonathan van Senten, Luke Roy
ECONOMIC IMPACT ASSESSMENT OF THE U.S. CATFISH INDUSTRY
- 9:00 Morgan Cheatham**, Shraddha Hegde, Ganesh Kumar, Carole Engle, Luke Roy, Terry Hanson, Jonathan van Senten
ADOPTION OF PRODUCTIVITY-ENHANCING TECHNOLOGIES IN THE U.S. CATFISH INDUSTRY
- 9:15 Jonathan van Senten**, Matthew A. Smith, Carole R. Engle, Ganesh Kumar, Michael H. Schwarz, Charles Clark, Shraddha Hegde, Shannon Fluharty
IMPACTS OF COVID-19 ON THE U.S. CATFISH AQUACULTURE INDUSTRY
- 9:30 Darshika U Hettiarachchi**, Veronica Alston, Jeremy Gurbatow, Vahid Zadmajid, Andrew Johnson, Jinhai Wang, Michael P. Coogan, De Xing, Shangjia Li, Ian A.E. Butts, Rex A. Dunham
EFFECT OF SEASONALITY FOR OPTIMIZATION OF STEM CELL EXTRACTION FROM MATURE BLUE CATFISH *Ictalurus furcatus* TO PRODUCE ALLOXENOGENIC CATFISH
- 9:45 Rex Dunham**, Darshika Hettiarachchi, Veronica Alston, Logan Bern, Shang Mei, Baofeng Su, Ian A. E. Butts
PROGRESS IN CATFISH XENOGENESIS
- 10:00 BREAK**
- 11:00 David Brune**, A.J. Aranguren, G. Schwartz, A. Eversole, T. Schwedler
CHANNEL CATFISH PRODUCTION IN THE PARTITIONED AQUACULTURE SYSTEM
- 11:15 Noah Limbaugh**, Nicholas Romano, Nathan Egnaw, Amit Sinha
WHAT MAKES CHANNEL CATFISH TO TOLERATE HIGH WATER HARDNESS: AN INSIGHT INTO TISSUE RE-MODELLING
- 11:30 Tairu Rabiou**, Odunayo Adetuyi, Taibat Basharu
TOXICITY EFFECTS OF SMOKED AND UNSMOKED CIGARETTE BUTTS LEACHATE ON AFRICAN CATFISH *Clarias gariepinus*
- 11:45 Rex Dunham**, Michael Coogan, Veronica Alston, Logan Bern, Baofeng Su
DIRECT AND PLEIOTROPIC EFFECTS OF GENE EDITING MYOSTATIN AND *mc4r* GENES IN CHANNEL CATFISH, *Ictalurus punctatus*
- 12:00 Rex Dunham**, Andrew Johnson, Baofeng Su
ANALYSES OF TEXTURE AND SENSORY TRAITS, CARCASS TRAITS, AND FILLET COLOR IN DIFFERENT GENETIC TYPES OF FARMED CATFISH: GENETIC APPROACHES TO ENHANCE CATFISH FILLETS

AQUAPONICS

Saturday, August 14 8:30 AM - 12:30 PM Salon D

Chair: Huy Tran

- 8:30 Matthew Recsetar**, Samantha Heyward, Stacy Tollefson
ENGINEERING OF A ZERO-DISCHARGE COUPLED AND DECOUPLED AQUAPONICS SYSTEM PROTOTYPE
- 8:45 Yu-Ting Chu**, Paul Brown
EVALUATION OF PACIFIC WHITELEG SHRIMP AND THREE HALOPHYTIC PLANTS IN MARINE AQUAPONIC SYSTEMS UNDER THREE SALINITIES
- 9:00 Allen Pattillo**, Wheeler Foshee, Jeremy Pickens, Daniel Wells, Terry Hanson
PERFORMANCE OF AQUACULTURE EFFLUENT FOR TOMATO PRODUCTION IN OUTDOOR RAISED BEDS
- 9:15 Emmanuel Ayipio**, Daniel E. Wells, Brendan Higgins, David Blersch, Alyssa McQuilling, Glenn Fain
FERTIGATION MANAGEMENT FOR SOILLESS CUCUMBER PRODUCTION USING AQUACULTURE EFFLUENT WITH AND WITHOUT SUPPLEMENTATION
- 9:30 Kyle Hensarling**, Daniel Wells
EFFECTS OF HYDROPONIC SYSTEM TYPE ON GROWTH AND NUTRIENT UPTAKE IN LETTUCE IRRIGATED WITH AQUACULTURE EFFLUENT
- 9:45 Jill Fisk**, Leo J. Fleckenstein, Andrew J. Ray
MUSTARD 'GREEN WAVE' *Brassica juncea* AND GARDEN ORACHE 'COPPER PLUME' *Atriplex hortensis* PERFORMANCE IN BRACKISH WATER AQUAPONICS
- 10:00 Victor Lobanov**
MAXIMIZING THE GREEN POTENTIAL OF AQUAPONICS THROUGH NUTRIENT MANAGEMENT
- 10:15 BREAK**
- 11:00 Andrew Lohman**, Janelle Hager, James Tidwell
EVALUATION OF LOW-COST LED LIGHTS AS THE SOLE SOURCE LIGHT FOR PRODUCTION OF BIBB LETTUCE *Lactuca sativa* var. *Capitate* IN INDOOR AQUAPONIC SYSTEMS USING NILE TILAPIA *Oreochromis niloticus*
- 11:15 George B. Brooks Jr.**
AQUAPONICS IN VICTORY GARDENS (AQUAPONICS VICTORY GARDEN). A SUSTAINABLE SOLUTION TO URBAN FOOD INSECURITY AND ECONOMIC INEQUITY, PROOF OF TEST CONCEPT RESULTS
- 11:30 George B. Brooks Jr.**
AQUAPONICS IN THE CITY OF PHOENIX, ARIZONA 2021 FUTURE OF FOOD INITIATIVE
- 11:45 Connor Tiersch**, Ron Malone
FAILURE TESTING THE MODIFIED DECOUPLED RECIRCULATING AQUACULTURE SYSTEM
- 12:00 Jillian Malecki**, Terry Hanson, Mollie Smith, Daniel Wells
NOMIC ANALYSIS OF A DECOUPLED TILAPIA *Oreochromis niloticus* - CUCUMBER *Cucumis sativus* AQUAPONIC SYSTEM
- 12:15 Kelly Izumi**, Karyna Izumi, Henrique Santana, Fellipy Chaves, Wilson Wasielesky Jr., Carlos Gaona, Luis Poersch
AQUAPONIC SYSTEM WITH *Macrobrachium rosenbergii* (DE MAN, 1984) AND *Lactuca sativa* L. IN DIFFERENTS RATIO: WATER QUALITY, NITROGEN COMPOSTS AND PERFORMANCE

RAS AND BIOFLOCS

Saturday, August 14 8:30 AM - 12:30 PM Salon A

Chairs: Paul Begue, John Stubblefield

- 8:30** **John Stubblefield**, Yonathan Zohar
RECIRCULATING AQUACULTURE SALMON NETWORK (RAS-N): EMPOWERING US LAND-BASED SALMON PRODUCTION
- 8:45** **John Davidson**, Marc Turano, Gareth Butterfield, Curtis Crouse, Natalie Redman, Christopher Good
COMMERCIAL DEVELOPMENT OF RAS-SPECIFIC DIETS: EVALUATING EFFECTS ON WATER QUALITY AND ATLANTIC SALMON *Salmo salar* PERFORMANCE
- 9:00** **Abhinav Choudhury**, Christine Lepine, Christopher Good
ANAEROBIC DIGESTION OF SLUDGE FROM RECIRCULATING AQUACULTURE SYSTEMS: IMPACT OF SOLIDS CONCENTRATION ON METHANE PRODUCTION
- 9:15** **Terence Barry**, Ramsey Kropp, David Kapsos, Sam Johnson, Casey Grimm, Kyle Woolever, Steven Summerfelt
A NOVEL ADVANCED OXIDATION TECHNOLOGY THAT RAPIDLY REMOVES GEOSMIN AND MIB FROM WATER AND SIGNIFICANTLY REDUCES ATLANTIC SALMON DEPURATION TIME
- 9:30** **James Flaherty**
OXYGEN DECISIONS IMPACTING RAS SUSTAINABILITY
- 9:45** **Ron Malone**, Connor Tiersch
CLEAR-WATER FIXED FILM CAROUSEL PRODUCTION OF MARINE SHRIMP
- 10:00** **BREAK**
- 11:00** **Mark Johannemann**, Leo Fleckenstein, Andrew Ray
THE EFFECTS OF CARBON/NITROGEN RATIO ON SUSPENDED GROWTH DENITRIFICATION IN REUSED BRACKISH AQUACULTURE WATER
- 11:15** **Nicholas Romano**, Hayden Fischer, Amit Sinha, Vikas Kumar
NUTRITIONAL CONTRIBUTION OF BIOFLOC TO BLUEGILL *Lepomis macrochirus* AND IMPORTANCE OF UNINTERRUPTED AERATION IN BIOFLOC SYSTEMS
- 11:30** **Leo Fleckenstein**, Mark Johannemann, Andrew Ray
EFFECT OF WOODCHIPS, BIO-BEADS, AND EXPANDED CLAY PELLETS ON DENITRIFICATION EFFICIENCY IN REUSED SHRIMP AQUACULTURE WATER

EDUCATION AND EXTENSION

Saturday, August 14 8:30 AM - 12:30 PM Salon C

Chairs: Forrest Wynne, Matt Smith, Ken Thompson

- 8:30** **Shraddha Hegde**, Ganesh Kumar
REGULATIONS IN THE U.S. AQUACULTURE: PERSPECTIVES FROM INLAND AQUACULTURE
- 8:45** **Kenneth Thompson**, Kirk Pomper, James Tidwell
ASSESSING THE EFFECTS OF AN AUTHENTIC PROJECT-BASED INTERVENTION ON SECONDARY STUDENTS' UNDERSTANDING OF ECOSYSTEMS AND THEIR ATTITUDES TOWARD AND INTERESTS IN STEM

- 9:00** **Mercy L. Pena M.**, Maira Cuellar, Laura Pastrana, Herbert Quintero
IMPLEMENTING DIDACTIC MATERIALS FOR TEACHING MEASURES OF CENTRAL TENDENCY IN THE CONTEXT OF AQUACULTURE
- 9:15** **David Cline**, D. Allen Pattillo
AQUACULTURE EDUCATION WEBINAR SERIES ADDS VALUE AND EXTENDS REACH
- 9:45** **M. Teresa Gutierrez-Wing**, Yue Liu, Jin-Woo Choi, W. Todd Monroe, Terrence R. Tiersch
LEVERAGING OPEN FABRICATION FOR COMMUNITY DEVELOPMENT AND AQUATIC GERMLASM CONSERVATION
- 10:00** **BREAK**
- 11:00** **Lance Beecher**, Kimberly Baker
PROMOTING SPINACH CONSUMPTION AND SUSTAINABLE AGRICULTURAL PRACTICES IN SCHOOL USING AQUAPONICS
- 11:15** **Luke A. Roy**, Anita M. Kelly, Terrill R. Hanson, Larry Dorman, Matthew A. Recsetar, Herbert E. Quintero
RESEARCH VERIFICATION IS EFFECTIVE AS A TOOL FOR EXTENSION PROGRAMS IN AQUACULTURE
- 11:30** **Forrest Wynne**
EVALUATING KENTUCKY EXTENSION AQUACULTURE AND FISHERIES CLIENT INFORMATION REQUESTS FROM 2017 - 2020
- 11:45** **Noel Novelo**, Boris Gomelsky, Marcus Bernard, Jeffrey Warner, Kristopher Grimes, Nilima Mishra
BUILDING A MULTIDISCIPLINARY PATHWAY TO TILAPIA AQUACULTURE DEVELOPMENT IN KENTUCKY

ORNAMENTALS

Saturday, August 14 8:30 AM - 12:30 PM Room 16

Chairs: Mick Walsh, Matt DiMaggio

- 8:30** **Uttam Deb**
THE UNITED STATES PERFORMANCE IN ORNAMENTAL FISH TRADE DURING THE COVID-19 PANDEMIC
- 8:45** **Noah Boldt**, Carole Engle, Jonathan van Senten, Eric Cassiano, Matthew DiMaggio
A REGULATORY IMPACT ASSESSMENT OF ORNAMENTAL AQUACULTURE FARMS IN FLORIDA
- 9:00** **Jessie Castanier**, Andrew Fields, John Scarpa, Simon Geist, David Portnoy
POTENTIAL SOURCE OF MARINE FISH FOR EXHIBITS AND CONSERVATION - IDENTIFICATION OF EGGS AND LARVAE AT THE TEXAS STATE AQUARIUM
- 9:15** **Kathryn McCord**, Cortney Ohs
FIRST SUCCESSFUL CAPTIVE SPAWNING AND LARVAL CULTURE OF THE COPPERBAND BUTTERFLYFISH *Chelmon rostratus*
- 9:30** **Martin Perez-Velazquez**, Mayra L. González-Félix, Hugo Cañedo-Orihuela
SOME ASPECTS OF THE REPRODUCTIVE BIOLOGY OF LIMBAUGH'S DAMSELFISH *Chromis limbaughi*, A POMACENTRID UNDER SPECIAL PROTECTION STATUS
- 9:45** **Casey Murray**, Amy L. Wood, Taylor N. Lipscomb, Quenton Tuckett, Joshua Patterson, Matthew A. DiMaggio
CHARACTERIZING THE DIGESTIVE ENZYME ONTOGENY AND GASTROINTESTINAL MORPHOLOGY TO INFORM LARVAL FEEDING PROTOCOLS FOR BLACKBANDED SUNFISH *Enneacanthus chaetodon*

BUSINESS TOOLS AND THE ECONOMICS OF SHELLFISH AQUACULTURE

Saturday, August 14 8:30 AM - 12:30 PM Room 1

Chairs: Rusty Grice, Matt Parker

- 8:30 Steven Richards**, Marzieh Motallebi
SURVEY CAPTURES SOUTH CAROLINA OYSTER CONSUMER PREFERENCES
- 8:45 Angee Doerr**, Gilbert Sylvia, John Moehl, Clint Bentz, Amy Ehrhart, Lisa Gaines, Michael Harte, Matthew Hawkyard, Megan Judge, Marc Rempel, Janine Salwasser
EXPANDING AQUACULTURE INVESTMENT IN OREGON USING A NOVEL GEOSPATIAL AND FINANCIAL PLANNING TOOL
- 9:00 Keith Butterfield**, Aaron Pannell
A SEMI-AUTOMATED OYSTER GROWING SYSTEM; ONE-MILLION LANDED OYSTERS PER WORKER YEAR PER AT A LOWER COST
- 9:15 Matt Gorstein**, Marzieh Motallebi, Rob Carey, Sam Cheplick, Graham Gaines, Steve Richards
SOUTH CAROLINA'S FIRST OYSTER MARICULTURE INDUSTRY OUTLOOK ASSESSMENT
- 9:45 Christian Brayden**, Sebastian Belle
MAINE AQUACULTURE BUSINESS PLANNING TOOLS
- 10:00 BREAK**
- 11:00 Russell Grice**
OYSTER AQUACULTURE WEB/PHONE APP FOR ENTERPRISE BUDGET DEMO
- 11:15 Carole Engle**, Jonathan van Senten, Matthew Parker, Donald Webster, Charles Clark
ECONOMIC TRADE-OFFS AND RISK BETWEEN TRADITIONAL BOTTOM AND CONTAINER CULTURE OF OYSTERS ON MARYLAND FARMS
- 11:30 Robert Smith**, Everard Ashworth, Brian Pendleton, Doug Bush, Linda Santschi, Ralph Imondi, Brooke Ashworth, Diane Windham, Scott Lindell, Blake Stok
NAVIGATING PERMITTING REQUIREMENTS FOR OFFSHORE SHELLFISH AQUACULTURE: CHALLENGES AND OPPORTUNITIES FACED BY THE VENTURA SHELLFISH ENTERPRISE PROJECT
- 11:45 Everard Ashworth**, Robert M. Smith, Brian Pendleton, Doug Bush, Linda Santschi, Ralph Imondi, Brooke Ashworth, Diane Windham, Blake Stok, Scott Lindell
VENTURA SHELLFISH ENTERPRISE: REALIZING OPPORTUNITIES FOR OFFSHORE AQUACULTURE IN CALIFORNIA

SATURDAY

AQUACULTURE 101

Saturday, August 14 8:30 AM - 12:30 PM Room 20

Chairs: Kathleen Hartman, Josh Patterson

- 8:30 Paul Zajicek**, National Aquaculture Association
HE AQUACULTURE BUG HAS BIT ME! NOW WHAT?
- 9:00 Josh Patterson**, University of Florida
FINDING A HOME FOR AQUACULTURE IN THE CORAL REEF CONSERVATION UNIVERSE
- 9:30 Amy Stone**, Aquatic Equipment and Design, Inc
CRITICAL QUESTIONS TO ASK WHEN BUILDING YOUR FARM
- 9:45 Bob Robinson**, Kasco Marine
AQUACULTURE 101
- 10:15 BREAK**
- 11:00 LaDon Swann**, Mississippi-Alabama Sea Grant Consortium
INDUSTRY RESEARCH, ENGAGEMENT, AND EDUCATION NEEDS
- 11:15 Casey Murray**, University of Florida, Tropical Aquaculture Laboratory
BASICS OF MARINE LARVICULTURE
- 11:45 Larry Lawson**, Clint Lloyd, Auburn University
LEARNING FROM STUDENTS: TEACHING THE NEXT GENERATION OF AQUACULTURISTS

SATURDAY

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FINFISH POSTERS

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IN-POND RACEWAY SYSTEM: PERFORMANCE AND PROFITABILITY
- 102** **Tyler Bianchine**, Scott Snyder, Craig Browdy, Susan Laramore, Paul Wills
EFFECTS OF HARD AND SOFT PELLETS IN CONJUNCTION WITH PELLET SIZE ON PRODUCTION CHARACTERISTICS OF FLORIDA POMPANO *Trachinotus carolinus*
- 103** **Nicole Verdile**, Rolando Pasquariello, Gloriana Cardinaletti, Tiziana AL Brevini, Emilio Tibaldi, Fulvio Gandolfi
TELOCYTES: A NOVEL PLAYER IN PRESERVING THE HOMEOSTASIS OF RAINBOW TROUT *Oncorhynchus mykiss* INTESTINAL MUCOSA
- 104** **Jasmine Iniguez**, Noel Novelo, Erika Wierman
DEVELOPMENT OF A SYSTEMATIC APPROACH TO DIAGNOSTIC ULTRASOUND IN NILE TILAPIA *Oreochromis niloticus*
- 105** **Hong Yao**, Hanping Wang, Paul O'Bryant, Dean Rapp
LARGE-SCALE PRODUCTION AND COMERCILIZATION OF MONOSEX YELLOW PERCH

HEALTH/DISEASE POSTERS

Board

- 110** **Tyler J. McKay**, Tifani R. Watson, Ashmita Poudel, Robert M. Durborow
DEVELOPING A CLINICAL DATABASE FOR FISH DISEASE PROFESSIONALS
- 111** **Elizabeth Robinson**, Julie Lively
REVITALIZING LOUISIANA'S SOFT SHELL CRAB INDUSTRY WITH EXTENSION AND RESEARCH ON THE TRANSMISSION OF *Callinectes sapidus* REOVIRUS 1 (CsRV1) AMONG BLUE CRABS
- 112** **Anita Kelly**, Luke Roy
TOOLS OF THE TRADE: USE OF A MOBILE LABORATORY FOR IDENTIFYING FISH DISEASES ON FARMS
- 113** **Andrew Lawrence**
THE MONITORING AND EVALUATION OF STOCK HEALTH AND WELFARE IN AQUACULTURE USING SUBMERSIBLE REMOTELY OPERATED VEHICLES
- 114** **Tifani Watson**
EVALUATING PREFERENCES FOR FISH DISEASE TREATMENT OPTIONS AND SUCCESS RATES AT KENTUCKY STATE UNIVERSITY FISH DISEASE DIAGNOSTIC LABORATORY

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- 120 Pouya Ebrahimi**, Reza Changizi, Shayan Ghobadi, Poulin Shohreh, Saber Vatandoust
EFFECT OF NANO-FE ON GROWTH PERFORMANCE AND IMMUNE FUNCTIONS OF STELLATE STURGEON *Acipenser stellatus*
- 121 Michelle Loftus**, Waldemar Rossi
EFFECTS OF SUPPLEMENTAL CARBOHYDRASE AND PROTEASE ENZYMES ON THE DIGESTIBILITY OF PLANT PROTEIN-BASED DIETS BY HYBRID STRIPED BASS *Morone chrysops* ♀ × *M. saxatilis* ♂
- 122 Sungchul Bai**, Moe Oo, Olumide Olowe, Ali Hamidoghli, Wonsuk Choi, Jinho Bae
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- 123 Fernando Yamamoto**, Blaine Suehs, Caitlin Older, Matthew Ellis, Paul Bowles, Michael Hume, Delbert Gatlin III
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- 124 Blaine A. Suehs**, Fernando Y. Yamamoto, Delbert M. Gatlin III
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- 125 Sungchul Bai**, Jinho Bae, Ali Hamidoghli, Wonsuk Choi, Ji Young Kim, Sera Choi
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