

AQUACULTURE AMERICA 2017



MONDAY, February 20

PLENARY

Monday, February 20 8:30 - 10:30 Salon C

8:30 Opening and Awards

9:00 Jonathan Van Senten

HOW TO MIX WATER AND ELECTRICITY: MUSINGS BY A MILLENNIAL

9:30 Sally Rockey

MEETING 2050 CHALLENGES THROUGH AGRICULTURE RESEARCH: INNOVATION AND COLLABORATION TO HELP FEED THE WORLD

9:55 Aoife Lyons

COMMUNICATION ACROSS GENERATIONS...IMPLICATIONS FOR SUSTAINABILITY

10:30 BREAK

STUDENT SPOTLIGHT

Monday, February 20 11:00 - 11:30 Room 13

11:30 LUNCH

ZEBRAFISH HUSBANDRY WORKSHOP

Monday, February 20 9:30 - 5:00 Room 1

Chair: Bobbi Baur

Attendees qualify for 10 CE Credits through AALAS –

Please sign in on the Attendance Sheet

MONDAY

FISH DISEASES – Michael Kent, Coordinator

9:30 **Sophie Sichel**
TRANSMISSIBLE INTESTINAL TUMORS AND LINKS TO A *Mycoplasma* sp.

9:45 **Chris Whipps**
MYCOBACTERIA STUDIES

10:00 **Katy Murray**
THYROID LESIONS AND IODINE DEFICIENCY

10:15 **Marcus Crim**
DISEASE TESTING

11:00 ZHA ANNUAL MEETING

LUNCH

2:00 **Mark Francis**
INTRODUCTION

Katy Murray
ZIRC UPDATE

Dante D'India
ZHA UPDATE & STEWARDSHIP AWARD

Susan Farmer
ZEBRAFISH HUSBANDRY TRAINING UPDATE

ZHA SPONSORED SESSION

2:45 **Stephen Frederickson**
THE EFFECT OF TWO FEEDING REGIMENS ON JUVENILE ZEBRAFISH *Danio rerio*

3:05 **Tami V. Sanchez**
ZEBRAFISH FACILITY MANAGEMENT: THE BENEFITS OF UNDERGRDUATE
STUDENT ASISTANCE

3:25 **Marc Gervais**
SPREADSHEETS DON'T LABEL TANKS AND TRACK STOCKS. WHAT CAN A
ZEBRAFISH DATA SYSTEM DO FOR YOU?

3:45 **Sonia Alvarado-Rica**
PROTOCOL FOR SMALL-SCALE PRODUCTION IN ZEBRAFISH EMBRYOS *Danio*
rerio FOR TOXICOLOGICAL SCREENING

4:05 **Carrie Carmichael**
THE IMPORTANCE OF ESTABLISHING A CRYOPRESERVATION PROGRAM IN THE
LABORATORY

4:25 **Ana Borges**
IMPLEMENTATION OF A ZEBRAFISH HEALTH PROGRAM CONTRIBUTES TO
BETTER HUSBANDRY PRACTICES: CASE-STUDY

AQUACULTURE IN A CHANGING ENVIRONMENT

Monday, February 20 1:00 - 2:15 Room 7

Chairs: Ian Bricknell, Joe McElwee

- 1:00 Nhu Nguyen**, Michael Choiniere, Brandon Lieberthal, Krish Thiagarajan
MOORING LOADS ON OYSTER CAGES IN A TIDAL ESTUARY
- 1:15 Adriane Michaelis**, Don Webster, L. Jen Shaffer
UNDERSTANDING PARTICIPATION IN MARYLAND OYSTER AQUACULTURE
- 1:30 Dave Conley**
AQUABOUNTY'S AQUADVANTAGE SALMON: CLIMATE-SMART AQUACULTURE
- 1:45 Brandon Lieberthal**, Kimberly Huguenard, Kyah Lucky
INTERACTIONS BETWEEN TIDES, CURRENTS, AND WATER QUALITY IN THE DAMARISCOTTA ESTUARY
- 2:00 Wei Xu**, Mackenzie Richards, Amy Mallozzi, Greer Darden, Reagan Errera, Ilyia Tietzel, John Supan
IMPACTS OF OCEAN ACIDIFICATION ON BACTERIAL COMMUNITIES IN COASTAL MICROBIAL BIOFILMS

FISH NUTRITION – ALTERNATIVE PROTEIN SOURCES

Monday, February 20 1:00 - 3:00 Salon D

Chair: Carl Webster

- 1:00 Stephanie F. Velasquez**, Merab Chan, Rhea Abisado, Rex Ferdinand Traifalgar, Melchor Tayamen, Gian Carlo Maliwat, Janice Ragaza
DIETARY SPIRULINA *Arthrospira platensis* REPLACEMENT ENHANCES PERFORMANCE OF POND- AND TANK-REARED JUVENILE NILE TILAPIA *Oreochromis niloticus*
- 1:15 Laura Gasco**, Achille Schiavone, Tommaso Mei, Marco Meneguz, Marta Gariglio, Christian Caimi, Andrea Dama, Manuela Renna, Sihem Dabbou, Enrico Bressan, Marco Montagnani, Alberto Prato, Alessio Bonaldo, Marino Prearo, Francesco Gai
EFFECTS OF BLACK SOLDIER FLY *Hermetia illucens* MEAL IN STURGEON *Acipenser baerii* JUVENILES FEEDS: PRELIMINARY RESULTS
- 1:30 Chelsea Walling**, Vikas Kumar, Waldemar Rossi, Leigh Anne Bright, James Tidwell
EVALUATION OF BLACK SOLDIER FLY *Hermetia illucens* LARVAE AS A FISH MEAL REPLACEMENT IN PRACTICAL DIETS FOR LARGEMOUTH BASS *Micropterus salmoides*
- 1:45 Constant Motte**, Jorge Dias
EFFECT OF GRADED LEVELS OF A DEFATTED INSECT MEAL FROM *Tenebrio molitor* LARVAE (YNSECT TMP-465) ON THE GROWTH PERFORMANCE AND NUTRIENT DIGESTIBILITY IN JUVENILE TROUT
- 2:00 Sehar Mughal**, Noor Khan, Farkhanda Manzoor, Ghazala Jabeen
COMPARISON OF SNAIL MEAL VERSUS FISH MEAL BASED DIETS ON THE GROWTH AND BODY COMPOSITION OF CATFISH *Pangasius hypophthalmus*
- 2:15 Fernando Yamamoto**, Waldemar Rossi Jr., Delbert Gatlin III
DIGESTIBILITY OF DRY-EXTRUDED SEAFOOD PROCESSED WASTED BLENDED WITH PLANT PROTEINS FOR RED DRUM *Sciaenops ocellatus*

- 2:30 Denise Skonberg**, Bouhee Kang, Angela Myracle
POTENTIAL FOR ISOELECTRIC SOLUBILIZATION/PRECIPIATION TO IMPROVE
NUTRITIONAL VALUE OF GREEN CRAB *Carcinus maenus* MEAL FOR AQUAFEDS
- 2:45 Sungchul C. Bai**, Jin-Hyeok Lee
A REVIEW OF MICRONUTRIENT REQUIREMENTS IN JUVENILE AND BROODSTOCK
JAPANESE EEL *Anguilla japonica*

FEDERAL TOWN HALL

Monday, February 20 1:00 - 3:00 Room 17

Chair: Jim Parsons

The Federal Town Hall provides an opportunity for direct dialogue between the aquaculture community and key federal aquaculture leaders and managers that are members of the Interagency Working Group on Aquaculture (IWG-A). The IWG-A serves as the federal interagency coordinating group to increase the overall effectiveness and productivity of federal aquaculture research, regulations, technology transfer, and assistance programs.

In addition to the opportunity to ask questions, a goal of this year's session will be to identify and define regulatory solutions that federal agencies and industry can partner together to resolve during 2017. The means to achieve this goal may include streamlining and coordinating federal permitting, creating regulatory modernization, eliminating regulatory gaps, or recommending federal-state regulatory approaches.

- 1:00 Gene Kim**
INTERAGENCY WORKING GROUP ON AQUACULTURE (IWG-A) AND USDA –
NATIONAL INSTITUTE OF FOOD AND AGRICULTURE (NIFA)
- 1:00 David Miko**
U.S. FISH AND WILDLIFE SERVICE (USFWS)
- 1:00 Michael Rubino**
NOAA – FISHERIES
- 1:00 Jennifer Matysczak**
FDA – CENTER FOR VETERINARY MEDICINE (CVM)
- 1:00 Kathleen Hartman**
USDA – ANIMAL AND PLANT HEALTH INSPECTION SERVICE (APHIS),
VETERINARY SERVICES
- 1:00 Bruce Boess**
USDA – NATIONAL AGRICULTURAL STATISTICS SERVICE (NASS)
- 1:30 Caird Rexroad**
USDA – AGRICULTURAL RESEARCH SERVICE (ARS)

AQUACULTURE SYSTEMS

Monday, February 20 1:00 - 4:00 Room 13

Chair: Ken Semmens

- 1:00 Alexander J. Sitek**, Todd Guerdat
CAPTURING A WASTED OPPORTUNITY: CHARACTERIZATION OF AQUACULTURE EFFLUENT AS A NUTRIENT SOURCE FOR HYDROPONICS
- 1:15 Qiong Zhou**, Dapeng Li, Xugang He, Congxin Xie
EFFECTS OF TWO DIFFERENT NUTRIENT SOURCES ON AQUATIC ENVIRONMENT AND C/N TROPHIC SHIFT IN GRASS CARP POLY-CULTURED POND
- 1:30 Dallas Flickinger**, Daniela Pimenta Dantas, Wagner C. Valenti
THE CARBON BUDGET AND ENERGY CONTENTS IN THE CULTURE OF THE AMAZON RIVER PRAWN AND TAMBAQUI FARMED IN MONOCULTURE AND IN INTEGRATED MULTITROPHIC SYSTEMS
- 1:45 Terry Hanson**, Jesse Chappell, Daniel Wells, David Blersch, Esau Arana, Erin Landers, Mary Catherine Rubisch
CAPTURE AND RE-USE OF FISH WASTES FROM IN-POND RACEWAYS
- 2:00 Bauer Duke**
OXYGEN DEPLETION IN A HIGH INTENSITY HYBRID CATFISH POND AFTER A POWER OUTAGE: HOW MUCH TIME IS TIME ENOUGH?
- 2:15 Kenneth J. Semmens**
INTENSIVE PRODUCTION OF YOY PADDLEFISH *Polyodon spathula*
- 2:30 Steve Amisah**, A.Y. Karikari, R. Asmah, N.W. Agbo
STATUS OF CAGE FISH FARMING ON THE LAKE VOLTA IN GHANA
- 2:45 S. Abbas Haghshenas**, Michael John Risk, Craig Down, Azadeh Razavi Arab
ECONOMIC, ENVIRONMENTAL AND SOCIAL BENEFITS OF IMTM IN THE PERSIAN GULF
- 3:00 Song Yang**, Yuan-Liang Duan, Jie Zhang, Jian Zhou, Ya Liu, Jun Du, Liu-lan Zhao, Zong-jun Zhou, Shuai-shuai Han
COMPARISONS OF INTESTINAL MICROBIOTA CHARACTERIZATIONS, IMMUNE ENZYME ACTIVITIES, AND MUSCLE AMINO ACID COMPOSITIONS OF LOACH CULTURED IN PADDY FIELDS AND PONDS
- 3:15 James Morris**, Barry King, Jack Rensel
OFFSHORE AQUACULTURE IN THE SOUTHERN CALIFORNIA BIGHT: AN ASSESSMENT OF AQUAMODEL PARAMETER SENSITIVITY AND FARM ENVIRONMENTAL PERFORMANCE
- 3:30 Rodrigo Sanchez Raccaro**
FROM THE IMPROVEMENT OF THE INSHORE FISH PRODUCTIONS TO THE AUTONOMOUS OFFSHORE FISH FARMING SHIPS
- 3:45 Young Dae Kim**, Mi Seon Park
A STUDY ON THE POLYCULTURE OF SEA SQUIRT *Halocynthia roretzi* AND SEA CUCUMBER *Apostichopus japonicus* UNDER A HANGING CULTURE SYSTEM

FUNDAMENTALS OF FLOATING BEAD FILTER TECHNOLOGY IN RECIRCULATING SYSTEMS

Monday, February 20 1:00 - 5:30 Room 5

Chairs: Tim Peiffer, Ron Malone

MONDAY

- 1:00 John A. Hargreaves**
FINDING THE PROPER PLACE FOR RECIRCULATING AQUACULTURE
- 1:30 Todd Guerdat**
THE FUNCTION AND USE OF GRANULAR FILTRATION IN RECIRCULATING
AQUACULTURE SYSTEMS: BASIC PRINCIPLES
- 2:00 James M. Ebeling, Chaz Shelton, Bill Shriver**
ENGINEERING DESIGN AND CONSTRUCTION OF A 10,000 SQ FT AQUAPONIC
GREENHOUSE, MERCHANT'S GARDEN
- 2:30 Ron Malone**
SIZING AND DESIGN OF LOW LIFT AIRLIFTS FOR RAS APPLICATIONS
- 3:00 Rhine Perrin, Ronald Malone**
SIZING OF A FLOATING BEAD BIOCLARIFIER
- 3:30 Timothy Pfeiffer, Ronald F. Malone, Rhine Perrin**
BIOFILTRATION CAPACITY OF A MOVING BED BIOREACTOR IN SEQUENCE WITH A
SUBMERGED FLOATING BEAD BIOCLARIFIER – APPLICATION IN RECIRCULATING
AQUACULTURE SYSTEMS
- 3:45 Ronald Malone**
IMPROVED PNEUMATIC SLUDGE HANDLING IN POLYGEYSER FLOATING BEAD
FILTERS
- 4:00 Reginald Blaylock, Angelos Apeitos, Alexander Schesny**
BEAD FILTER APPLICATIONS IN MARINE AQUACULTURE AT THE UNIVERSITY OF
SOUTHERN MISSISSIPPI
- 4:15 Paul S. Wills, Richard Baptiste, Timothy J. Pfeiffer**
APPLICATION OF BEAD FILTER TECHNOLOGY AT A MARINE WARMWATER
AQUACULTURE RESEARCH FACILITY
- 4:30 C.R. Weirich, M.H. Schwarz, K.L. Hudson, A.E. Wilbur, D.D. Kuhn, D.S. Cerino**
APPLICATION OF RECIRCULATING TECHNOLOGIES TO MARINE AQUACULTURE
SYSTEMS: AN OVERVIEW
- 4:45 Craig Watson**
USE OF BEAD FILTERS IN ORNAMENTAL AQUACULTURE
- 5:00 Burt Nichols, Ron Malone**
TREATMENT OF KOI PONDS WITH A FLOATING BEAD FILTER AND ULTRAVIOLET
LIGHT COMBINATION
- 5:15 John Zevgolis**
ECONOMIC CONSIDERATIONS FOR GROWING HYBRID STRIPED BASS IN
RECIRCULATING SYSTEMS AT COMMERCIAL SCALE; PLANNING INPUT /
OUTPUT, GROWTH, FINANCIAL, OPERATIONAL AND INVESTOR IMPLICATIONS

BIOFLOC / INTENSIVE SYSTEMS

Monday, February 20 1:00 - 3:30 Salon B

Chair: Andrew Ray

- 1:00 Bartholomew Green**, Steven Rawles, Matthew McEntire
PRODUCTION OF HYBRID STRIPED BASS STOCKERS IN A BIOFLOC SYSTEM
- 1:15 Andrew Ray**, Leo Fleckenstein, John Barksdale, Adam Cecil, Nathan Kring
INTEGRATING BIOFLOC SYSTEMS WITH ORGANIC PLANT PRODUCTION AND RENEWABLE ENERGY AT KSU'S HIGH TUNNEL COMPLEX
- 1:30 John Bailey Barksdale**, Leo Fleckenstein, Andrew Ray
THE EFFECTS OF SUPPLEMENTARY LED LIGHTS ON THE FUNCTION OF BIOFLOC SYSTEMS AND GROWTH OF TILAPIA
- 1:45 Leo Fleckenstein**, John Bailey O. Barksdale, Andrew J. Ray
TILAPIA *Oreochromis niloticus* PERFORMANCE IN CLEAR-WATER RAS, BIOFLOC, AND HYBRID NURSERY SYSTEMS
- 2:00 Yoram Avnimelech**, Hanoch Glasner
EFFECT OF BIOFLOCS ON INFECTION OF TILAPIA FINGERLINGS BY PARASITES
- 2:15 Misael Rosales**, Addison Lawrence, Delbert Gatlin
FEED AND WATER ADDITIVES FOR SHRIMP CULTURE USING BIOFLOC TECHNOLOGY: CURRENT STATUS OF KNOWLEDGE AND FUTURE CHALLENGES
- 2:30 Misael Rosales**, Jonathan Holt, Michael Hume, Addison Lawrence, Delbert Gatlin
PREBIOTIC EFFECTS ON MICROBIOTA OF *Litopenaeus vannamei* AND BIOFLOC, AS WELL AS WATER QUALITY IN A REDUCED H₂O EXCHANGE SYSTEM
- 2:45 Thomas Tierney**, Andrew J. Ray
A COMPARISON OF BIOFLOC, CLEAR-WATER, AND HYBRID CULTURE SYSTEMS FOR INTENSIVE SHRIMP *Litopenaeus vannamei* NURSERY PRODUCTION
- 3:00 Tzachi Samocha**, David Prangnell, Terrill Hanson, Granvil Treece, Leandro Castro, Timothy Morris, Nick Staresinic
DESIGN AND OPERATION OF INDOOR, SUPER-INTENSIVE, BIOFLOC-DOMINATED SYSTEMS FOR THE PRODUCTION OF PACIFIC WHITE SHRIMP: THE TEXAS A&M AGRILIFE RESEARCH EXPERIENCE

CATFISH / HYBRIDS

Monday, February 20 1:00 - 4:30 Salon A

Chair: Jimmy Avery

- 1:00 Jimmy Avery**
STATUS OF THE U.S. FARM-RAISED CATFISH INDUSTRY
- 1:15 Craig S. Tucker**, Charles C. Mischke, Travis W. Brown, Eugene L. Torrans
WATER QUALITY IN CATFISH PONDS AFTER PARTIAL FISH HARVEST
- 1:30 James Schwartz**, Waldemar Rossi Jr., James H. Tidwell, Vikas Kumar
EVALUATION OF FISHMEAL-FREE, SOYBEAN MEAL-BASED DIETS IN HYBRID CATFISH *Ictalurus punctatus* × *I. furcatus*

- 1:45 Dalton Robinson**, David Drescher, William Bugg, Kamal Gosh, Nathan Backenstose, Nagaraj Chatakondi, Terry Hanson, Rex Dunham
EFFECT OF GENETICS ON BODY WEIGHT VARIABILITY IN CHANNEL CATFISH
Ictalurus punctatus FEMALE × BLUE CATFISH *I. furcatus* HYBRIDS
- 2:00 Les Torrans**, Brian Ott
EFFECT OF GRADED FINGERLINGS ON HYBRID CATFISH FOOD FISH SIZE DISTRIBUTION
- 2:15 Charles C. Mischke**, Travis W. Brown, Craig S. Tucker, E. Les Torrans
REDUCING SIZE VARIATION IN HYBRID CATFISH CULTURE THROUGH GRADED PARTIAL HARVEST
- 2:30 Bauer Duke**
HYBRID CATFISH *Ictalurus punctatus* × *Ictalurus furcatus* RAISED AT HIGH DENSITY WITH INTENSIVE AERATION IN A TRADITIONAL CLAY-BOTTOM CATFISH POND
- 2:45 Fernando Kubitza**, Jesse Chappell, Terry Hanson
CATFISH PRODUCTION IN FLOATING RACEWAYS
- 3:00 Nagaraj Chatakondi**, James Rodgers
EVALUATION OF PORTABLE NEAR INFRARED SPECTROPHOTOMETER TO STAGE MATURITY IN CHANNEL CATFISH
- 3:15 Nagaraj Chatakondi**, Carl Jeffers
EFFECTS OF CALCIUM AND MAGNESIUM HARDNESS ON THE FERTILIZATION AND HATCHING SUCCESS OF HYBRID CATFISH EGGS
- 3:30 Heather Stewart**, Brian C. Peterson, Mark A. Arick II, Kurt Showmaker, Peter J. Allen
UNDERSTANDING THE EFFECTS OF STRAIN SELECTION AND HYBRIDIZATION OF CHANNEL CATFISH *Ictalurus punctatus* ON ENVIRONMENTAL GENE RESPONSE
- 3:45 Ramjie Odin**, Khoi Vo, Dalton Robinson, David Drescher, Kamal Gosh, William Bugg, Rex Dunham
GENERAL AND SPECIFIC COMBINING ABILITY OF CHANNEL CATFISH *Ictalurus punctatus* FEMALE × BLUE CATFISH *I. furcatus* MALE FOR EARLY PERFORMANCE TRAITS OF F1 HYBRID PROGENY
- 4:00 Ganesh Karunakaran**, David Wise, Terrence Greenway, Todd Byars, Matt Griffin, Lester Khoo, Suja Aarattuthodiyil
ECONOMIC EVALUATION OF ORAL ESC VACCINATION

FISH GENETICS AND GENOMICS

Monday, February 20 1:00 - 5:00 Room 11

Chair: Eric Saillant

- 1:00 Nermeen Abass**, Rex Dunham
SEX EFFECTS ON GROWTH RESPONSE TO GROWTH HORMONE (GH) INSERTION FOR TWO GH CONSTRUCTS IN CHANNEL CATFISH *Ictalurus punctatus* AT TWO AGES
- 1:15 Thomas A. Delomas**, Konrad Dabrowski
GYNOGENESIS IN ZEBRAFISH RESULTS IN ALL MALE PROGENIES
- 1:30 Zhigang Shen**, Han-Ping Wang
LARGE-SCALE MONO-SEX PRODUCTION IN FISH
- 1:45 Terrence Tiersch**, J. Michael Christensen
DEVELOPMENT OF AN AQUATIC GERMLASM AND GENETIC RESOURCES CENTER
- 2:00 Aleksandra Krasilnikova**, Elena N. Ponomareva, Andrey M. Tikhomirov, Angelina V. Firsova
CRYOPRESERVATION OF REPRODUCTIVE CELLS OF FISH: THE DEVELOPMENT OF RESEARCHERS OF SOUTH OF RUSSIA
- 2:15 Christopher M. Merkes**, Craig A. Jackson, Richard A. Erickson, Jon J. Amberg
A PORTABLE DNA TEST TO RAPIDLY DETECT INVASIVE SPECIES IN TRANSPORTED FISH
- 2:30 Eric Saillant**, Adrienne Norrell, America Fujimoto, Jason Stannard
DEVELOPMENT OF A HIGH THROUGHOUT SINGLE NUCLEOTIDE POLYMORPHISM ASSAY FOR GENETIC MONITORING OF RED SNAPPER AQUACULTURE AND STOCK ENHANCEMENT
- 2:45 Zhi-Gang Shen**, Han-Ping Wang, Hong Yao, Liang Guo, Xiao-Xia Li
5S rRNA PROFILING AND APPLICATION IN IDENTIFICATION OF SEX AND OVARIAN DEVELOPMENT STAGE IN TELEOSTS
- 3:00 Tetsuzan Ron**, David Haymer, Gulab Khedkar
COI GENE SEQUENCE METHOD HELPS AQUACULTURE FARMERS AND THEIR CUSTOMERS
- 3:15 Nour Salam**, Kenneth Jones, Eric Saillant
DEVELOPMENT OF GENOMIC RESOURCES FOR THE SPOTTED SEATROUT *Cynoscion nebulosus*
- 3:30 Han-Ping Wang**, Zhi-Gang Shen, Hong Yao, Paul O'Bryant, Dean Rapp
GENOMIC REGULATION AND EPIGENOMIC MODIFICATION OF SEXUAL SIZE DIMORPHISM IN FISH
- 3:45 Zexia Gao**, Weimin Wang, Shiming Wan, Weizhuo Zhang, Chunhong Nie
DEVELOPMENT OF INTERMUSCULAR BONE IN TELEOSTS
- 4:00 Jason Evenhuis**, Timothy Leeds, Yniv Palti, Roger Vallejo, Guangtu Gao, Greg Wiens, Kyle Martin, James Parsons
GENOMIC SELECTION EXPLOITS WITHIN-FAMILY GENETIC VARIATION FOR DISEASE RESISTANCE IN RAINBOW TROUT
- 4:15 Louis Landesman**, John W. Cross
DUCKWEED AS A PLATFORM FOR THE PRODUCTION OF VALUABLE PHARMACEUTICALS: THE STORY OF BIOLEX THERAPEUTICS

MONDAY

WATER QUALITY

Monday, February 20 1:00 - 3:30 Salon C

Chairs: Lauren Jescovitch, James Mazzola

MONDAY

- 1:00 Claude E. Boyd**
QUALITY CONTROL IN AQUACULTURE WATER ANALYSES
- 1:15 Shamim Naigaga**, Claude Boyd, Philippe Gaillard, Hisham Abdelrahman
ASSESSING THE RELIABILITY OF WATER TEST KITS FOR USE IN POND
AQUACULTURE
- 1:30 Marcelo Mattos Pedreira**, Claude E. Boyd, Idalmo G. Santos, Marianne Schorer,
Afonso Pelli, Talita A. Ferreira, Stella I.R. Lobato, André L. Ferreira,
Maria P. Nascimento, Maíra S.A. Rocha
CALCIUM SILICATE AS LIMING MATERIAL FRONT OF THE TRADITIONAL
LIMESTONES
- 1:45 Hisham Abdelrahman**, Claude Boyd
EFFECTS OF CLAY AND PHYTOPLANKTON TURBIDITY ON THERMAL
STRATIFICATION IN SHALLOW AQUACULTURE PONDS
- 2:00 Lauren N. Jescovitch**, Carter Ullman, Melanie Rhodes, D. Allen Davis,
Claude E. Boyd
WATER QUALITY AMONG DIFFERENT FEED MANAGEMENT TREATMENTS FOR
PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 2:15 Bryan Norris**, Robert Vega, Joe Fox, Anthony Siccardi
EFFECTS OF pH AND SALINITY ON JUVENILE HATCHERY-REARED RED DRUM
Sciaenops ocellatus
- 2:30 Michael Matthews**, David Prangnell, Hugh Glenewinkel
THE SENSITIVITY OF SWIM-UP GUADALUPE BASS *Micropterus treculii* FRY TO
HYPEROXIA
- 2:45 Lauren Jescovitch**, Claude E. Boyd
EFFECTS OF AERATION ON WATER QUALITY IN WASTE-TREATMENT SECTIONS
OF SPLIT-POND AQUACULTURE, A THREE YEAR SYNOPSIS
- 3:00 Anita Kelly**, Julieann Jacobs, Luke Roy
SULFUR-OXIDIZING BACTERIA AS A POTENTIAL METHOD TO IMPROVE WATER
QUALITY IN AQUACULTURE PONDS
- 3:15 Hisham Abdelrahman**, Karen L. Veverica
THE PERFORMANCE OF NEW AIRLIFT AERATORS AT DIFFERENT SALINITIES,
USING DIFFERENT BLOWER POWERS

GETTING PUBLISHED, FROM RESEARCH DESIGN TO WRITING: ADVICE FROM EXPERTS

Monday, February 20 1:00 - 5:00 Room 12

Chair: Carole Engle

- 1:00 Carole R. Engle**
INTRODUCTION
- 1:15 Lou D'Abramo**
WHY YOU SHOULD TAKE THE TIME TO CONTRIBUTE QUALITY REVIEWS TO
PEER-REVIEWED JOURNALS
- 1:30 Meghan Rasmussen**
PREPARING YOUR MANUSCRIPT TO MAXIMIZE CHANCES FOR ACCEPTANCE
- 2:00 Rosie Trice**
THE PEER REVIEW PROCESS, ETHICS, AND MAXIMIZING YOUR ARTICLE'S IMPACT
- 2:30 Craig Tucker**
HOW TO WRITE A BAD PAPER: ADVICE FROM A NOTED EXPERT
- 3:00 D. Allen Davis**
NUTRITION
- 3:15 Geoff Waldbeiser**
GENETICS
- 3:30 Frank Asche**
ECONOMICS AND MARKETING
- 3:45 Q&A SESSION WITH SPEAKERS**

GENERAL CONTRIBUTED

Monday, February 20 2:30 - 3:45 Room 7

Chair: Tina Crosby

- 2:30 Gary J. Burtle, Claude Reeves**
AQUACULTURE DEMONSTRATIONS IN A FARM PROGRESS SHOW FORMAT:
UPDATE ON THE FISH POND AREA AT THE SUNBELT AGRICULTURAL EXPOSITION
- 2:45 Larry Feinberg**
A UNIQUE PROTEIN PLATFORM TECHNOLOGY TO MEET THE NEEDS OF
AQUACULTURE
- 3:00 Louis Landesman**
INDONESIA DUCKWEED PROJECT
- 3:15 Zhilong Liu, Kimberly Huguenard**
QUANTIFICATION OF AQUACULTURE FARM DRAG BASED ON THE MOMENTUM
SINK METHOD
- 3:30 Praveen Sappati, Emily Duran-Frontera, Balunkeswar Nayak, Peter VanWalsum**
EFFECT OF DRYING TEMPERATURE, HUMIDITY AND TIME ON THE PHYSICO-
CHEMICAL PROPERTIES OF SUGAR KELP *Saccharina latissima*

FISH NUTRITION – NUTRIENT REQUIREMENTS

Monday, February 20 3:30 - 5:00 Salon D

Chair: Carl Webster

MONDAY

- 3:30 Ken Webb**, Lee Fuiman
GENE EXPRESSION AND LIPID PROFILE OF RED DRUM *Sciaenops ocellatus* EGGS THAT DEMONSTRATE METABOLIC PROGRAMMING
- 3:45 Aaron Watson**, Dan Bearden, Fabio Casu, Justin Yost, Michael Denson
A COMPARISON OF METABOLITE PROFILES OF NATURAL FEED ITEMS AND SUBSEQUENT TISSUE PROFILES IN JUVENILE RED DRUM *Sciaenops ocellatus*
- 4:00 Sergio Castillo**, Delbert M. Gatlin III
DIETARY LEUCINE AND ISOLEUCINE REQUIREMENTS OF RED DRUM *Sciaenops ocellatus* AND THE EFFECTS OF EXCESS LEUCINE ON BRANCHED-CHAIN AMINO ACIDS UTILIZATION
- 4:15 Brittany M. Woodward**, Waldemar Rossi Jr., Vikas Kumar
REASSESSING THE LYSINE REQUIREMENT OF JUVENILE LARGEMOUTH BASS *Micropterus salmoides*
- 4:30 Biswamitra Patro**, Madison S. Powell, Ronald W. Hardy
DIETARY LYSINE REQUIREMENT OF JUVENILE SNAKE RIVER CUTTHROAT TROUT

CAHPS

Monday, February 20 3:15 - 5:00 Room 17

Chair: Kathleen Hartman

- 3:15 Kathleen Hartman**
CAHPS OVER THE LAST YEAR
- 3:45 Lori Gustafson**
COST-BENEFIT ANALYSIS OF COMMERCIAL AQUACULTURE HEALTH PROGRAM STANDARDS (CAHPS) PILOT PROJECTS
- 4:15 Kathleen Hartman**
IMPLEMENTING CAHPS

URBAN AQUACULTURE

Monday, February 20 3:45 - 5:15 Room 7

Chairs: Bauer Duke, Salma Sultana

- 3:45 Tayyaba Sultana**, Tauseef Ullah, Salma Sultana, Shahid Mahboob
HISTOPATHOLOGY UNVEILING THE TEXTILE INDUSTRY EFFLUENTS TOXICITY IN DIFFERENT FISH ORGANS IN SELECTED FISH SPECIE
- 4:00 Salma Sultana**, Amber Anwar, Tayyaba Sultana, Shahid Mahboob
STRESS INDUCED FISH HEAMATOLOGY: A POLLUTION ASSESSMENT TOOL FOR AQUATIC TOXICOLOGY

- 4:15 T. James Akaahan**, Joel Odo
STRUCTURAL DEFORMATION IN THE KIDNEY AND LIVER OF *Clarias gariepinus* JUVENILES EXPOSED TO GRADED CONCENTRATION OF ZINC
- 4:30 Gennady G. Matishov**, Elena Ponomareva
THE MAIN DIRECTIONS OF DEVELOPMENT OF AQUACULTURE IN DIFFERENT REGIONS OF RUSSIA
- 4:45 Kenneth J. Semmens**, Rafael Cuevas Uribe
INTEGRATING AQUACULTURE AND WATER REUSE FOR DECOMMISSIONED WASTEWATER TREATMENT FACILITIES IN LONDON, KENTUCKY
- 5:00 Muruganandam Muthiah**
WATER HARVESTING AND FISH FARMING IN INDIA

TUESDAY

TUESDAY, February 21

SHELLFISH AQUACULTURE: SITING AND PERMITTING, LAND USE PLANNING AND RELATED CONFLICTS

Tuesday, February 21 8:30 - 10:00 Room 5

Chair: Stephanie Otts

- 8:30 Alexandra Chase**
LOCAL GOVERNMENT PLANNING AND ZONING AUTHORITY: ADDRESSING LAND USE CONFLICTS AND SHELLFISH OPERATIONS
- 8:50 Elizabeth Andrews**
AQUACULTURE IN WATERFRONT COMMUNITIES: POTENTIALLY CONFLICTING USES
- 9:10 Read Porter**
CREATING A SPATIALLY DEFINED TOOL FOR MARINE SHELLFISH AQUACULTURE SITING AND PERMITTING
- 9:30 PANEL Q&A**

FISHERIES

Tuesday, February 21 8:30 - 11:30 Room 12

Chair: Anita Kelly

- 8:30 Candis Ray**, Cova Arias
ANALYSIS OF THE SKIN AND GUT MICROBIOMES OF WILD-CAUGHT FISHES FROM LAKE GUNTERSVILLE, ALABAMA
- 8:45 Shahid Mahboob Rana**, Bilal Hussain, Tayyaba Sultana, Salma Sultana, Khalid Al-Ghanim
STUDY ON EFFECT OF POLLUTION ON GENOTOXIC DAMAGE IN *Cirrhinus mrigala* AND *Catla catla* FROM RIVER CHENAB

- 9:00 Festus Adeosun**, Tunde Omoniyi, Yemi Akegbejo-Samsons, Olusegun Alegbeleye
FISH SPECIES COMPOSITION, DISTRIBUTION AND ABUNDANCE AND GILLNET FISHERIES IN IKERE GORGE, NIGERIA
- 9:45 Baba Usman Ibrahim**
ATLAS OF FISHERIES, FISH CRAFT AND FISHING GEARS OF SOME SELECTED WATER BODIES IN NORTHERN NIGERIA
- 10:00 BREAK**
- 10:30 Adeolu Akinyemi**, Olufemi Oyelakin, Rasak Oloyede
GENE SEQUENCING AND SENSITIVITY OF BACTERIA IN *Tilapia zilli* FROM IJAKA-OKE LOCATION ON YEWA RIVER
- 10:45 Baba Usman Ibrahim**
LENGTH-WEIGHT RELATIONSHIP OF *Hepsetus odoe* IN LAPAI-AGAIE RESERVOIR, NIGER STATE, NIGERIA
- 11:00 Joshua Babatunde Ogunremi**, Olalekan Jacob Olaoye, Abudullahi Dauda Kida
INFORMATION SOURCES AND ACCESSIBILITY AMONG FISHER FOLKS IN ESE-ODO AND ILAJE LOCAL GOVERNMENT AREAS OF ONDO STATE, NIGERIA
- 11:15 Amita Saxena**
SKIN PIGMENTS IN ORNAMENTAL FISHES

LACEY ACT: INJURIOUS WILDLIFE AND WILDLIFE TRAFFICKING PROVISIONS

Tuesday, February 21 8:30 - 11:00 Salon B

Chair: Craig Watson

- 8:30 David Miko**
INJURIOUS WILDLIFE PROVISIONS OF THE LACEY ACT: CLARIFICATION OF TITLE 18, IW PROHIBITIONS, LISTING PROCESS INCLUDING ROLES OF PETITIONS, AND WHAT TAXA ARE LISTED
- 9:00 Craig Martin**
CHARACTERIZING RISK, EVALUATING RISK MANAGEMENT, INJURIOUS WILDLIFE LISTINGS, AND WORKING WITH PARTNERS AND STAKEHOLDERS
- 9:30 Byron Landry**
LAW ENFORCEMENT: INSPECTION AND IMPORT/EXPORT, LACEY ACT TITLES 18 AND 16, AND FALSE LABELING/REPORTING
- 10:00 PANEL Q&A**

ORNAMENTALS

Tuesday, February 21 8:30 - 12:30 Room 11
Chairs: Matt DiMaggio, Michael Schwarz, Andrew Rhyne

- 8:30 Matthew DiMaggio**, Eric Cassiano, Kevin Barden, Shane Ramee, Cortney Ohs, Craig Watson
RECENT ADVANCES IN THE CULTURE OF THE PACIFIC BLUE TANG *Paracanthurus hepatus*
- 8:45 Cortney Ohs**, Isaac Lee, Jason Broach, Matthew DiMaggio, Craig Watson
DETERMINING PREY PREFERENCE OF FIRST FEEDING MARINE ORNAMENTAL FISH LARVAE UTILIZING FLUORESCENT MICROSPHERES
- 9:00 Shane Ramee**, Matthew A. DiMaggio
EVALUATION OF MASCULINIZATION TECHNIQUES IN TWO SEXUALLY DICHROMIC ORNAMENTAL SPECIES
- 9:15 Avier J. Montalvo**
UNTAPPING THE RESOURCE: THE USE OF A MIXED SPECIES EXHIBIT AS A VIABLE SOURCE OF EGGS FOR MARINE ORNAMENTAL AQUACULTURE
- 9:30 Bryan Danson**, Cortney Ohs
SPONTANEOUS VOLITIONAL SPAWNING, FRY CULTURING, AND SPAWNING INDUCTION VIA WATER HARDNESS MANIPULATION OF *Otocinclus vittatus*
- 9:45 Laura E. Anderson**, Joseph T. Szczebak, Bradford D. Bourque, Andrew L. Rhyne
THE EFFECTS OF BROODSTOCK PARAMETERS ON THE SPAWNING BEHAVIOR OF THE CLEANER WRASSE *Labroides dimidiatus*
- 10:00 BREAK**
- 10:30 Andrew L. Rhyne**
CELEBRATING THE LIFE OF Junda Lin, A REMARKABLE COLLEAGUE AND MENTOR
- 11:00 J. Alexander Bonanno**, Anthony Stella, Joseph T. Szczebak, Bradford D. Bourque, Andrew L. Rhyne
DEVELOPMENTS IN CAPTIVE BREEDING AND REARING OF *Selene vomer*
- 11:15 Anthony Stella**, Laüra Gaitan Daza, Joseph T. Szczebak, Bradford D. Bourque, Andrew L. Rhyne
BROODSTOCK CONDITIONING AND LARVAL REARING OF THE YASHA GOBY *Stonogobiops yasha*
- 11:30 Laüra Gaitan Daza**, Joseph Szczebak, Bradford Bourque, Andrew Rhyne, Kerri Warren
CHARACTERIZATION OF EARLY LIFE HISTORY AND SEXUAL SYSTEM OF THE YASHA GOBY *Stonogobiops yasha*
- 11:45 Elena L. Welch**, Savannah J. Whitley, Joseph T. Szczebak, Bradford D. Bourque, Andrew L. Rhyne
THE EFFECT OF THREE BROODSTOCK DIETS ON THE REPRODUCTIVE PRODUCTIVITY OF THE FIRE SHRIMP *Lysmata debelius*
- 12:00 Elizabeth Fairchild**, Michael Chambers, Michelle L. Walsh
DO WHITE WORMS *Enchytraeus albidus* HAVE COMMERCIAL POTENTIAL AS A FEED IN THE ORNAMENTAL INDUSTRY?

AQUACULTURE 101

Tuesday, February 21 8:30 - 12:30 Room 13

Chair: Kathleen Hartman

- 8:30 Chuck Weirich**
MARINE AQUACULTURE OPPORTUNITIES IN THE UNITED STATES
- 9:00 Herbert Quintero**
DEVELOPING A FRAMEWORK FOR THE EXTENSION PROGRAM
- 9:30 Timothy S. Kniffen**
AN OVERVIEW OF THE CHANGES FOR VETERINARY FEED DIRECTIVE (VFD) DRUG USE AND IMPLICATIONS FOR VETERINARIANS, PRODUCERS AND FEED MILLS/ FEED DISTRIBUTORS IN THE AQUACULTURE INDUSTRY
- 10:00 BREAK**
- 10:30 Shane Ramee**
MONOSEX FISH PRODUCTION 101
- 11:00 David Brune, Robert Pierce, Charles Hicks**
AQUACULTURE 101: SUSTAINABLE SEAFOOD PRODUCTION IN THE MIDWEST
- 11:30 Suja Aarattuthodiyil, David Wise**
FARM BIOSECURITY – PREVENTION IS BETTER THAN CURE

FISH NUTRITION – SOY PRODUCTS

Tuesday, February 21 8:30 - 12:30 Salon D

Chairs: Steve Rawles, Gibson Gaylord

- 8:30 Neil Anthony Sims, Lisa Volbrecht, Gavin Key, Cory Hungate, Tom Clemente, Steven Weier**
CROSSING THE COMMERCIALIZATION CHASM – TRANSITIONING SOY-BASED FISHMEAL REPLACEMENT DIETS FROM RESEARCH SCALE TO FARM SCALE
- 8:45 Vikas Kumar, Steven Craig, Ramanathan S. Lalgudi, Richard Hulefeld, Waldemar Rossi Jr., Jarod Jones, James H. Tidwell, Rob Cain, Barry McGraw**
ENZOMEAL (IMPROVED SOYBEAN MEAL): POTENTIAL PROTEIN SOURCE FOR AQUAFEED
- 9:00 Guillaume Salze, Dave Jirsa, Mark Drawbridge, D. Allen Davis**
INTERACTION BETWEEN DIETARY SOY AND ANIMAL PROTEIN ONTO THE TAURINE REQUIREMENT IN WHITE SEABASS *Atractoscion nobilis* AND CALIFORNIA YELLOWTAIL *Seriola lalandi*
- 9:15 Romi Novriadi, Melanie Rhodes, Carter Ullman, Sirirat Chatvijitkul, Guillaume Salze, Terry Hanson, Chong Lee, D. Allen Davis**
TOWARDS THE BETTER USE OF SOY BASED DIET FOR FLORIDA POMPANO *Trachinotus carolinus*: USE OF NOVEL SOY PROTEIN CONCENTRATE AND SQUID PRODUCTS

TUESDAY

- 9:30 Romi Novriadi**, Melanie Rhodes, Sirirat Chatvijitkul, Carter Ullman, Thomas Derbes, Guillaume Salze, Terry Hanson, D. Allen Davis
ASSESSING THE USE OF FERMENTED SOY PROTEIN IN SOY BASED FEED FORMULATIONS ON THE HAEMATOLOGICAL, HISTOLOGICAL, GROWTH, SERUM, AND NUTRITIONAL VALUE OF FLORIDA POMPANO *Trachinotus carolinus*
- 9:45 Melanie Rhodes**, Romi Novriadi, Carter Ullman, Sirirat Chatvijitkul, Guillaume Salze, Terry Hanson, D. Allen Davis
IDENTIFYING THE MINIMAL LEVEL OF FISHMEAL INCLUSION IN HIGH SOY FEED FORMULATIONS FOR FLORIDA POMPANO *Trachinotus carolinus*
- 10:00 BREAK**
- 10:30 Nicholas Romano**, Sofea Taher, Aziz Arshad, Mahdi Ebrahimi, Jun The, Wing-Keong Ng, Vikas Kumar
ASSESSING THE FEASIBILITY OF DIETARY SOYBEAN MEAL REPLACEMENT FOR FISHMEAL TO THE SWIMMING CRAB *Portunus pelagicus* JUVENILES
- 10:45 Alexandra K. Amorocho**, Elkin R. Montecino, Karen Veverica, D. Allen Davis
TILAPIA GROWTH PERFORMANCE USING TWO TYPES OF EXTRACTED SOYBEAN MEAL
- 11:00 Megan M. Kemski**, Macdonald Wick, Konrad Dabrowski
NUTRITIONAL PROGRAMMING OF YELLOW PERCH *Perca flavescens* INCREASES SECOND GENERATION'S ABILITY TO UTILIZE SOYBEAN MEAL-BASED DIETS
- 11:15 Tiago Hori**, Andre Dumas, Jason Stannard, Debbie Plouffe, John Buchanan
GENOME-WIDE ASSOCIATION STUDY OF SOYBEAN MEAL TOLERANCE IN ATLANTIC SALMON
- 11:30 Michele Thompson**, Rebecca Lochmann, Ruben Morawicki
MODIFIED SOYBEAN MEALS AS SUSTAINABLE PROTEIN SOURCES IN DIETS OF LARGEMOUTH BASS *Micropterus salmoides*
- 11:45 Xiaoxia Li**, Han-Ping Wang, Hong Yao, Zhi-Gang Shen, Liang Guo, Paul O'Bryant, Dean Rapp
EVALUATION OF SOYBEAN MEAL AS PROTEIN SOURCE FOR NORTHERN AND SOUTHERN LARGEMOUTH BASS
- 12:00 R.S.N. Janjua**, Kevin Fitzsimmons, Sehar Munawar
STUDY OF ECONOMICAL BENEFIT OF SOY-BASED FLOATING FEED VERSUS MASH FEED IN MONOCULTURE OF TILAPIA (GIFT) IN PAKISTAN

RESTORATION AND STOCK ENHANCEMENT

Tuesday, February 21 8:30 - 2:00 Room 7

Chairs: Reg Blaylock, Ken Leber

- 8:30 Bijoy Kumar Ghosh**
HYDRAULIC IMPACT ON FISH MIGRATION IN SARIKANDHI FISH PASS OF BANGLADESH
- 8:45 Nur Eda Topçu**
GORGONIANS AS INDICATORS OF MASS MORTALITY: THE CASE OF *Spinimuricea klavereni* IN THE SEA OF MARMARA (TURKEY)
- 9:00 Joshua Patterson**, Kelli O'Donnell, Kathryn Lohr, Erich Bartels
COMPARISON OF CULTURE METHODS FOR THREATENED CARIBBEAN STAGHORN CORAL *Acropora cervicornis* GROWN IN AN OCEAN-BASED NURSERY FOR RESTORATION
- 9:15 Yue Liu**, Leticia Torres, Terrence Tiersch
CRYOPRESERVATION OF SPERMATOZYGUMATA (SPERM BUNDLES) FROM ENDANGERED VIVIPAROUS GOODEID FISHES
- 9:30 William H. Neill**, Robert R. Vega
ECOPHYSIOLOGICAL-MODELING-BASED ANALYSIS OF RED DRUM STOCK ENHANCEMENT IN TEXAS: AN UPDATE
- 9:45 Kevin K. Loftus**, Timothy D. Drew, Ryan W. Zheng, Jennifer L. Smith, Trevor E. Pitcher, Timothy B. Johnson, Chris C. Wilson
AN OVERVIEW OF BINATIONAL EFFORTS TO USE CULTURE AND STOCKING TO RESTORE AN EXTIRPATED SPECIES *Coregonus hoyi* TO LAKE ONTARIO
- 10:00 BREAK**
- 10:30 Ruairi MacNamara**, Mark Drawbridge, Mike Shane, Ed Camp
BUILDING ON STOCK ENHANCEMENT SUCCESS IN SOUTHERN CALIFORNIA: CASE STUDY OF A DEVELOPING CALIFORNIA HALIBUT *Paralichthys californicus* REPLENISHMENT PROGRAM
- 10:45 Karl Brenkert**, Tanya L. Darden, Michael R. Denson
STOCK ENHANCEMENT AS A SCIENCE-BASED TOOL FOR FISHERIES MANAGEMENT DECISION-MAKING: CASE STUDIES FROM 10 YEARS OF RED DRUM, STRIPED BASS, SPOTTED SEATROUT AND COBIA STOCKING IN COASTAL SOUTH CAROLINA
- 11:00 Timothy P. O'Donnell**, Karl Brenkert, Michael R. Denson, Matt J. Walker, Tanya L. Darden
THE IMPORTANCE OF APPROPRIATE ESTIMATION OF CULTURED CONTRIBUTION IN STOCK ENHANCEMENT: CASE STUDIES FROM SOUTH CAROLINA
- 11:15 Matt Perkinson**, Tanya Darden, Karl Brenkert IV, Michael R. Denson
STOCK ENHANCEMENT OF COBIA *Rachycentron canadum* IN SOUTH CAROLINA
- 11:30 Tanya L. Darden**, Chris J. Katalinas, John D. Robinson, Michael R. Denson
USING INDIVIDUAL-BASED MODELS TO DETERMINE OPTIMAL HARVEST REDUCTION AND STOCK ENHANCEMENT TO MINIMIZE GENETIC IMPACTS DURING RESTORATION OF WILD COBIA POPULATIONS

TUESDAY

- 11:45 Andrea Tarnecki**, Nicole Rhody
ACCLIMATION OF CAPTIVELY REARED JUVENILE COMMON SNOOK TO THE WILD: EFFECTS ON MICROBIOTA AND INNATE IMMUNITY
- 12:00 Rebecca Lucas**, Betty Staugler, Josh Patterson
EFFECTIVENESS OF LARGE SCALE LARVAL SEEDING AND PARENTAGE ANALYSIS FOR BAY SCALLOP *Argopecten irradians* RESTORATION IN CHARLOTTE HARBOR, FLORIDA
- 12:15 Matthew Resley**, Nicole Rhody, Carlos Yanes-Roca, Carole Neidig, Ronald Hans, Kevan Main
EXPANDING PRODUCTION OF COMMON SNOOK THROUGH IMPROVEMENTS IN LARVAL REARING PROTOCOLS
- 12:30 LUNCH**
- 1:30 Erick Sturm**, Mark Galloway
INCREASED SURVIVAL WITH WATER QUALITY IMPROVEMENTS AT AN ENDANGERED COHO SALMON *Oncorhynchus kisutch* RESTORATION HATCHERY
- 1:45 Megan Davis**, Laura Issac
VARIATION OF VELIGER HATCHING, DEVELOPMENT, AND GROWTH FROM FIVE *Strombus gigas* QUEEN CONCH EGG MASSES: FOR RESTORATION IN THE BAHAMAS

AQUAPONICS

Tuesday, February 21 8:30 - 5:00 Room 17
Chairs: Huy Tran, Bradley Todd

- 8:30 Hye-Ji Kim**, Teng Yang
GROWTH AND YIELD COMPARISON OF LETTUCE, BASIL AND TOMATO GROWN IN AQUAPONICS AND HYDROPONICS SYSTEMS
- 8:45 Donald S. Bailey**, Rhuanito Soranz Ferrarezi
PRODUCTION OF BASIL VARIETIES IN THE UVI COMMERCIAL AQUAPONIC SYSTEM
- 9:00 Donald S. Bailey**, Rhuanito Soranz Ferrarezi
IMPROVING CANTALOUPE FRUIT SUGAR CONTENT IN THE UVI COMMERCIAL AQUAPONIC SYSTEM
- 9:15 Brad Todd**
MOVING THE INDUSTRY FORWARD, ECONOMICS FOR 1500 FT2 OWNER/ OPERATOR COMMERCIAL AQUAPONICS SYSTEM
- 9:30 Huy Tran**, Brad Todd
DESIGN CONSIDERATION FOR A 1,500 FT2 AQUAPONIC SYSTEM
- 9:45 Zachariah Chambers**, Matthew Pollom, Brandon Hall, Dan DeBard
LESSONS LEARNED IN STARTING A COMMERCIAL AQUAPONICS OPERATION: GREENER SCENES, LLC
- 10:00 BREAK**

- 10:30 Tonny Vang, Terry Vang**
INTENSIVE COMMERCIAL AQUAPONICS SYSTEM DESIGN AND CONSTRUCTION
LEARNING EXPERIENCE
- 10:45 Hye-Ji Kim, Teng Yang**
EFFECT OF PLANT SPECIES ON NITROGEN AND PHOSPHORUS REMOVAL IN
AQUAPONIC SYSTEM
- 11:00 Huy Tran**
DECOUPLED AQUAPONICS FOR *IN SITU* NUTRIENT MITIGATION FROM RAS
- 11:15 Meg Stout**
THE WATER FOOTPRINT OF FISH: WHAT IT MEANS AND HOW TO USE IT TO
MARKET FISH CONSUMPTION
- 11:30 Wenresti Gallardo, Yahya Al-Yahyaie, Mohammed Al-Khamzari, Idris Al-Balushi,
Mazin Al-Naamani**
EFFECTS OF FISH DENSITIES ON GROWTH, SURVIVAL AND HEAVY METAL
ACCUMULATION IN FISH AND PLANTS IN A RECIRCULATING AQUAPONIC
SYSTEM
- 11:45 Mollie R. Smith, Daniel Wells, Terry Hanson, Jesse Chappell, David Blersch**
AQUACONIC TILAPIA/CUCUMBER PRODUCTION VARYING PLANT DENSITY AND
SUBSTRATE
- 12:00 Brad Todd**
DESIGNING COMMERCIAL AQUAPONICS SYSTEMS FOR ALTERNATIVE ENERGY
- 12:30 LUNCH**
- 1:30 James M. Ebeling, Michael B. Timmons, Michael B. Malone**
OPEN SOURCE ENGINEERING DESIGNS FOR AQUACULTURE/AQUAPONICS
SYSTEMS PRODUCING 500, 5,000 AND 50,000 LBS. OF FISH PER YEAR
- 1:45 Bauer Duke**
IS THERE A DIFFERENCE GROWING LETTUCE WITH TILAPIA *Oreochromis
niloticus* OR BLUEGILL *Lepomis macrochirus*?
- 2:00 Meg Stout, Brian Filipowich, Sarah Taber**
ORGANIC AQUAPONICS: RECOMMENDED GUIDELINES FOR CONSIDERATION
- 2:15 Sarah Taber**
UPDATES IN FOOD SAFETY IN AQUAPONICS
- 2:30 Janelle Hager, Fred Gonzales, George Pate, Leigh Anne Bright, James Tidwell**
EVALUATION OF ULTRA-VIOLET LIGHT TO REDUCE POTENTIAL HUMAN
PATHOGENS IN AQUAPONIC SYSTEMS
- 2:45 Fred Gonzales, Janelle Hager, George Pate, Zackary Perry, James Tidwell**
EFFECTS OF PROBIOTICS *Pedococcus*, *Bacillus subtilis* AND *Lactobacillus
acidophilus* ON FOOD SAFETY INDICATORS IN AQUAPONIC SYSTEMS
- 3:00 Meg Stout, Brian Filipowich**
ECOLOGICAL IMPACT OF AQUAPONICS: EXTERNALIZING SOCIETAL COSTS
RELATIVE TO SOIL AGRICULTURE

- 3:15 Mark Schmitz**, R.C. Shultz
GROWTH PERFORMANCE OF FOUR VARIETIES OF SWEET BASIL GROWN IN A GREENHOUSE WITH BOTH AQUAPONIC EFFLUENT AND SOIL
- 3:30 Elena Ponomareva**, Vadim A. Grigoriev, Ludmila P. Ilina, Maria M. Belaya
INTENSIVE BIOTECHNOLOGY OF CULTIVATION OF HYDROCOLES AND PLANTS IN MODULAR INSTALLATION
- 3:45 Tetsuzan Ron**, Glenn Martinez, Barbara Payne McLain
AQUAPONICS IN THE PACIFIC AND A WAY TO SAVE ENERGY, IMPROVE SAFETY AND EDUCATION
- 4:00 George Brooks, Jr.**
HOW MARKET NEEDS INCLUDING GOVERNMENTAL RULES AND REGULATIONS MAY AFFECT THE DESIGN AND USAGE OF AQUAPONIC SYSTEMS

AQUATIC VETERINARY PRACTICE AND AQUACULTURE PRODUCTION

Tuesday, February 21 9:00 - 5:00 Salon A

Chairs: Dave Scarfe, Pat Gaunt

- 9:15 Angela Williamson**, Hazel Manjarris, John Scarpa
PRELIMINARY INVESTIGATION TO DETERMINE A SAFE CONCENTRATION OF TRICHLORFON FOR TREATING PARASITES OF THE RAYS *Dasyatis sabina* AND *Rhinoptera bonasus*
- 9:30 Katherine Haman**, Austen Thomas, Maria Chacon-Heszele, Mieke Sinnesael
FIELD DETECTION OF PATHOGENS *Renibacterium salmoninarum* USING A HANDHELD QPCR SYSTEM
- 10:00 BREAK**
- 11:00 Mark Braceland**, John Tinsley, David Cockerill, Ralph Bickerdike, Marian McLoughlin, P. David Eckersall
SELECTIVE PRECIPITATION REACTION: A NOVEL DIAGNOSTIC TEST FOR TISSUE PATHOLOGY IN ATLANTIC SALMON *Salmo salar* INFECTED WITH SALMONID ALPHAVIRUS (SAV3)
- 11:15 Christopher Good**, John Davidson, David Straus, Susan Harper, David Marancik, Timothy Welch, Christine Lepine, William Wolters, Brian Peterson, Lars-Flemming Pedersen, Vipaporn Phuntumart, Steven Summerfelt
ASSESSING PERACETIC ACID AS A MEANS TO CONTROL POST-VACCINATION SAPROLEGNIASIS IN ATLANTIC SALMON *Salmo salar* PARR IN RECIRCULATION AQUACULTURE SYSTEMS
- 11:30 Ashley K. Emanuele**
WEN TRIMMING TO CORRECT BUOYANCY ISSUES IN AN ORANDA GOLDFISH *Carassius auratus auratus*
- 11:45 Myron Kebus**
AMERICAN ASSOCIATION OF FISH VETERINARIANS – YEAR FIVE

- 12:00 David Scarfe**
WORLD AQUATIC VETERINARY MEDICAL ASSOCIATION PROGRAMS AND SERVICES
- 12:15 David Scarfe**
EDUCATION, TRAINING AND CREDENTIALING OPPORTUNITIES FOR AQUATIC VETERINARIANS
- 12:30 LUNCH**
- 1:30 Patricia Gaunt**
USING VETERINARY FEED DIRECTIVE DRUGS IN AQUACULTURE
- 2:00 Jennifer Matysczak**
BE IN THE KNOW: WHAT'S NEW REGARDING DRUGS FOR AQUATIC SPECIES
- 2:30 Timothy S. Kniffen**
AN OVERVIEW OF THE CHANGES FOR VETERINARY FEED DIRECTIVE (VFD) DRUG USE AND IMPLICATIONS FOR VETERINARIANS, PRODUCERS, AND FEED MILLS / FEED DISTRIBUTORS IN THE AQUACULTURE INDUSTRY
- 3:30 Ron Lane**
ELECTRONIC SOFTWARE SOLUTIONS ENABLE VFD COMPLIANCE FOR VETERINARIANS
- 4:00 Veterinary Feed Directives**
SPEAKER PANEL / AUDIENCE Q&A, DISCUSSION
- 4:30 Ron Lane, Tim Kniffen**
Vets/Producers Signup for Wednesday one-on-one meeting with GVL/Merck for e-VFD Instructions in Room 8

FISH HEALTH AND DISEASE

Tuesday, February 21 8:30 - 5:00 Salon C

Chairs: Ben Beck, Ben LaFrentz

- 8:30 Ra'anán Ariav**, Natan Wajsbrodt, Allan Heres
TILV, AN EMERGING NEW VIRAL DISEASE OF TILAPIA spp.
- 8:45 Reiny Tumbol**, Silvana Manumpil
MAPPING OF FISH DISEASES OF NORTH SULAWESI AQUACULTURE
- 9:00 Julie Schroeter**, Wendy Sealey, William Fraser
EVALUATION OF THE EFFECT OF SALINITY ON WOUNDFIN *Plagopterus argentissimus* SURVIVAL FOLLOWING EXPOSURE TO *Ichthyophthirius multifiliis*
- 9:15 De-Hai Xu**, Craig Shoemaker, Benjamin LaFrentz, Dunhua Zhang
IMPACTS OF PARASITE INFECTION ON COLUMNARIS DISEASE OF TILAPIA
- 9:30 Miles Lange**, Bradley Farmer, Jason Brown, Matthew Barnett, Eric Peatman, Benjamin Beck
THE CARBOHYDRATE L-RHAMNOSE PROMOTES BIOFILM FORMATION WHICH ENHANCES *Flavobacterium columnare* VIRULENCE

- 9:45 Benjamin Beck**, Rashida Eljack, Mediha Aksoy, Eric Peatman
DIETARY INCLUSION OF A *Saccharomyces cerevisiae* FERMENTATION PRODUCT TO A COMMERCIAL RATION IMPROVES IMMUNE READINESS AND COLUMNARIS DISEASE RESISTANCE IN CHANNEL CATFISH *Ictalurus punctatus*
- 10:00 BREAK**
- 10:30 Eric Peatman**, James Mazzola, Benjamin Beck
PHYTASE FORTIFICATION OF A COMMERCIAL CATFISH DIET ELEVATES MINERAL STORES AND IMPROVES HEMATOLOGICAL HEALTH OF CHANNEL CATFISH *Ictalurus punctatus*
- 10:45 Ali Sepahi**, Irene Salinas, Mariah Sanchez
APPLICATIONS OF *Flectobacillus major* AND ITS SPHINGOLIPIDS IN THE MODULATION OF FISH HEALTH
- 11:00 F.C. Thomas Allnutt**, Kennard Roy, Scott LaPatra, Mariam Ashraf, Arun Dhar
FORMULATIONS FOR IMPROVED ORAL DELIVERY OF IMMUNOACTIVE RIBONUCLEOTIDES AND LPS TO RAINBOW TROUT *Oncorhynchus mykiss*
- 11:15 José Luiz Pedreira Mourão**, Marcela Maia Yamashita, Lucas Cardoso, Scheila Anelise Pereira, Ana Paula de Araujo, Carlos Eduardo Oda, Éder Carlos Schmidt, Zenilda Laurita Bouzon, Maurício Laterça Martins
PROBIOTIC DIETARY SUPPLEMENTATION IN NILE TILAPIA AS PROPHYLAXIS AGAINST STREPTOCOCCOSIS
- 11:30 Kenneth Cain**, Carla Schubiger, David Burbank, Bikram Ghosh, Douglas Call
CHARACTERIZATION OF A PUTATIVE PROBIOTIC ENTEROBACTER STRAIN (C6-6) AND POTENTIAL MECHANISMS ASSOCIATED WITH PROTECTION OF RAINBOW TROUT CHALLENGED WITH *Flavobacterium psychrophilum*
- 11:45 Ali Sepahi**, Luca Tacchi, Irene Salinas, Scott LaPatra
RECENT ADVANCES IN NASAL VACCINOLOGY IN RAINBOW TROUT
- 12:00 Benjamin LaFrentz**, Carlos Lozano, Craig Shoemaker, Julio Garcia, Dehai Xu, Marie Lovoll, Morten Rye
CONTROLLED LABORATORY CHALLENGE DEMONSTRATES SUBSTANTIAL ADDITIVE GENETIC VARIATION IN RESISTANCE TO *Streptococcus iniae* IN NILE TILAPIA
- 12:15 Craig A. Shoemaker**, Carlos A. Lozano, Benjamin R. LaFrentz, Julio C. Garcia, Esteban Soto, De-Hai Xu, Benjamin H. Beck, Morten Rye
SPRING FORWARD WITH IMPROVED NILE TILAPIA *Oreochromis niloticus* RESISTANT TO *Streptococcus iniae* AND *Streptococcus agalactiae* lb
- 12:30 LUNCH**
- 1:30 Jesse Trushenski**, Matthew Aardsma, Kelli Barry, James Bowker, Christopher Jackson, Artur Rombenso
DISPELLING ANTIBIOTIC DRUG USE MYTHS: OXYTETRACYCLINE DIHYDRATE DOES NOT ENHANCE FISH GROWTH PERFORMANCE
- 1:45 Omotoyosi T. Banjo**, G.E.O. Makinde
HAEMATOLOGICAL AND BIOCHEMICAL RESPONSE OF *Clarias gariepinus* (AFRICAN CATFISH) JUVENILE EXPOSED TO THERAPEUTIC CONCENTRATIONS OF TETRACYCLINE

- 2:00 J. Alan Johnson**, Stephen Grausgruber, Jim Bowker, Randall Esser, Molly Bowman
DIQUAT AND COLUMNARIS DISEASE NEW ANIMAL DRUG RESEARCH AND STATUS
- 2:15 Kathryn Mitchell**, R.M. Durborow, J. Kelso, L. Sneed, A. Poudel, J. Ma, C. Frederick, T. Ogunsanya, A. Redden, K. Campbell, W. Kahill, C. Lyvers
TWENTY-SEVEN YEAR HISTORY OF FISH DISEASE CASES DIAGNOSED AT THE KENTUCKY STATE UNIVERSITY FISH DISEASE DIAGNOSTIC LABORATORY FROM 1990 THROUGH 2016
- 2:30 Nilima Renukdas**, Bradley Farmer, Sindhu Kaimal, Anita M. Kelly, Luke A. Roy, Jeonghwan Park
COLUMNARIS *Flavobacterium columnare* CHALLENGE USING FATHEAD MINNOWS *Pimephales promelas* IN AN ULTRA-LOW FLOW SYSTEM
- 2:45 Yu-Ling Liu**, Hsin-Hung Chen, Wan-Chin Kuo, Han-You Lin
ESTABLISH A FLOW CYTOMETRY ANALYSIS OF GROUPER LYMPHOCYTE DIFFERENTIATION UNDER IMMUNE STIMULATION
- 3:00 Gagan D. Kolimadu**, Kamal K. Jain, Narottam P. Sahu, Muralidhar P. Ande, Adnan H. Gora
STUDIES ON GROWTH AND IMMUNE RESPONSES IN *Pangasianodon hypophthalmus* FED WITH BIOTIC SUPPLEMENTS

ZEBRAFISH HUSBANDRY WORKSHOP – CONTINUED

Tuesday, February 21 8:30 - 5:00 Room 1

Chair: Bobbi Baur

FISH DISEASES – Michael Kent, Coordinator

- 8:30 Samantha M. Peneyra**, Jose Cardona-Costa, Julie White, Christopher M. Whipps, Elyn R. Riedel, Neil S. Lipman, Christine Lieggi
TRANSMISSION OF *Pseudoloma neurophilia* IN ZEBRAFISH *Danio rerio* WHEN USING A MASS SPAWNING CHAMBER
- 8:45 Lauren Norris**
EFFECTS OF CRYOPRESERVATION ON ZEBRAFISH PATHOGENS
- 9:00Carolynn Chang**
MYCOBACTERIA IN ZEBRAFISH
- 9:15 Justin Sanders**
M. chelonae AND IMPACTS ON RESEARCH ENDPOINTS
- 9:30 George Sanders**
PSEUDOLOMA PREVALENCE REDUCTION IN A CLOSED COLONY OF ENDEMICALLY INFECTED ZEBRAFISH
- 9:45 Megan Finley**
VALIDATION STUDY AT BOSTON CHILDREN'S HOSPITAL TO DETERMINE OPTIMAL HEALTH MONITORING APPROACH
- 10:00 BREAK**

- 10:30 Michael Kent**
PSEUDOCAPILLARIA AND EFFECTS ON MICROBIOME
- 10:50 Mackenzie Miller**, Konrad Dabrowski
FROM GENERATION TO GENERATION: CULTURING ZEBRAFISH UNDER CONTINUOUS ILLUMINATION FROM FERTILIZATION TO ADULTHOOD
- 11:10 Thomas Delomas**, Konrad Dabrowski
A NEW PROTOCOL FOR EXPLORING THE POTENTIAL GROWTH RATE OF ZEBRAFISH LARVAE AND JUVENILES
- 11:30 Jeremy Turner**
NOISE AND VIBRATION AS POSSIBLE CONFOUNDS FOR RESEARCH WITH AQUATIC SPECIES
- 12:30 LUNCH**

KEYNOTE SPEAKER

- 1:30 Richard Borowsky**
THE EVOLUTION OF THE USE OF MEXICAN CAVEFISH IN RESEARCH
- 2:45 Dante Fenolio**
RESEARCH AND CONSERVATION: MEXICAN, CHINESE AND TEXAN CAVEFISH
- 3:30 BREAK**
- 3:45 Tannia Clark**
IACUC FINDINGS AND POST VETERINARIAN MONITORING IMPROVE ANIMAL HEALTH AND IMPROVE THE FACILITY
- 4:05 Anne Murray**
LAMA AND THE ZEBRAFISH HUSBANDRY COMMUNITY
- 4:45 TOWN HALL MEETING - NIH ORIP AND AQUATIC HUSBANDRY COMMUNITY SESSION**
The Town Hall Meeting is sponsored by Aquaneering, FishVet Group

MOLLUSK AQUACULTURE

Tuesday, February 21 10:30 - 12:45 Room 5

Chair: Bill Walton

- 10:30 Mackenzie Richards**, Sara King, Courtney Healy, Jeni Ewing, Sandra Casas Liste, Jerome La Peyre, John Supan, Wei Xu
THE IMPACT OF CO₂ RELATED OCEAN ACIDIFICATION ON THE MOLECULAR REGULATION OF SHELL DEVELOPMENT IN EASTERN OYSTER *Crassostrea virginica*
- 10:45 David Kuhn**, Joe Salisbury, Daniel Taylor, Elizabeth Shadwick, Karen Hudson, AJ Erskine, James Wesson, Brad Warren, Durrelle Scott
CHARACTERIZING THE CARBONATE CHEMISTRY ENVIRONMENT IN THE CHESAPEAKE BAY: FOCUS ON SHELLFISH HATCHERIES

- 11:00 Adrianus Both**, Carrie Byron, Damian Brady, Barry Costa-Pierce, Larry Mayer, Christopher Parrish
EVALUATING THE POTENTIAL OF DETRITUS AS A SUPPLEMENTAL DIET FOR BIVALVE AQUACULTURE USING STABLE ISOTOPES AND FATTY ACID BIOMARKERS
- 11:15 Ben Scuderi**, Xuan Chen
EVALUATING THE PRODUCTION EFFICIENCY OF NEW ENGLAND'S OYSTER AQUACULTURE INDUSTRY
- 11:30 Scott Borsum**, Melanie Fuoco, Laurieann Phalen, Gulnihal Ozbay
DEVELOPING BASELINE POPULATION AND DIVERSITY STATISTICS FOR ASSESSING AQUACULTURE'S ROLE IN RESTORATION OF EASTERN OYSTERS *Crassostrea virginica* IN DELAWARE INLAND BAYS
- 11:45 Gulnihal Ozbay**, Laurieann Phalen, Karuna Chintapenta, Amanda Abbott, Lataijah Crawford
ENVIRONMENTAL ASSESSMENT OF DELAWARE BAY WATER AND OYSTER *Crassostrea virginica* FOR TOTAL BACTERIA AND TOTAL VIBRIO
- 12:00 Kenneth Riley**, Everette Newton, David Johnston, James Morris
AQUADEBRIS: AN ASSESSMENT OF MARINE DEBRIS FROM SHELLFISH AQUACULTURE USING DRONE TECHNOLOGY IN NORTH CAROLINA
- 12:15 Yongwen Gao**, Shane Depoe
GEODUCK AQUACULTURE MONITORING IN NEAH BAY AND SEAWATER ISOTOPIC ANALYSES
- 12:30 James Morris**, Kenneth Riley, Jud Kenworthy, Christine Voss
SEAGRASS AND SHELLFISH AQUACULTURE: AN ASSESSMENT TO INFORM MANAGEMENT AND RESEARCH

WOMEN IN AQUACULTURE

Tuesday, February 21 11:00 - 2:30 Salon B

Chairs: Karti Eckdahl, Canon Purdy

- 11:00 Kari Eckdahl**, Canon Purdy
WOMEN IN AQUACULTURE: A FORUM FOR NETWORKING SUCCESS
- 11:15 Jackie Zimmerman**
HUI YOUR RESOURCES: SUCCESSES OF COLLABORATION AND COOPERATION TO ADVANCE AQUACULTURE
- 11:45 Roy D. Palmer**
PARDON OUR PROGRESS – AwF WOMEN/GENDER
- 12:15 Kat Goetting**
EMPOWERING WOMEN AND STRENGTHENING COMMUNITIES: GENDER INTEGRATION IN AQUACULTURE
- 12:30 LUNCH**

- 1:30 Paula Sylvia**
AN OVERVIEW OF AQUACULTURE AT THE UNIFIED PORT OF SAN DIEGO:
EXPLORING AQUACULTURE OPPORTUNITIES IN AND AROUND SAN DIEGO BAY,
CALIFORNIA
- 1:45 Carole R. Engle**
THE ECONOMIC LINKAGES FROM AQUACULTURE THAT IMPACT THE RESILIENCY,
SUSTAINABILITY, AND ECONOMIES OF LOCAL COMMUNITIES
- 2:15 May Myat Noe Lwin**
A COMMUNITY-BASED APPROACH TO MANGROVE SOFT-SHELL CRAB
AQUACULTURE

ECONOMICS AND MARKETING

Tuesday, February 21 11:30 - 5:00 Room 12

Chair: Frank Asche

- 11:45 Isaac Sitienei, Madan M. Dey**
SUPPLY RESPONSE IN THE U.S. CATFISH INDUSTRY: A REVIEW OF ASYMMETRIC
PRICE TRANSMISSION
- 12:00 Frank Asche, Andreea Cojucaru, Marius Sikveland**
MARKET SHOCKS AND DISEASE: THE IMPACT OF ISA ON CHILEAN SALMON
- 12:15 Jonathan van Senten, Carole Engle**
THE ECONOMIC IMPACT OF THE BAITFISH AND SPORTFISH INDUSTRY ON THE
STATE OF ARKANSAS
- 12:30 LUNCH**
- 1:30 Matt Parker, Emma Evans, John Duberg, Doug Lipton**
QUANTIFYING THE ECONOMIC IMPACT OF THE U.S. AQUACULTURE INDUSTRY:
CHALLENGES OF A PILOT STUDY
- 1:45 Tetsuzan Ron, Nitzan Gour**
DOES THE CRISIS OF THE ISRAELI AQUACULTURE INDUSTRY A PRIVATE CASE?
- 2:00 José L. Fernández Sánchez, José M. Fernández Polanco, Ignacio Llorente, Elisa
Baraibar Diez, María D. Odriozola Zamanillo, Ladislao Luna Sotorrió**
TECHNICAL EFFICIENCY OF THE EUROPEAN FISH AND SEAFOOD PRODUCTION
INDUSTRY
- 2:15 Dakota Raab, Siddhartha Dasgupta, Quinton Phelps**
ECONOMICS OF DEBONING BIGHEAD AND SILVER CARP FILLETS
- 2:30 Mohammad Hasan, Maria Bampasidou**
H-2B VISA WORKERS AND SEAFOOD PROCESSING INDUSTRIES IN THE U.S.:
CURRENT KNOWLEDGE AND FUTURE NEEDS
- 2:45 Dave Love, Irena Gorski, Jillian Fry**
AN ANALYSIS OF ONE BILLION DOLLARS OF AQUACULTURE GRANTS MADE BY
THE UNITED STATES FEDERAL GOVERNMENT FROM 1990 TO 2015

- 3:00 Benjamin Meskin**, Jason Scott, Duncan Richmond, Megan Sorby
YOUR BUSINESS IS AT RISK! AN INTRODUCTION TO AQUACULTURE INSURANCE
- 3:15 Christian Brayden**, Caroline L. Noblet, Margaret Snell, Maryam Kashkooli
ASSESSING THE IMPACT OF ECOLABELS ON CONSUMER PREFERENCES FOR SEAFOOD: THE ROLE OF PRODUCTION METHOD, CERTIFICATION AND ORIGIN ON WILD HARVEST AND AQUACULTURE PRODUCTS
- 3:30 Julia Bronnmann**, Frank Asche
SUSTAINABLE SEAFOOD FROM AQUACULTURE AND WILD FISHERIES: INSIGHTS FROM A DISCRETE CHOICE EXPERIMENT IN NORTHERN GERMANY
- 3:45 Selin Guney**, A.B.M. Mahfuzul Haque, Madan Dey
AN EMPIRICAL ANALYSIS OF LAW OF ONE PRICE IN BANGLADESH FISH MARKETS: A GENERALIZED ADDITIVE MODELING APPROACH
- 4:00 Madan Dey**, Oai Li Chen
ANALYSIS OF SCANNER DATA ON SEAFOOD PRODUCTS IN THE UNITED STATES: REVIEW OF RECENT STUDIES AND IMPLICATIONS FOR AQUACULTURE/ FISHERIES INDUSTRY
- 4:15 Uttam Deb**, Madan Dey, Oai Li Chen
BRAND EQUITY IN SHRIMP ACROSS METRO MARKETS IN USA: AN ANALYSIS OF STORE-BASED SCANNER DATA
- 4:30 Roy Endré Dahl**, Frank Asche, Erlendur Jonsson
VOLATILITY SPILLOVER IN AQUACULTURE AND FISHERIES MARKETS

LIVE FEEDS

Tuesday, February 21 1:30 - 3:30 Room 11

Chairs: Guillaume Salze, Adam Daw

- 1:30 Michael Schwarz**, Jerome Bosmans, Chad Clayton, Glenn Schipp, Stephen Urick
COPEPOD USE INCREASING AS A LIVE FEED FOR LARVICULTURE
- 1:45 Chad Clayton**, Eric Henry, Tim Reed
Apocyclops panamensis – DEVELOPING A PROMISING COPEPOD FOR AQUACULTURE
- 2:00 Adam Daw**, Brie Sarkisian, Reginald Blaylock, Eric Saillant
EVALUATION OF SODIUM HYPOCHLORITE IMMERSION PROTOCOLS FOR THE DISINFECTION OF *Acartia tonsa* AND *Parvocalanus crassirostris* CULTURES
- 2:15 Kamil Mert Eryalçın**
EFFECT OF FEEDING DIFFERENT MICROALGAE ON SURVIVAL, GROWTH AND BIOCHEMICAL PERFORMANCE OF *Artemia*
- 2:30 Amin Eimanifar**, Alireza Asem, Michael Wink
GENETIC DIVERSITY AND POPULATION STRUCTURE IN NATIVE AND INTRODUCED POPULATIONS OF THE *Artemia franciscana* (CRUSTACEA, ANOSTRACA) IN AUSTRALIA
- 2:45 Louis Landesman**
MASS CULTURE OF LIVE FEED ORGANISMS FOR FISH AND INVERTEBRATES

- 3:00 Courtney Ohs**, Wesley Freitas da Anunciação, Mônica Yumi Tsuzuki
INFLUENCE OF ABIOTIC FACTORS AND FOOD CONCENTRATION ON POPULATION GROWTH OF THE CILIATE *Euplotes* sp.
- 3:15 Ziyanda Mzozo**, N. G. Vine, G. Matcher
FEEDING PREFERENCES OF THE CALANOID COPEPOD *Pseudodiaptomus hessei* UNDER CULTURE CONDITIONS

MICROALGAE

Tuesday, February 21 1:30 - 4:00 Room 5
Chair: Anthony Siccardi

- 1:30 Joe M. Fox**, Anthony J. Siccardi III, Delbert M. Gatlin III, Craig Browdy
MICROALGAE BIOMASS IN AQUACULTURE FEEDS – A ROADMAP TO COMMERCIALIZATION
- 1:45 Nathan Huysman**, Delbert Gatlin, Jacqueline Mitchell, John Crockett, Anthony Siccardi
SELECTION OF MICROALGAE CULTURES BASED ON AMINO ACID PROFILES AND PROTEIN CONTENT TO BE USED AS FISH MEAL REPLACEMENTS IN AQUACULTURE DIETS
- 2:00 Ivy C. McClellan Jones**, Anthony Siccardi III, Delbert M. Gatlin III, Joe M. Fox, Nathan Huysman, Christopher W. Jones
EVALUATION OF MARINE MICROALGAE BIOMASS FOR PROTEIN REPLACEMENT IN AQUACULTURE FEEDS
- 2:15 Clement de Cruz**, Alexander Lubrano, Delbert Gatlin III
EVALUATION OF MICROALGAE CONCENTRATES AS FISHMEAL REPLACEMENTS FOR HYBRID STRIPED BASS *Morone* sp. INCLUDING EFFECTS ON NUTRIENT DIGESTIBILITY, GROWTH AND UTILIZATION OF FEED
- 2:30 Anthony Siccardi**, Nathan Huysman, Colin Beal, Joe Fox, Hoyt Thomas, Cristina Richardson, Jacqueline Mitchell, Todd Lane
IN VITRO DIGESTIBILITY OF TWO MICROALGAE BY-PRODUCTS AND WHOLE CELL MICROALGAE IN AQUATIC DIETS
- 2:45 Jacqueline Mitchell**, John Scarpa, Joe Fox, Nathan Huysman, Ronald Pate, Mark Zivojnovich, Steven Calahan, Anthony Siccardi III
OPTIMIZATION OF ALGAL TURF SCRUBBERS FOR LARGE-SCALE SUPER-INTENSIVE AQUACULTURE
- 3:00 Maria Teresa Gutierrez-Wing**, Jonathan Barnett, Ronald Malone, Kelly Rusch
EFFECT OF IRRADIANCE AND LIGHT WAVELENGTH ON A MIXED MICROALGAL/ CYANOBACTERIAL CULTURE
- 3:15 Brooke Konkle**, Nathan Huysman, John Scarpa, Anthony Siccardi
A SEASONAL COMPARISON OF PROXIMATE COMPOSITION OF MIXED CULTURES VERSUS MONOCULTURES OF *Nannochloropsis salina* AND *Phaeodactylum tricornutum* IN SEMI-CONTINUOUS OUTDOOR RACEWAYS
- 3:30 Paul Zimba**, I-Shuo Huang
TOXIN-PRODUCING ALGAE ARE A SIGNIFICANT IMPACT IN FRESHWATER AND MARINE AQUACULTURE

LICENSING AND PERMITTING OF OFFSHORE AQUACULTURE

Tuesday, February 21 1:30 - 4:00 Room 13

Chairs: Alexandra Chase, Diane Windham

- 1:30 Michael Rubino**
STATUS OF OFFSHORE AQUACULTURE IN THE UNITED STATES
- 2:00 Susan Bunsick**, Kevin Madley, David Nichols
REGIONAL APPROACHES TO PERMITTING OFFSHORE AQUACULTURE IN THE UNITED STATES
- 2:40 James Morris**
FORECASTING WATER QUALITY AND BENTHIC IMPACTS OF MARINE FINFISH AQUACULTURE USING AQUAMODEL
- 3:30 Diane Windham**, Don Kent, Randy Lovell, Paul Olin
A DEEPER DIVE: CALIFORNIA CASE STUDY

TUESDAY

FISH NUTRITION – DIETARY SUPPLEMENTS AND FEED ADDITIVES

Tuesday, February 21 1:30 - 3:45 Salon D

Chair: Carl Webster

- 1:30 Guillaume Salze**, Kevin Stuart, D. Allen Davis, Mark Drawbridge
EFFECTS AND INTERACTIONS OF TAURINE SUPPLEMENTATION IN BROODSTOCK AND LARVAL FEEDS IN CALIFORNIA YELLOWTAIL *Seriola lalandi*
- 1:45 Thomas Derbes II**, Melanie Rhodes, Guillaume Salze, Nicole Rhody, Matthew Resley, Kevan Main, Josh Neese, Marie Head, D. Allen Davis
SUPPLEMENTING BROODSTOCK AND LARVAL DIETS FOR FLORIDA POMPANO *Trachinotus carolinus* WITH TAURINE TO IMPROVE EGG, LARVAL, AND WEANED JUVENILE QUALITY
- 2:00 Mariana Michelato**, Wilson M. Furuya, Delbert M. Gatlin III
METABOLIC RESPONSES OF NILE TILAPIA *Oreochromis niloticus* TO METHIONINE AND TAURINE SUPPLEMENTATION
- 2:15 Abigail Bockus**, Gibson Gaylord, Wendy Sealey, Carl Yeoman, Daniel Bearden
THE USE OF DIETARY ADDITIVES AS A MEANS OF COUNTERACTING ELEVATED TEMPERATURE IN RAINBOW TROUT: GROWTH, EFFICIENCY AND PHYSIOLOGICAL PERFORMANCE
- 2:30 Brian Peterson**, Brian Small, Wendy Sealey, Brian Bosworth, Menghe Li, Richard Endris
EFFECTS OF FEEDING ZILPATEROL HYDROCHLORIDE ON GROWTH PERFORMANCE, FILLET YIELD, AND BODY COMPOSITION OF RAINBOW TROUT, NILE TILAPIA, AND CHANNEL CATFISH
- 2:45 Gary Burr**, William Wolters, Frederic Barrows
ATLANTIC SALMON *Salmo salar* SMOLTS FED DIETS CONTAINING PROPLEX, A YEAST PROTEIN PRODUCT

- 3:00 Matthew McEntire**, Steven Rawles, Rick Barrows, Jason Frost
SCREENING OF POTENTIAL FEED PALATANTS FOR USE IN ALL-PLANT PROTEIN DIETS FOR HYBRID STRIPED BASS *Morone chrysops* × *M. saxatilis*
- 3:15 Hervé Lucien-Brun**, Emilio Missale, Jimmy Wongsang, M.A. Kabir Chowdhury
DIETARY PROTEASE IMPROVES PRODUCTION PERFORMANCE OF COMMERCIALY FARMED PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 3:30 Alejandro Velasquez**, Delbert Gatlin
EFFECTS OF METHIONE AND TAURINE SUPPLEMENTATION ON GROWTH PERFORMANCE, WHOLE-BODY COMPOSITION, AND PLASMA AMINO ACID CONCENTRATIONS OF JUVENILE RED DRUM *Sciaenops ocellatus*

STRIPED BASS GROWERS ASSOCIATION INDUSTRY FORUM

Tuesday, February 21 2:30 - 5:00 Salon B

Chair: Tyler Faucette

- 2:30 Mike Freeze**
UPDATE FROM THE NATIONAL AQUACULTURE ASSOCIATION
- 3:00 Delbert M. Gatlin III**
UPDATE ON HYBRID STRIPED BASS NUTRITION RESEARCH AT TEXAS A&M UNIVERSITY
- 3:15 Matthew E. McEntire**, Harry K. Dupree
POTENTIAL FEED PALATANTS FOR USE IN ALL-PLANT PROTEIN DIETS
- 3:30 Jonathan van Senten**, Madan Dey, Carole Engle
THE EFFECTS OF REGULATIONS ON EFFICIENCY OF U.S. BAITFISH AND SPORTFISH PRODUCERS
- 3:45 Anita Kelly**
2015 U.S. HYBRID STRIPED BASS INDUSTRY SURVEY
- 4:00 Striped Bass**
SBGA ANNUAL MEMBERS MEETING
- 4:30 Board Directors**
SBGA BOARD OF DIRECTORS MEETING

FORGING A FUTURE FOR COMPETITIVE RESEARCH FUNDING

Tuesday, February 21 2:30 - 5:00 Room 7

Chair: Bridget Owen

- 2:30 Matthew Clancy**
U.S. AGRICULTURAL R&D IN AN ERA OF FALLING PUBLIC FUNDING
- 2:45 Gene Kim, Caird Rexroad III**
AQUACULTURE RESEARCH OPPORTUNITIES AT USDA: NIFA EXTRAMURAL
AQUACULTURE PROGRAMS AND ARS INTRAMURAL RESEARCH LABORATORIES
- 3:15 Mike Rust**
TODAY'S RESEARCH FOR TOMORROW'S SEAFOOD AND WORKING
WATERFRONTS
- 3:45 Bridget Owen**
U.S. SOYBEAN FARMERS SUPPORTING A SUSTAINABLE FUTURE FOR
AQUACULTURE
- 4:00 Tim Kurt**
ADVANCING AQUACULTURE RESEARCH: THE VIEW FROM AFAR
- 4:15 PANEL Q&A**

FINFISH REPRODUCTION

Tuesday, February 21 3:30 - 5:15 Room 11

Chairs: Nicole Rhody, Julie Schroeter

- 3:30 Shafaq Fatima, Mark Adams, Ryan Wilkinson**
THE EFFECT OF PHOTOPERIOD MANIPULATION UPON MATURATION AND SEX
STERIODS PROFILES OF BROOK TROUT *Salvelinus fontinalis*
- 3:45 Boris Gomelsky, Jeffrey L. Warner, Thomas A. Delomas**
GONAD DEVELOPMENT IN ANEUPLOID ORNAMENTAL KOI CARP OBTAINED BY
CROSSING TRIPLOID FEMALES WITH DIPLOID MALES
- 4:00 Jeffrey Warner, Boris Gomelsky, Thomas Delomas**
REPRODUCTIVE ABILITY OF SECOND GENERATION KOI × GOLDFISH HYBRID
MALES AND RESULTS OF THEIR CROSSES WITH KOI FEMALES
- 4:15 Kevin Stuart, Ron Johnson, Lisa Armbruster, John Hyde, Mark Drawbridge**
CAPTIVE SPAWNING AND EGG QUALITY OF CALIFORNIA YELLOWTAIL *Seriola dorsalis*
- 4:30 Nicole R. Rhody, Matthew Resley, Rebecca Medvecky, Chris Deprez, Kevan Main, Dana Wetzel**
EFFECT OF CRUDE OIL EXPOSURE ON REPRODUCTION IN CAPTIVE FLORIDA
POMPANO BROODSTOCK
- 4:45 Kristen Towne, Konrad Dabrowski**
EVALUATION OF THE IMPACT OF PROLONGED HIGH TEMPERATURE EXPOSURE
ON GONADAL DIFFERENTIATION IN JUVENILE YELLOW PERCH *Perca flavescens*
- 5:00 William Childress, Terrence Tiersch**
SIMULATION MODELING OF THE CRYOPRESERVATION OF *Xiphophorus*
GERMPLASM

FISH NUTRITION – PROBIOTICS

Tuesday, February 21 3:45 - 5:00 Salon D

Chairs: Wendy Sealy, Delbert Gatlin

- 3:45 Lucas Keeton**, Susan Knudson, Becky Rivoire
UNDERSTANDING INTERSPECIES COMPETITION WITHIN PROBIOTICS AND DEBUNKING THE POND SIDE GROW OUT MYTH
- 4:00 Min Ju**, Delbert M. Gatlin III
EFFECTS OF DIETARY PREBIOTIC AND PROBIOTIC SUPPLEMENTATION ON GROWTH PERFORMANCE AND DISEASE RESISTANCE OF HYBRID STRIPED BASS *Morone chrysops* × *Morone saxatilis* IN PONDS
- 4:15 Ione Hunt von Herbing**, Michael Anderson, Wren Busby
BUGS & MORE BUGS: USING PROBIOTICS AND THE FISH GUT MICROBIOME TO PRODUCE HEALTHY FISH FOR HUMAN CONSUMPTION
- 4:30 Daniel Taylor**, Ann Stevens, Moonyoung Choi, David Drahos, Seth D’Imperio, Stephen Smith, Jared Heffron, David Kuhn
DIRECT-FED PROBIOTICS IMPROVE SURVIVAL IN SHRIMP *Litopenaeus vannamei* UNDER AHPND/EMS CHALLENGE
- 4:45 Jin-Hyeok Lee**, Seunghan Lee, Sungchul C. Bai
SYNERGETIC EFFECTS OF DIETARY *Bacillus subtilis* WB60 AND MANNAN OLIGOSACCHARIDE (MOS) IN JUVENILE JAPANESE EEL *Anguilla japonica*

TUESDAY

A BRIDGE TO AFRICAN AQUACULTURE – AN INSIGHT INTO THE DEVELOPMENT OF AQUACULTURE ACROSS AFRICA

Presented by the AwF UK Team

Tuesday, February 21 3:15 - 5:00 Salon C

Chair: Clifford Spencer

Aquaculture without Frontiers - UK

Hamady Diop (African Union - New Partnership for Africa’s Development)

Roger Krohn (Aquaculture Association of Southern Africa)

Kevan Main (former President - World Aquaculture Society)

Roger Gilbert (Vice Chairman - Aquaculture without Frontiers)

WEDNESDAY, February 22

LARVAL CULTURE

Wednesday, February 22 8:30 - 10:00 Room 11

Chairs: Eric Saillant, Nicole Rhody

- 8:30** **Brittany Peachey**, Delbert Gatlin III
EARLY ONTOGENY OF SELECTED DIGESTIVE ENZYMES IN LARVAL SOUTHERN FLOUNDER *Paralichthys lethostigma*
- 8:45** **Kevan Main**, Carlos Yanes-Roca, Nicole Rhody, Matthew Resley, Juliette Delabbio
EFFECTS OF LIGHT CONDITIONS ON THE LARVAL DEVELOPMENT OF TWO CENTROPOMID SPECIES *Centropomus undecimalis* AND *C. nigrescens*
- 9:00** **Elizabeth Silvy**, Todd Sink
DEVELOPMENT OF NEW REPRODUCTIVE AND LARVAL REARING METHODS TO ELIMINATE MAJOR CONSTRAINTS DURING PRODUCTION OF SOUTHERN FLOUNDER *Paralichthys lethostigma* FOR STOCK ENHANCEMENT
- 9:15** **Konrad Dabrowski**, Thomas Delomas
REPRODUCTION, DEVELOPMENT, AND GROWTH OF REDHEAD CICHLID *Cichlasoma synspilum* AND ITS HYBRID WITH MIDAS *Amphilophus citrinellum*
- 9:30** **David Prangnell**, Michael Matthews
THE EARLY LIFE HISTORY AND FOOD HABITS OF HATCHERY-REARED GUADALUPE BASS *Micropterus treculii*

TILAPIA

Wednesday, February 22 8:30 - 10:00 Room 1

Chair: Jim Franklin

- 8:30** **Hyun Sik Chu**, Sean O'Keefe, David Kuhn, Dan Taylor, Stephen Smith, Tyler Stoneham, Susan Duncan
21st CENTURY CONSUMER BEHAVIORS – WHY WE ARE INTERESTED IN VALUE-ADDED “DESIGNER” TILAPIA
- 8:45** **David Kuhn**, Stephen Smith
IMPROVING TILAPIA HEALTH AND INCREASING DISEASE PROTECTION WITHOUT THE USE OF VACCINES OR ANTIBIOTICS
- 9:00** **Adams O. Iyiola**, Mabel O. Ipinmoroti, Olugbenga Orisasona, Ifeoluwa A. Oladejo
HISTOPATHOLOGICAL EFFECTS OF PARAQUAT DICHLORIDE ON THE KIDNEY, LIVER, GILLS AND TISSUES OF TILAPIA *Oreochromis niloticus* FINGERLINGS
- 9:15** **Kevin Fitzsimmons**
SLOWING SALES OF TILAPIA IN THE U.S.: WHY AND WHAT CAN BE DONE TO RETURN TO RAPID GROWTH

- 9:30 R.S.N. Janjua**, Kevin Fitzsimmons, Sehar Munawar, Zoya Bilal
DEVELOPMENT OF TILAPIA (GIFT) AND SOY-BASED FEED INDUSTRY SECTOR
IN PAKISTAN AND STUDY OF BENEFIT OF SOY-BASED FLOATING FEED VERSES
MASH FEED IN TILAPIA (GIFT) IN PAKISTAN
- 9:45 Mohamed Megahed**
EFFECT OF INBREEDING ON GROWTH, SURVIVAL, DISEASE RESISTANCE AND
GENETIC DIVERSITY OF *Oreochromis niloticus* BASED ON THE FULL-SIBLING
INBREEDING FAMILIES IN TILAPIA HATCHERIES IN EGYPT

ENGINEERING

Wednesday, February 22 8:30 - 10:30 Room 13

Chairs: Tim Peiffer, Zac Chambers

- 8:30 John Colt**, Desmond Maynard
IMPACTS OF CHILLER FAILURE ON TEMPERATURE CHANGE IN ISOLATION
INCUBATORS FOR SALMONIDS
- 8:45 Daniel Moses**, John Colt
IMPACT OF FISH FEED ON AIRLIFT PUMP PERFORMANCE
- 9:00 Federico Rotman**, Kevin Stuart, Mark Drawbridge
SELF-CLEANING LARVAL REARING TANKS TO IMPROVE LARVAL PRODUCTION
OF CALIFORNIA YELLOWTAIL *Seriola dorsalis* AND WHITE SEABASS *Atractoscion
nobilis*
- 9:15 Marlon Greensword**, Ron Malone, Steven Hall
RICE HULL BIOFILTER DESIGN: LAB AND COMMERCIAL SCALE RESULTS
- 9:30 Veena Soni**
A MONITORING AND CONTROL SYSTEM FOR AQUACULTURE VIA WIRELESS
NETWORK AND ANDROID PLATFORM
- 9:45 Sulaiman Olanrewaju**
RISK AND RELIABILITY ANALYSIS OF OFFSHORE AQUACULTURE OCEAN
PLANTATION SYSTEM
- 10:00 Tyler Sclodnick**, Langley Gace, David Kelly, Steve Sutton
EVALUATING THE RISK OF EUTROPHICATION AND INFRASTRUCTURE
DAMAGE AT PROTECTED AND EXPOSED FINFISH PRODUCTION SITES USING A
GEOSPATIAL MODEL

WEDNESDAY

FARMING MARINE SEAWEED

Wednesday, February 22 8:30 - 12:30 Room 5

Chairs: Michael Chambers, Gabby Bradt

- 8:30 Michael Chambers**, Megan Peavey, Gabby Bradt
INTEGRATED MULTI-TROPHIC AQUACULTURE OF SUGAR KELP *Saccharina
latissima*
- 9:00 Clifford A. Goudey**, Scott Lindell, Ryan Beaumont, Hauke Kite-Powell
THE DEVELOPMENT OF INNOVATIVE ENGINEERING STRUCTURES FOR OFFSHORE
MACROALGAE FARMING

9:30 Gabriela M. Bradt, Michael Chambers
DEVELOPING A MARKET FOR IMTA GROWN SEA VEGETABLES

10:00 BREAK

11:00 Adam T. St-Gelais, Tollef K. Olson, David W. Fredriksson, Barry A. Costa-Pierce
COMMUNITY SCALE SEA VEGETABLE AQUACULTURE: A LOCAL APPROACH TO
GLOBAL DIVERSIFICATION OF WORKING WATERFRONTS

11:30 Gretchen Grebe
IMPROVED SITING OF KELP AQUACULTURE USING N15 STABLE ISOTOPE
ANALYSIS

12:00 David W. Fredriksson, Andrew Drach, Adam St. Gelais, Steven Reidel,
Colby Sowerby, Kyle Mortensen, Kelley Robinson, Seth Toski, Lauren Haller,
William Beaver, Barry Costa-Pierce
ENGINEERING TECHNIQUES FOR THE DESIGN OF OPEN OCEAN MACROALGAE
FARMING SYSTEMS

FISH NUTRITION – FEEDS AND FEEDING

Wednesday, February 22 8:30 - 12:30 Salon D

Chairs: Vikas Kumar, Jackie Zimmerman

8:30 Mark Portman
EFFECT OF DIETARY MOISTURE ON GROWTH AND INTESTINAL HISTOLOGY
Seriola dorsalis

8:45 James Barron, Kyle Hanson, Kelli Hawke, Racheal Headley, Ronald Twibell,
Ann Gannam
EVALUATION OF EFFLUENT WASTE WATER FROM SALMONID CULTURE AS
A POTENTIAL FOOD AND WATER SUPPLY FOR CULTURING LARVAL PACIFIC
LAMPREY *Entosphenus tridentatus*

9:00 John Walakira, John Kiburara, Jackson Efitre, Bridget Kimera, Euglance Ganda,
Casius Aruho, Joseph Molnar
RESPONSE OF AFRICAN LUNGFISH *Protopterus aethiopicus* LARVAE FED ON
COMMERCIAL DIETS AND *Artemia* sp. CYSTS

9:15 Noor Khan
EFFECT OF VARIOUS PROTEIN FEEDS ON THE GROWTH, BODY COMPOSITION,
HEMATOLOGY AND ENDOGENOUS ENZYMES OF CATFISH *Pangasius*
hypophthalmus

9:30 Matthew A. Smith, Luke A. Roy, Anita M. Kelly, Michele Thompson,
Herbert E. Quintero, Rebecca Lochmann, Jeonghwan Park
FEEDING REGIMES FOR LARGEMOUTH BASS AT HIGH SUMMER TEMPERATURES

9:45 Rebecca Lochmann, Joao Koch, Michele Thompson, Ruguang Chen,
Kurt Rosentrater
GROWTH AND HEALTH RESPONSES OF JUVENILE LARGEMOUTH BASS
Micropterus salmoides FED PRACTICAL ANIMAL-BASED AND PLANT-BASED
DIETS WITH DIFFERENT LEVELS OF VITAMIN A

10:00 BREAK

WEDNESDAY

- 11:00 James H. Tidwell**, Shawn D. Coyle, Leigh Anne Bright, John Hawke
IMPACT OF DIET ON GROWTH AND HEALTH INDICATORS FOR THE LARGEMOUTH BASS *Micropterus salmoides*
- 11:15 Biswamitra Patro**, Madison S. Powell, Frederic T. Barrows
EVALUATION OF VARYING LEVELS OF DIGESTIBLE PROTEIN AND DIGESTIBLE ENERGY AND THEIR RATIOS IN THE DIETS OF JUVENILE CUTTHROAT TROUT
- 11:30 Ann Gannam**, Ronald Twibell, Kyle Hanson, Larry Zeigenfuss
EVALUATION OF THE EFFECTS OF AN ALTERNATIVE FEEDING REGIME APPLIED IN THE HATCHERY ON GROWTH AND BODY COMPOSITION OF JUVENILE CHINOOK SALMON *Oncorhynchus tshawytscha*
- 11:45 Tracy Kennedy**, Arianna Bartlett, Joseph Hawkes, Amy Gossi, Brian Small, Madison Powell
TRANSCRIPTOMIC EFFECTS OF FEEDING SCHEDULE ENTRAINMENT ON RAINBOW TROUT *Oncorhynchus mykiss* HYPOTHALAMIC APPETITE-REGULATING HORMONES, INTESTINAL TRANSPORTERS, AND CIRCADIAN RHYTHM-REGULATING HORMONES
- 12:00 Ashley Fincannon**, Robert R. Vega, Delbert M. Gatlin III, Joe M. Fox, Blair D. Sterba-Boatwright
EFFECTS OF STOCKING DENSITY AND FEED RATE ON THE GROWTH OF HATCHERY-REARED JUVENILE SPOTTED SEATROUT *Cynoscion nebulosus*

AQUACULTURE TO RESTORE COASTAL ECOSYSTEMS

Wednesday, February 22 8:30 - 2:30 Salon B

Chair: Robert Jones

- 8:30 Bill Dewey**
WELCOMING REMARKS BY NATIONAL AQUACULTURE ASSOCIATION
- 8:35 Robert Jones**
AQUACULTURE BY DESIGN: THE NATURE CONSERVANCY'S GLOBAL AQUACULTURE PROGRAM
- 8:45 Michael Rust**
WORKING TOWARDS AN ECOSYSTEM APPROACH TO AQUACULTURE
- 9:15 Bill Dewey**
A FARMER'S EYE VIEW ON SHELLFISH ECOSYSTEM SERVICES
- 9:30 William C. Walton**, John E. Supan
OFF-BOTTOM OYSTER FARMING PROVIDING ECOSYSTEM SERVICES IN THE GULF OF MEXICO
- 9:45 Andrew Lacatell**, Lisa Kellogg, Paula Jasinski, Dave Jasinski
CHESAPEAKE BAY OYSTER AQUACULTURE: COMMUNICATING THE SCIENCE OF ECOSYSTEM SERVICES
- 10:00 BREAK**

- 11:00 Robert Rheault**, John Corbin, John Forster, Jim Parsons, Gale K. Vick, Dave Wallace, Paul Zajicek
AQUACULTURE-BASED TOOLS TO ENHANCE U.S. FISHERIES RESILIENCE IN RESPONSE TO CLIMATE CHANGE
- 11:15 Julianne Robinson**
BELIZE WEED: THE NEXT BIG THING FOR FISHERIES
- 11:45 TJ Tate**
CONSUMERS: CHANGING BEHAVIORS NOT JUST PERCEPTION
- 12:00 Michelle L. Walsh**, Robert C. Jones
COMPARATIVE ANALYSIS OF U.S. FEDERAL AQUACULTURE MANAGEMENT TO THE FAO CERTIFICATION GUIDELINES: AQUACULTURE FOR RESTORATION AND IMPACT MITIGATION
- 12:30 LUNCH**
- 1:30 Julie Reichert-Nguyen**, Jeff Cornwell, Lisa Kellogg, Mark Luckenbach, Suzanne Bricker, Chris Moore, Chesapeake Bay Foundation, Matt Parker, Ken Paynter, Lynn Fegley, Larry Sanford, Bill Wolinski, Karen Hudson, Andrew Lacatell, Emily French, Ward Slacum
NUTRIENT REDUCTION EFFECTIVENESS OF OYSTER AQUACULTURE FOR BEST MANAGEMENT PRACTICE APPLICATION IN THE CHESAPEAKE BAY
- 1:45 Elizabeth Silvy**, Todd Sink
MANIPULATION OF GENDER IN SOUTHERN FLOUNDER TO IMPROVE BOTH STOCK ENHANCEMENT PROGRAMS AND FOOD PRODUCTION
- 2:00 PANEL Q&A**

EXTENSION AND OUTREACH

Wednesday, February 22 8:30 - 5:00 Room 17
Chairs: Forrest Wynne, Allen Patillo

- 8:30 Forrest Wynne**
AQUACULTURE EXTENSION AND OUTREACH
- 8:45 Gary Fornshell**, Forrest Wynne
IDAHO – MORE THAN FAMOUS POTATOES – SITE OF THE NATIONAL AQUACULTURE EXTENSION CONFERENCE JUNE 2017
- 9:00 Don Webster**, Matt Parker, Don Meritt
ORGANIZING EFFECTIVE AQUACULTURE EXTENSION PROGRAMS THROUGH ACTION TEAMS: PARTNERING FOR PROGRESS
- 9:15 Kenneth Thompson**, Buddhi Gyawali, Jeremy Sandifer, Vikas Kumar, Kirk Pomper, John Sedlacek, James Tidwell, Forrest S. Wynne, Carl D. Webster
EVALUATION OF STUDENTS' PERCEPTIONS AND BEHAVIOR OF PROJECT-BASED LEARNING PROGRAMS THROUGH HANDS-ON AQUACULTURE ACTIVITIES
- 9:30 Bauer Duke**
AQUACULTURE IN THE CLASSROOM: A REVIEW OF TEACHER TRAINING IN ARKANSAS

- 9:45 Han-Ping Wang**, Jordan Maxwell, Matthew Smith, Paul O'Bryant, Dean Rapp
AN INNOVATIVE EDUCATIONAL PROGRAM: AQUACULTURE BOOT CAMP (ABC)
- 10:00 BREAK**
- 11:00 Mercy L. Pena Morales**, Herbert E. Quintero Fonseca, Susanne C. Ashby, Anita M. Kelly
AQUACULTURE DATA MAY BE USED BY TEACHERS AS A TOOL FOR TEACHING A SPECIFIC MATHEMATICS TOPIC
- 11:15 Steven Hall**, Melody Thomas, Alex Geddie, Mike Burchell
COMPARISON OF FOUR DIFFERENT VENUES FOR OUTREACH IN NORTH CAROLINA
- 11:30 Matthew A. Smith**
A COMPARISON OF EXTENSION AQUACULTURE PROGRAM DEVELOPMENT IN OHIO AND ARKANSAS
- 11:45 Emma Wiermaa**, Greg Fischer, Chris Hartleb
EDUCATING THE FUTURE AND PRESENT WORKFORCE THROUGH INTERACTIVE, HANDS-ON APPLICATIONS OF AQUACULTURE
- 12:00 Terry Hanson**
AQUACULTURE EXTENSION FIELD TRIAL EXPERIENCES
- 12:15 Luke Roy**, Anita M. Kelly, Nathan Stone, Carole R. Engle, Jeonghwan Park, Matthew A. Smith
USING AN EXTENSION APPROACH TO ADDRESS AN EMERGING INDUSTRY CONCERN: A CASE STUDY OF WINTER FISH LOSSES IN ARKANSAS
- 12:30 LUNCH**
- 1:30 Anita Kelly**, Julieann Jacobs, Luke Roy
COLLABORATION BETWEEN EXTENSION AND INDUSTRY: COORDINATION AND ASSESSMENT OF BACTERIA TO CONTROL HYDROGEN SULFIDE IN AQUACULTURE PONDS
- 1:45 Herbert E. Quintero Fonseca**, George Selden, Anita Kelly, Luke Roy
UAPB-AQUACULTURE EXPERIMENTAL RESEARCH STATION: EXTENSION AND OUTREACH ACTIVITIES
- 2:00 D. Allen Pattillo**, David Cline, Linda O'Dierno, Paul W. Zajicek
BEST PRACTICES AND LESSONS LEARNED FOR CONDUCTING EXTENSION WEBINARS
- 2:15 D. Allen Pattillo**, David Cline, Linda O'Dierno, Paul W. Zajicek
EFFECTIVE TECHNIQUES FOR AQUACULTURE INFORMATION TRANSFER
- 2:30 Kwamena Quagrainie**, Stephen Amisah
MOBILE PHONE TECHNOLOGY AND FISH MARKETING INFORMATION SYSTEM (FMIS) IN GHANA
- 2:45 Nilima Renukdas**, Anita Kelly
A LITTLE KNOWN EXTENSION PROGRAM IN FISH HEALTH
- 3:00 BREAK**

- 3:30 Dennis McIntosh**
SPLIT ACADEMIC APPOINTMENTS: THE GOOD, THE BAD, AND THE UGLY
- 3:45 Forrest Wynne**
THE TERMS EDUCATION, ADVOCACY AND PROMOTION IN AQUACULTURE EXTENSION PROGRAMS: WHAT DO THEY MEAN AND WHERE AND WHEN TO DRAW THE LINE?
- 4:00 Joseph Buttner**, Gregory Carroll, Alan Shwedel, George Weagba, Jerry Kuhl, Moses Yama, Roger Domah
PONDS FOR PEACE: RESURRECTION OF AQUACULTURE IN LIBERIA
- 4:15 Sujan Bhattarai**, Suraj Singh, Sailesh Gurung
STATUS OF FISH FARMING IN SHIKTAHAN VDC OF RUPANDEHI DISTRICT OF NEPAL
- 4:30 David Cline**
CREATING BETTER EDUCATIONAL VIDEOS FOR EXTENSION AND OUTREACH
- 4:45 Ganesh Karunakaran**
PIT FALLS AND HONEY TRAPS IN AQUACULTURE FARM MANAGEMENT

MARINE AQUACULTURE

Wednesday, February 22 8:30 - 2:30 Salon C

Chair: Megan Davis

- 8:30 Megan Davis**, Paul Wills, Marty Riche, Susan Laramore
THE AQUACULTURE DEVELOPMENT PARK AT HARBOR BRANCH OCEANOGRAPHIC INSTITUTE: 20 YEARS OF OPERATION
- 8:45 Wojciech Wawrzynski**
TRANS-ATLANTIC COOPERATION: AQUACULTURE BUSINESS, RESEARCH AND EDUCATION PRIORITIES
- 9:00 Najat El Moutchou**, Lisa Wickliffe, Barry King, James A. Morris, Jr.
DEVELOPMENT OF SITING GUIDELINES, MONITORING STANDARDS, AND ENVIRONMENTAL MODELS COASTAL FINFISH AQUACULTURE IN MOROCCO
- 9:15 Neil Anthony Sims**
PIVOT TO THE PACIFIC – PROSPECTS FOR OPEN OCEAN AQUACULTURE IN THE WESPAC REGION
- 9:30 Lisa Wickliffe**, Ken Riley, James Morris
NAVIGATING OFFSHORE AQUACULTURE THROUGH A SEA OF OCEAN COMMERCE: A STUDY OF TRAFFIC AND OCEAN USE IN THE GULF OF MEXICO AND SOUTHERN CALIFORNIA
- 9:45 Jesse DeNike**, Chris Cziesla, Marlene Meaders, Billy Plauche
WEST COAST AQUACULTURE PERMITTING: TRIALS OF A CONVOLUTED REGULATORY ENVIRONMENT
- 10:00 BREAK**

- 11:00 John Wintermeyer**, K. Vallier
MINI-ROVs IMPROVING FINFISH AQUACULTURE OPERATIONS
- 11:15 Lisa Vollbrecht**, Dale Sarver, Neil Sims
HERBIVOROUS MARINE FINFISH CULTURE – THE COMPELLING CASE FOR KYPHOSIDS
- 11:30 Emma Taccardi**, Carrie Byron, Ian Bricknell
CAN STABLE ISOTOPES INDICATE THE GEOGRAPHICAL ORIGINS OF SEA LICE?
- 11:45 Scott Lindell**, David Bailey, Clifford Goudey, Bren Smith, Charles Yarish
INTEGRATING MUSSEL AND KELP LONGLINE CULTURE STRUCTURES AND MANAGEMENT
- 12:00 Eric Gigli**, Reginald Blaylock, Eric Saillant
EFFECTS OF SALINITY AND DENSITY ON GROWTH AND SURVIVAL OF SPOTTED SEATROUT *Cynoscion nebulosus* REARED IN RECIRCULATING AQUACULTURE SYSTEMS
- 12:30 LUNCH**
- 1:30 Kenneth Saillant**, Alycia Herndon, Ahmed Mustafa
AQUACULTURE OF SEA URCHIN: WILL THEY BE STRESSED?
- 1:45 Jeff Kaiser**, Lee Fuiman
SPAWNING OF PIGFISH *Orthopristis chrysoptera* FOR THE MARINE BAITFISH INDUSTRY
- 2:00 Cynthia Faulk**, Kathryn L. Thompson, Lee A. Fuiman
OPTIMIZING REARING CONDITIONS FOR LARVAL PIGFISH *Orthopristis chrysoptera*
- 2:15 Troy Rezek**, James Morris, Kenneth Riley, Wade Watanabe, M.S. Alam, Andrew Ostrowski
RED PORGY AQUACULTURE: WHAT HAVE WE LEARNED, WHERE DO WE GO FROM HERE

SHRIMP AND CRUSTACEANS

Wednesday, February 22 8:30 - 3:30 Room 7

Chair: Kathy Tang

- 8:30 Mohamed Megahed**
CHARACTERIZATION OF MICROSATELLITE DNA MARKERS IN POPULATIONS OF INDIAN WHITE SHRIMP *Fenneropenaeus indicus* ASSOCIATED WITH SUSCEPTIBILITY TO THE WSSV
- 8:45 Maarten Jay van Schoonhoven**, Dang Thi Hoang Oanh
ROLE OF ALGAE EXTRACTS IN REDUCING STRESS AND ACUTE HEPATOPANCREATIC NECROSIS SYNDROME (AHPNS) MORTALITIES IN WHITELEG SHRIMP *Litopenaeus vannamei*
- 9:00 May Lwin**
DEVELOPMENT OF FORMULATED FEED FOR MANGROVE CRAB *Scylla* spp.

- 9:15 Jasmine Smalls**, Dennis McIntosh
THE USE OF PROBIOTICS IN SHRIMP AQUACULTURE
- 9:30 Kathy Tang**, Jee Eun Han, Luis Fernando Aranguren, Brenda White-Noble, Margeaux Schmidt, Donald Lightner
DENSE POPULATIONS OF THE MICROSPORIDIAN *Enterocytozoon hepatopenaei* (EHP) IN FECES OF *Penaeus vannamei* EXHIBITING WHITE FECES SYNDROME AND PATHWAYS OF THEIR TRANSMISSION TO HEALTHY SHRIMP
- 9:45 Kathy Tang**, Fernando Aranguren, Jee Eun Han, Irina Maskaykina, Margeaux Schmidt, Donald Lightner
HISTOPATHOLOGY AND *IN SITU* DETECTION OF THE MICROSPORIDIAN *Enterocytozoon hepatopenaei* (EHP) IN *Penaeus vannamei* CULTURED IN A LATIN AMERICA COUNTRY
- 10:00 BREAK**
- 11:00 Luis Fernando Aranguren Caro**, Kathy Tang-Nelson, Donald Lightner
BIOSECURITY AND THE RELEVANCE OF THE PROFICIENCY TEST (PT TEST)
- 11:15 Craig Browdy**, Peter Van Wyk, Alonnah Creswell, Lucas Jennings
DEVELOPMENT OF A REPLICATED LABORATORY SCALE SYSTEM FOR SHRIMP LARVAL NUTRITION RESEARCH
- 11:30 Richard Hulefeld**, Vikas Kumar, James Tidwell, Ramanathan Lalgudi, Rob Cain, Barry McGraw
IMPROVED SOYBEAN MEAL (EnzoMeal) ALTERNATIVE OF FISHMEAL FOR SUSTAINABLE PRODUCTION OF PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 11:45 Mingming Duan**, D. Allen Davis
DETERMINATION OF METHIONINE REQUIREMENT AND EFFICACY OF METHIONINE SUPPLEMENTS FOR PACIFIC WHITE SHRIMP *Litopenaeus vannamei* FED WITH SOY-BASED DIETS
- 12:00 Xuan Qiu**, Donald Davis
ULVA MEAL *Ulva pertussa* AS A SUBSTITUTE FOR SOYBEAN MEAL IN PRACTICAL DIETS FOR PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 12:15 Carter Ullman**, Melanie Rhodes, Romi Novriadi, Sirirat Chatvijitkul, Thomas Derbes, Terry Hanson, D. Allen Davis
EFFECTS OF FOUR DIFFERENT FEEDING TECHNIQUES ON THE POND CULTURE OF PACIFIC WHITE SHRIMP *Litopenaeus vannamei*
- 12:30 LUNCH**
- 1:30 Vikas Kumar**, Kristy Allen, Kenneth R. Thompson, Keith Filer, James H. Tidwell
DIETARY EFFECTS OF ALGAL MEAL *Schizochytrium* sp. ON LIPID METABOLISM AND OXIDATIVE STRESS ENZYMES ACTIVITY IN SHRIMP *Litopenaeus vannamei*
- 1:45 Mohamed Megahed**
CHARACTERIZATION OF TEN POLYMORPHIC MICROSATELLITE LOCI USEFUL FOR SELECTIVE BREEDING PROGRAM IN INDIAN WHITE SHRIMP *Fenneropenaeus indicus*

- 2:00 Susan Laramore**, John Scarpa
GROWTH AND SURVIVAL OF SHRIMP CULTURED IN WATER WITH DIFFERING IONIC PROFILES
- 2:15 Eugene Blair**, Shawn D. Coyle, James H. Tidwell
LARVICULTURE DEVELOPMENT FOR THE AFRICAN RIVER PRAWN *Macrobrachium vollehovenii*
- 2:30 Richard Bryant**, Dakota Raab, Siddhartha Dasgupta, Richard Hulefeld
PRODUCTION OF SOFT-SHELL AUSTRALIAN RED CLAW CRAYFISH *Cherax quadricarinatus* AT A SMALL SCALE
- 2:45 Ricardo Sanchez Diaz**, Lucio Galaviz Silva, Jose Cuauhtemoc Ibarra Gamez
EVALUATION OF MARINE BACTERIA THROUGH *IN VITRO* AND *IN VIVO* ASSAYS AND THEIR POTENTIAL USE AS FEED ADITIVE AND PROBIOTIC AGENT AGAINST PATHOGENIC *Vibrio parahaemolyticus* (AHPND) IN WHITE SHRIMP *Litopenaeus vannamei*
- 3:00 Adriana Rodriguez**, Anderson Guerrero, Laura Gutiérrez, Jose Villacob
FIRST PRODUCTION OF JUVENILE SEA URCHIN *Lytechinus variegatus* AND EFFECT OF TEMPERATURE ON GROWTH UNDER LABORATORY CONDITIONS
- 3:15 Xuan Qiu**, Scott L. Tilton, Donald A. Davis
UTILIZATION OF CORN PROTEIN WITH YEAST AS A PROTEIN SOURCE IN PRACTICAL DIETS FOR PACIFIC WHITE SHRIMP *Litopenaeus vannamei*

AQUATIC VETERINARY PRACTICE AND AQUACULTURE PRODUCTION – CONTINUED

Wednesday, February 22 8:30 - 12:30 Salon A

Chairs: Dave Scarfe, Pat Gaunt

- 8:30 Kathleen Hartman**
COMMERCIAL AQUACULTURE HEALTH PROGRAM STANDARDS (CAHPS)
- 9:00 Christa Speekmann**
NATIONAL VETERINARY ACCREDITATION PROGRAM MODULE # 15: PREVENTING DISEASE INTRODUCTION AND SPREAD IN AQUACULTURE
- 11:15 Kathleen Hartman**
NATIONAL VETERINARY ACCREDITATION PROGRAM MODULE #28: SIGNIFICANT AND EMERGING VIRAL DISEASES OF CARP, KOI AND GOLDFISH
- 12:15 Panel Discussion**
IMPLEMENTING CAHPS AND NVAP PROGRAMS TO MEET THE NEEDS OF AQUACULTURE PRODUCERS
- 9:00 - 3:00 Room 8 e-VFDs**
GVL/Merck to work one-on-one with individual Vets and Producers to demonstrate e-VFDs with Ron Lane, Tim Kniffen

AMERICA'S TILAPIA ALLIANCE

Wednesday, February 22 10:30 - 12:30 Room 1

Chair: Jim Franklin

WALLEYE

Wednesday, February 22 11:00 - 12:30 Room 13

Chairs: Greg Fischer, Alan Johnson

- 11:00 J. Alan Johnson**
WALLEYE PRODUCTION CHALLENGES AND SOLUTIONS FOR SPORT FISH AND FOOD FISH
- 11:15 Gregory Fischer**
INTENSIVE PRODUCTION OF HYBRID WALLEYE *Sander vitreum* × *S. canadense* IN A RECYCLE WATER SYSTEM
- 11:30 Paul F. Methner**, T.D. Drew, R.W. Zheng, J.L. Smith, S.V. Krause, K.K. Loftus
EFFECTS OF DIET AND REARING UNIT SIZE ON THE INTENSIVE CULTURE OF NEWLY-HATCHED WALLEYE *Sander vitreus* IN A RECIRCULATING AQUACULTURE SYSTEM AT ONTARIO'S BLUE JAY CREEK FISH CULTURE STATION
- 11:45 Kevin Kelsey**, Thomas Chairvolotti, Benjamin Rooks
APPLIED INTENSIVE CULTURE TECHNIQUES OF WALLEYE *Sander vitreus* USED IN FISHERIES RESTORATION EFFORTS FOR LAKE CHAMPLAIN
- 12:00 Timothy Drew**, Ryan W. Zheng, Jennifer L. Smith, Kyle A. Reynolds, Kevin K. Loftus
EFFECTS OF DIET AND REARING UNIT SIZE ON GROWTH AND SURVIVAL OF NEWLY-HATCHED WALLEYE *Sander vitreus* GROWN UNDER INTENSIVE CONDITIONS AT ONTARIO'S WHITE LAKE FISH CULTURE STATION AND PROGRESS ON DEVELOPING A CAPTIVE BROODSTOCK
- 12:15 John Davidson**, Frederic Barrows, Brandon Gottsacker, Robert Summerfelt, Christopher Good, Gregory Fischer, Steven Summerfelt
WALLEYE *Sander vitreus* PERFORMANCE, WATER QUALITY, AND WASTE PRODUCTION IN RECIRCULATION AQUACULTURE SYSTEMS WHEN FEEDING DIETS WITH AND WITHOUT FISHMEAL

AQUACULTURE WITHOUT FRONTIERS

Wednesday, February 22 11:00 - 12:30 Room 11

Chair: Roy Palmer

- 11:00 Roy D. Palmer**
AQUACULTURE WITHOUT FRONTIERS – DEVELOPMENT, WELFARE AND POVERTY ALLEVIATION

FORGING NEW FRONTIERS: ROUNDTABLE OF ASSOCIATIONS

Wednesday, February 22 1:30 - 2:45 Room 11

Chair: Roy Palmer

Aquaculture without Frontiers

- 1:30 Caird Rexroad III**, David C. Love
FORGING NEW FRONTIERS: ROUNDTABLE OF ASSOCIATIONS

FISH NUTRITION – LIPIDS

Wednesday, February 22 1:30 - 5:00 Salon D

Chair: Rebecca Lochmann

- 1:30 Ronald Twibell**, Ann Gannam, James Barron, Kieslana Wing, Kyle Hanson
EFFECTS OF DIETARY LIPID SOURCE AND ULTRAVIOLET RADIATION ON GROWTH AND FATTY ACID PROFILE OF STEELHEAD *Oncorhynchus mykiss*
- 1:45 Ken Overturf**, Jason Abernathy
ENHANCING THE ABILITY OF SALMONIDS TO CONVERT PLANT OILS INTO EPA AND DHA
- 2:00 Yang Jin**, Rolf Erik Olsen, Mari Ann Østensen, Gareth Gillard, Sven Arild Korsvoll, Nina Santi, Jacob Seilø Torgersen, Arne Bjørke Gjuvsland, Jon Olav Vik, Simen Rød Sandve, Yngvar Olsen
TRANSCRIPTOMIC STUDIES OF LIPID METABOLISM IN DIFFERENT INTESTINAL SECTION OF SALMON FRY FED VEGETABLE OIL
- 2:15 Luke A. Roy**, Steven D. Rawles, Anita M. Kelly, Jeonghwan Park, Herbert E. Quintero, Carl D. Webster
GROWTH, SURVIVAL, AND FATTY ACID COMPOSITION OF COPPERNOSE BLUEGILL *Lepomis macrochirus* subspecies OFFERED DIFFERENT WINTER FEEDING REGIMES
- 2:45 John Grayson**, Richard Bruno, Konrad Dabrowski
EVALUATING DIFFERENT LEVELS OF -TOCOPHEROL SUPPLEMENTATION FOR LIVE FOOD PUFA ENRICHMENTS AND THEIR INFLUENCE ON THE SURVIVAL, GROWTH, AND CONDITION OF YELLOW PERCH *Perca flavescens* LARVAE
- 3:30 Regina Edziye**, Rita Abera, Josephine Afagachie, Nelson Agbo, Rebecca Lochmann
PROTEIN AND LIPID COMPOSITION OF INDIGENOUS OILSEEDS IN GHANA AND THEIR POTENTIAL FOR USE IN ANIMAL FEEDS
- 3:45 William Bugg**, Karim Khalil, Melissa Boersma, Chia Chen Weng Chen, Sammi Bustos, Sheng Dong, Rex Dunham
THE EFFECTS OF THE MASOU SALMON DELTA5-DESATURASE TRANSGENE ON N-3 FATTY ACID PRODUCTION IN COMMON CARP *Cyprinus carpio* AND CHANNEL CATFISH *Ictalurus punctatus*
- 4:00 Abdul Mateen**, Rizwana Kazim
COMPARATIVE GROWTH AND FATTY ACID PROFILE OF *Oreochromis niloticus* FED PLANT AND ANIMAL ORIGIN FAT SUPPLEMENTED FEED

WEDNESDAY

FISH PHYSIOLOGY

Wednesday, February 22 1:30 - 5:00 Room 13

Chairs: Steve Lochmann, Chris Green

Sponsored by FCS, AFS

- 1:30 Alf Haukenes**
AQUACULTURE AS A FOLLOWER AND/OR LEADER IN BUILDING AN UNDERSTANDING OF STRESS PHYSIOLOGY IN ANIMALS
- 1:45 Steve Lochmann**
ANALYSIS OF MEETING ABSTRACTS AS AN INDICATOR OF EMERGING ISSUES IN STRESS AND CULTURED AQUATIC SPECIES
- 2:00 Amit Sinha**, Jyotsna Shrivastava, Ronny Blust, Gudrun De Boeck
ECO-PHYSIOLOGICAL MEMORY OF FISH TO STRESS EPISODES: POTENTIAL ROLE IN AMMONIA ACCLIMATION
- 2:15 Amit Ranjan**, Prem Prakash Srivastava, Kamal Kant Jain, Muralidhar P. Ande
COMPARATIVE EVALUATION OF METABOLIC ENZYMES ACTIVITIES IN DIFFERENT TISSUES OF *Pangasianodon hypophthalmus* (SAUVAGE, 1878) FINGERLING REARED AT HIGHER TEMPERATURE
- 2:30 Andrea Yammine**, Christopher Green, Alf Haukenes
USE OF SURFACE MUCUS AS A BIOMARKER FOR ENDOCRINE DISRUPTION IN *Fundulus grandis*
- 2:45 Benjamin Renquist**, Caroline Foy, Kyle Kentch
MEASURING METABOLIC RATE OF EMBRYONIC FISH TO PREDICT GROWTH RATE
- 3:30 Kevin Fisher**, Mohammad Alam, Konrad Dabrowski
UNDERSTANDING THE MECHANISMS OF WINTER SURVIVAL THROUGH BIOCHEMICAL ADAPTATIONS IN INVASIVE SPECIES OF ASIAN CARP
- 3:45 Beth Cleveland**, Lisa Radler
LEUCINE AND METHIONINE DEFICIENCY INDUCE CATABOLISM THROUGH NON-OVERLAPPING MECHANISMS IN RAINBOW TROUT *Oncorhynchus mykiss* PRIMARY MYOBLASTS
- 4:00 Miguel Arturo Cabanillas Gámez**, Lus M. López Acuña, Mario A. Galaviz Espinoza, Conal D. True, Ulises Bardullas
TRYPTOPHAN ENRICHED DIETS INCREASE THE SEROTONIN LEVEL IN THE BRAIN OF THE TELEOST *Totoaba macdonaldi* AND ACTIVATES THE NEGATIVE FEEDBACK MECHANISM AFTER AN EVENT OF ACUTE STRESS
- 4:15 Nessrin Kheirallah**
NOVEL NON-ESTROGENIC ENDPOINTS IN ECOTOXICOLOGY: USING ZEBRAFISH AS A MODEL

WEDNESDAY

U.S. TROUT FARMERS ASSOCIATION PRODUCER FORUM

Wednesday, February 22 2:30 - 5:30 Salon B

Chair: Gary Fornshell

- 2:30 Carole R. Engle**, Jonathan van Senten
THE ECONOMIC IMPACT OF REGULATIONS ON U.S. TROUT AQUACULTURE GROWTH
- 2:45 Gary Fornshell**
PREDICTING GROWTH
- 3:30 Ken Cain**
EMERGING AND RE-EMERGING FLAVOBACTERIAL PATHOGENS OF TROUT
- 3:45 Wendy Sealey**
FORECASTING FUTURE INGREDIENTS FOR TROUT FEEDS
- 4:00 Jeff Hinshaw**, Gary Fornshell
THE PROCESS OF WORKING WITH NGOS THAT RATE SEAFOOD: THE GOOD, THE BAD, AND THE UGLY
- 4:30 Brian Small**
BUILDING A DEEPER RELATIONSHIP BETWEEN THE HAGERMAN FISH CULTURE EXPERIMENT STATION AND U.S. TROUT FARMERS
- 4:45 Timothy D. Leeds**, Roger L. Vallejo, Gregory M. Weber, Dianelys Gonzalez-Pena, Jeffrey T. Silverstein
RESPONSE TO FIVE GENERATIONS OF SELECTION FOR GROWTH PERFORMANCE TRAITS IN RAINBOW TROUT
- 5:00 Trout Farmers**
U.S. TROUT FARMERS ASSOCIATION MEMBERS AND BUSINESS MEETING

PROMOTING SEAFOOD CONSUMPTION (GILLS)

Wednesday, February 22 3:30 - 5:00 Room 11

Chair: Roy Palmer

Aquaculture without Frontiers

- 3:30 Nicholas V.C. Ralston**, Laura J. Raymond
SELENIUM HEALTH BENEFIT VALUES CONFIRM OCEAN FISH CONSUMPTION PREVENTS MERCURY TOXITY
- 3:45 Darryl E. Jory**, Roy Palmer
FACTS ABOUT SHRIMP AND CHOLESTEROL
- 4:00 Nancy Peterson**
SHAPING CONSUMER PERCEPTIONS OF FARM RAISED SEAFOOD
- 4:15 David C. Love**
AQUACULTURE, FOOD SYSTEMS, AND PUBLIC HEALTH

WEDNESDAY

- 4:30 John W. Ewart, Doris T. Hicks**
SEAFOOD HEALTH FACTS: MAKING SMART CHOICES TO BALANCE THE BENEFITS
AND RISKS OF SEAFOOD CONSUMPTION
- 4:45 Roy D. Palmer**
PROMOTING SEAFOOD CONSUMPTION: A TOOL FOR IMPROVING NUTRITION,
HEALTH AND REGIONAL DEVELOPMENT – PUBLIC POLICY AND PRODUCERS
EFFORT