

# Flatfish Biology Conference Celebrating 30 Years 2016

December 6<sup>th</sup> & 7<sup>th</sup>  
Water's Edge Resort and Spa, Westbrook, CT

## Oral Presentations Salons A/B

Tuesday December 6<sup>th</sup>

**8:00 a.m.**      **Registration/Coffee/Continental Breakfast**

**8:45 a.m.**      Welcome and Introduction  
**Renee Mercaldo-Allen, Chair**  
*NOAA Fisheries, Northeast Fisheries Science Center  
Milford Laboratory, Milford, CT*

**Dr. Thomas Noji, Chief Ecosystems and Aquaculture Division**  
*NOAA Fisheries, Northeast Fisheries Science Center  
James J. Howard Marine Sciences Laboratory, Highlands, NJ*

### Session I

**Penny Howell, Chair**

*Connecticut Department of Energy and Environmental Protection  
Marine Fisheries Division, Old Lyme, CT*

**9:00 a.m.**      Using a Long-term Dataset to Analyze the Effect of Season on the Size and  
Abundance of Flatfishes in a Georgia Tidal Creek  
**Hannah Z. Reilly and Mary Carla Curran\***  
*Savannah State University, Marine Sciences Program, Savannah, GA*

**9:20 a.m.**      Blue Crab Predation on Juvenile Winter Flounder in New England Waters  
Assessed Through PCR-based Methods  
**Kelly J. Cribari<sup>1\*</sup>, Abigail K. Scro<sup>2</sup>, Kathryn R. Markey<sup>2</sup>, and David L.  
Taylor<sup>1</sup>**  
*<sup>1</sup>Roger Williams University, Department of Marine Biology, Bristol, RI, <sup>2</sup>Aquatic  
Diagnostic Laboratory, Bristol, RI*

**9:40 a.m.** Migration Diversity, Spawning Behavior and Temperature Selection of Winter Flounder: Implications for Recovery of a Depleted Species  
**Catherine Ziegler\* and Michael Frisk**  
*Stony Brook University, School of Marine and Atmospheric Sciences,  
Stony Brook, NY*

**10:00 a.m.** The Effects of Sedimentation on the Survival of Winter Flounder Eggs Incubated in the Laboratory  
**Justin L. Wilkens\*, Burton C. Suedel, Alan J. Kennedy, Cheryl R. Montgomery, and Edward O'Donnell**  
*US Army Engineer Research and Development Center, Vicksburg, MS*

**10:20 a.m. Break/Coffee/Refreshments**

## **Session II**

**Steve Dwyer, Chair**

*Dominion Nuclear Connecticut, Inc.,  
Millstone Environmental Laboratory  
Waterford, CT*

**10:50 a.m.** Ocean Exploration, Morphological and Molecular Approaches, Contribute to Discoveries of Unrecognized Diversity of Tonguefishes (Pleuronectiformes: Cynoglossidae)  
**Thomas A. Munroe**  
*NOAA Fisheries, National Systematics Laboratory, National Museum of Natural History, Smithsonian Institution, Washington, DC*

**11:10 a.m.** Considering Fishery Catch Rates for New England Groundfish Assessments: A Case Study in Witch Flounder  
**Steven X. Cadrin and Brooke L. Wright\***  
*University of Massachusetts Dartmouth, School for Marine Science and Technology, New Bedford, MA*

**11:30 a.m.** Investigating Offshore Habitat of Southern New England Winter Flounder Using Dredge Surveys  
**Carl Hunstberger, Liese Siemann, Samir Patel\*, and Ronald Smolowitz**  
*Coonamessett Farm Foundation, Inc., East Falmouth, MA*

**11:50 a.m.** Role of Norwalk Harbor as a Nursery Ground for Winter Flounder (*Pseudopleuronectes americanus*)  
**Students from Wilton High School Marine Biology Club<sup>1\*</sup>, Sarah Crosby<sup>2</sup>, Suzanne Steadham<sup>1</sup>, Peter Fraboni<sup>2</sup>, Nicole Cantatore<sup>2</sup>, and Joshua Cooper<sup>2</sup>**  
*<sup>1</sup>Wilton High School, Wilton, CT, <sup>2</sup>Harbor Watch, Earthplace, Westport, CT*

**12:10 p.m. Hosted Buffet Lunch**

## Session III

**Sandra Sutherland, Chair**

*NOAA Fisheries, Northeast Fisheries Science Center  
Woods Hole Laboratory, Woods Hole, MA*

- 1:30 p.m.** Temporal Changes in Sex Ratio Observed Among Winter Flounder (*Pseudopleuronectes americanus*) in the Northwest Coastal Atlantic  
**Anne McElroy<sup>1\*</sup>, Matthew Siskey<sup>1</sup>, Paul Geoghegan<sup>2</sup>, Ann Pembroke<sup>2</sup>, Michael Moore<sup>3</sup>, and Ken Keay<sup>4</sup>**  
*<sup>1</sup>Stony Brook University, School of Marine and Atmospheric Sciences, Stony Brook, NY, <sup>2</sup>Normandeau Associates Inc., Bedford, NH, <sup>3</sup>Woods Hole Oceanographic Institution, Woods Hole, MA, <sup>4</sup>Massachusetts Water Resources Authority, Boston, MA*
- 1:50 p.m.** Evidence of Spatiotemporal Skew in the Sex Ratio of Winter Flounder in Narragansett Bay, Rhode Island  
**Joseph A. Langan<sup>1\*</sup>, Gavino Puggioni<sup>2</sup>, and Jeremy S. Collie<sup>1</sup>**  
*<sup>1</sup>University of Rhode Island, Graduate School of Oceanography, Narragansett, RI, <sup>2</sup>University of Rhode Island, Kingston, RI*
- 2:10 p.m.** Surviving their First Summer: Winter Flounder Mortality and Growth in Long Island Bays  
**Tara Dolan\*, Matthew Siskey, Anne McElroy, and Michael Frisk**  
*Stony Brook University, School of Marine and Atmospheric Sciences, Stony Brook, NY*
- 2:30 p.m.** Fecundity of Winter Flounder, *Pseudopleuronectes americanus*, in US Waters: Analysis of Geographic, Environmental, and Physiological Drivers  
**Mark J. Wuenschel<sup>1\*</sup>, W. David McElroy<sup>2</sup>, Emilee Tholke<sup>2</sup>, Kim Hyde<sup>3</sup>, and Richard S. McBride<sup>1</sup>**  
*<sup>1</sup>NOAA Fisheries, Northeast Fisheries Science Center, Woods Hole Laboratory, Woods Hole, MA, <sup>2</sup>Integrated Statistics, Falmouth, MA, <sup>3</sup>NOAA Fisheries, Northeast Fisheries Science Center, Narragansett Laboratory, Narragansett, RI*
- 2:50 p.m.**      **Refreshment Break**

## Session IV

**Elizabeth Fairchild, Chair**

*University of New Hampshire, Department of Biological Sciences  
Durham, NH*

- 3:20 p.m.** Diversity and Species Richness of Tonguefishes (Pleuronectiformes: Cynoglossidae) in Chinese Waters  
**Hairong Luo<sup>1,3</sup> and Thomas Munroe<sup>2</sup>**  
*<sup>1</sup>Key Laboratory of Marine Bio-resources Sustainable Utilization, South China Sea Institute of Oceanology, Chinese Academy of Sciences, Guangzhou,, China, <sup>2</sup>NOAA Fisheries, National Systematics Laboratory, Smithsonian Institution, Washington, DC, <sup>3</sup>University of Chinese Academy of Sciences, Beijing, China*
- 3:40 p.m.** Nearshore Sex-specific Dynamics of the Summer Flounder (*Paralichthys dentatus*) in Rhode Island Waters  
**Corinne Truesdale<sup>1\*</sup>, Joseph Langan<sup>1</sup>, Adena Schonfeld<sup>2</sup>, M. Conor McManus<sup>1</sup>, and Jeremy Collie<sup>1</sup>**  
*<sup>1</sup>University of Rhode Island, Graduate School of Oceanography, Narragansett, RI, <sup>2</sup>University of Miami, Rosenstiel School of Marine and Atmospheric Science, Miami, FL*
- 4:00 p.m.** Prey Consumption and Repeatability of Performance in Winter Flounder  
**R. Christopher Chambers\*, Jacob P. Strock, Raven M. Benko, Ehren A. Habeck, and Kristin M. Habeck**  
*NOAA Fisheries, Northeast Fisheries Science Center, James J. Howard Marine Sciences Laboratory, Highlands, NJ*
- 4:20 p.m.** Ebb Light, Flood Light: Red Light, Green Light for Larval Flatfishes  
**Hannah Z. Reilly and Mary Carla Curran\***  
*Savannah State University, Marine Sciences Program, Savannah, GA*
- 4:40 p.m.** **Poster Set-up**
- 5:00 p.m.** **Hosted Mixer and Poster Session**

## Wednesday December 7<sup>th</sup>

**8:00 a.m. Registration/Coffee/Continental Breakfast**

### **Session V**

**Christopher Chambers, Chair**

*NOAA Fisheries, Northeast Fisheries Science Center  
James J. Howard Marine Sciences Laboratory, Highlands, NJ*

**8:40 a.m.** Diet and Trophic Dynamics of Summer Flounder (*Paralichthys dentatus*) in Shinnecock Bay Based on Stomach Content Analysis

**Sara Cernadas-Martin**

*Stony Brook University, School of Marine and Atmospheric Sciences,  
Stony Brook, NY*

**9:00 a.m.** The How and Why of Size Dimorphism in Flatfishes: a Review

**Richard S. McBride**

*NOAA Fisheries, Northeast Fisheries Science Center, Woods Hole Laboratory,  
Woods Hole, MA*

**9:20 a.m.** Preliminary Evaluation of Variable Pigmentation Features Observed in Populations of the Fringe-lip Tonguefish, *Paraplagusia japonica* (Temminck & Schlegel 1846), Inhabiting Coastal Waters of China (Pleuronectiformes: Cynoglossidae)

**Hairong Luo<sup>1,3\*</sup>, Thomas Munroe<sup>2</sup>, Xiaoyu Kong<sup>1</sup>, and Jiangxing Dong<sup>1,3</sup>**

<sup>1</sup>*Key Laboratory of Marine Bio-resources Sustainable Utilization, South China Sea Institute of Oceanology, Chinese Academy of Sciences, Guangzhou., China,*

<sup>2</sup>*NOAA Fisheries, National Systematics Laboratory, Smithsonian Institution, Washington, DC,* <sup>3</sup>*University of Chinese Academy of Sciences, Beijing, China*

**9:40 a.m.** Indications that Winter Flounder are Spawning Offshore in the Southern Gulf of Maine

**Elizabeth A. Fairchild**

*University of New Hampshire, Department of Biological Sciences, Durham, NH*

**10:00 a.m.** The Importance of the Saco River Estuary to Winter Flounder (*Pseudopleuronectes americanus*) Life Stages

**Lars Hammer\* and James A. Sulikowski**

*University of New England, Marine Sciences, Biddeford, ME*

**10:20 a.m. Break/Coffee/Refreshments**

## Session VI

**Thomas A. Munroe, Chair**

*NOAA Fisheries, National Systematics Laboratory,  
Smithsonian Institution, Washington, DC*

- 10:40 a.m.** Burial Performance in Flatfishes among Species, Size Classes, and Grain Size  
**Stacy C. Farina<sup>1\*</sup>, Katherine A. Corn<sup>2</sup>, Amberle McKee<sup>3</sup>, Adam P. Summers<sup>4</sup>, and Alice C. Gibb<sup>5</sup>**  
*<sup>1</sup>Harvard University, Department of Organismic and Evolutionary Biology, Cambridge, MA, <sup>2</sup>University of California Davis, College of Biological Sciences, Davis, CA, <sup>3</sup>University of California Irvine, Department of Ecology and Evolutionary Biology, Irvine, CA, <sup>4</sup>University of Washington, Friday Harbor Laboratories, Friday Harbor, WA, <sup>5</sup>Northern Arizona University, Biology Department, Flagstaff, AZ*
- 11:00 a.m.** Nursery Habitat Quality for Winter Flounder, *Pseudopleuronectes americanus*, Linked to Soil Chemistry, Geology and Climate Factors – A Review of the Literature  
**Timothy C. Visel**  
*The Sound School Vocational Aquaculture Center, New Haven, CT*
- 11:20 a.m.** Ocean Acidification Effects on Early Life-Stages of Winter Flounder  
**R. Christopher Chambers\*, Ehren A. Habeck, Kristin M. Habeck, Allison Candelmo, Matthew Poach, Daniel Wieczorek, and Beth Phelan**  
*NOAA Fisheries, Northeast Fisheries Science Center, James J. Howard Marine Sciences Laboratory, Highlands, NJ*
- 11:40 a.m.** Reflections on Over 40 Years of Flatfish Seine Surveys and Future Research Survey Needs  
**Vincent Manfredi**  
*Massachusetts Division of Marine Fisheries, Resource Assessment Project, New Bedford, MA*
- 12:00 p.m.** Comparison of Young-of-the-Year Winter Flounder Abundance in 1988-1990 and 2013-2015 at Connecticut Beach Sites  
**Penny Howell**  
*Connecticut Department of Energy and Environmental Protection Marine Fisheries Division, Old Lyme, CT*
- 12:20 p.m.** Closing Comments
- 12:30 p.m.** Hosted Buffet Lunch  
Adjourn Meeting

**Poster Session**  
**Salon C**  
**Tuesday December 6<sup>th</sup>, 5:00 p.m.**

**Douglas Clarke<sup>1</sup>, and Christopher Powell<sup>2</sup>, Co-Chairs**

<sup>1</sup>*HDR Engineering*  
*Vicksburg, MS*

<sup>2</sup>*Roger Williams University*  
*Bristol, RI*

Protecting Winter Flounder in NY/NJ Harbor Using Long-Term Fishery Resource Data: Past, Present, and Future

**Catherine Alcoba<sup>1</sup>, Doug Clarke<sup>2</sup>, David Davis<sup>2</sup>, Jenine Gallo<sup>1</sup>, Dara Wilber<sup>3\*</sup>, and Sarah Zappala<sup>2</sup>**

<sup>1</sup>*US Army Corps of Engineers New York District, New York, NY*, <sup>2</sup>*HDR Engineering Inc., Pearl River, NY*, <sup>3</sup>*HXFive, Charleston, SC*

Effects of Maternal Investment on Anti-Predator Behavior of Larval Southern Flounder, *Paralichthys lethostigma*

**Corinne M. Burns\* and Lee A. Fuiman**

*University of Texas, Marine Science Institute, Port Aransas, TX*

Foraging Ecology of Blue Crabs (*Callinectes sapidus*) and their Potential Impact on Winter Flounder (*Pseudopleuronectes americanus*)

**Molly Fehon\* and David Taylor**

*Roger Williams University, Department of Marine Biology, Bristol, RI*

Acoustic Tracking of Southern Flounder (*Paralichthys lethostigma*) in the Charleston Harbor System

**Morgan P. Hart<sup>1\*</sup>, Michael R. Denson<sup>2</sup>, Fred S. Scharf<sup>3</sup>, Gorka Sancho<sup>1</sup>, and Stephen A. Arnott<sup>2</sup>**

<sup>1</sup>*College of Charleston, Graduate Program in Marine Biology, Charleston, SC*, <sup>2</sup>*South Carolina Department of Natural Resources, Marine Resources Research Institute, Charleston, SC*, <sup>3</sup>*University of North Carolina Wilmington, Department of Biology and Marine Biology, Wilmington, NC*

Spatial Distribution of Larval Winter Flounder as a Proxy for Habitat Use in a Warming Ocean

**Robert Krulee<sup>1\*</sup>, Joseph A. Langan<sup>2</sup>, Eric Schneider<sup>3</sup>, and Jeremy S. Collie<sup>2</sup>**

<sup>1</sup>*University of Rhode Island, Kingston, RI*, <sup>2</sup>*University of Rhode Island, Graduate School of Oceanography, Narragansett, RI*, <sup>3</sup>*Rhode Island Department of Environmental Management, Marine Fisheries Section, Jamestown, RI*

A Preliminary Re-evaluation of Atlantic Halibut Life History in the Western Atlantic

**Richard S. McBride<sup>1\*</sup>, Emilee K. Tholke<sup>2</sup>, and Scott Elzey<sup>3</sup>**

<sup>1</sup>NOAA Fisheries, Northeast Fisheries Science Center, Woods Hole Laboratory, Woods Hole, MA, <sup>2</sup>Integrated Statistics, Woods Hole, MA, <sup>3</sup>Massachusetts Division of Marine Fisheries, Gloucester, MA

Determining Natal Sources of Adult Winter Flounder in the Gulf of Maine and Southern New England/ Massachusetts Stocks

**Tiffany R. Rich\* and Elizabeth A. Fairchild**

*University of New Hampshire, Department of Biological Sciences, Durham, NH*

Preliminary Otolith Analyses Indicate Potential Spawning Diversity and Fine-scale Population Structure in Winter Flounder (*Pseudopleuronectes americanus*)

**Matthew Siskey<sup>1\*</sup>, Anne McElroy<sup>1</sup>, Tara Dolan<sup>1</sup>, Karin Limburg<sup>2</sup>, and Michael Frisk<sup>1</sup>**

<sup>1</sup>Stony Brook University, School of Marine and Atmospheric Sciences, Stony Brook, NY,

<sup>2</sup>State University of New York, College of Environmental and Forest Biology, Syracuse, NY

Age Determination of Georges Bank Windowpane Flounder (*Scophthalmus aquosus*) Using Otoliths

**Sandra J. Sutherland\* and Antonie Chute**

*NOAA Fisheries, Northeast Fisheries Science Center, Woods Hole Laboratory, Woods Hole, MA*

Relative Risk and Benefit of Consuming Two Southern New England Flatfish Species

**Mary Yurkevicius<sup>1\*</sup>, Joshua Jacques<sup>2\*</sup>, and David L. Taylor<sup>2</sup>**

<sup>1</sup>Roger Williams University, Department of Chemistry, Bristol, RI, <sup>2</sup>Roger Williams University, Department of Marine Biology, Bristol, RI