

**Southeastern Estuarine Research Society**

**Semiannual Meeting**

**February 28 – March 2, 2005**

**Francis Marion Hotel**

**Charleston, SC**



**PROGRAM & ABSTRACTS**

The Southeastern Estuarine Research Society (SEERS) is a nonprofit educational organization. Its objectives are the informal discussion and exchange of ideas dealing with estuarine and related research problems, centering on, but not restricted to, the southeastern United States. Emphasis is placed on interdisciplinary studies that have not been previously published, including works in progress, undergraduate and graduate student research, and research of regional interest. SEERS is an affiliate society of the Estuarine Research Federation.

President: Michael Mallin  
University of North Carolina at Wilmington  
[mallinm@uncw.edu](mailto:mallinm@uncw.edu)

Secretary: Paul Pennington  
NOAA, National Ocean Service  
[paul.pennington@noaa.gov](mailto:paul.pennington@noaa.gov)

Treasurer: Chandra Franklin  
Savannah State University  
[franklin@savstate.edu](mailto:franklin@savstate.edu)

Program Chair: Denise Sanger  
SCDHEC, Ocean and Coastal Resource Management  
[sangerdm@dhec.sc.gov](mailto:sangerdm@dhec.sc.gov)

President Elect: Marie DeLorenzo  
NOAA, National Ocean Service  
[marie.delorenzo@noaa.gov](mailto:marie.delorenzo@noaa.gov)

Past President: Alan Lewitus  
University of South Carolina, SC Department of Natural Resources  
[lewitusa@mrd.dnr.state.sc.us](mailto:lewitusa@mrd.dnr.state.sc.us)

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Harbor Branch Oceanographic Institution  
[lapointe@hboi.edu](mailto:lapointe@hboi.edu)

Student Representative: Jennifer Beseres  
University of South Carolina  
[beseres@biol.sc.edu](mailto:beseres@biol.sc.edu)

**SEERS Spring 2005 Student Travel Award Winners**

Amanda Kahn, University of North Carolina at Wilmington

Megan Singleton, Savannah State University

**SEERS would like to thank the following for their contributions  
to this meeting:**

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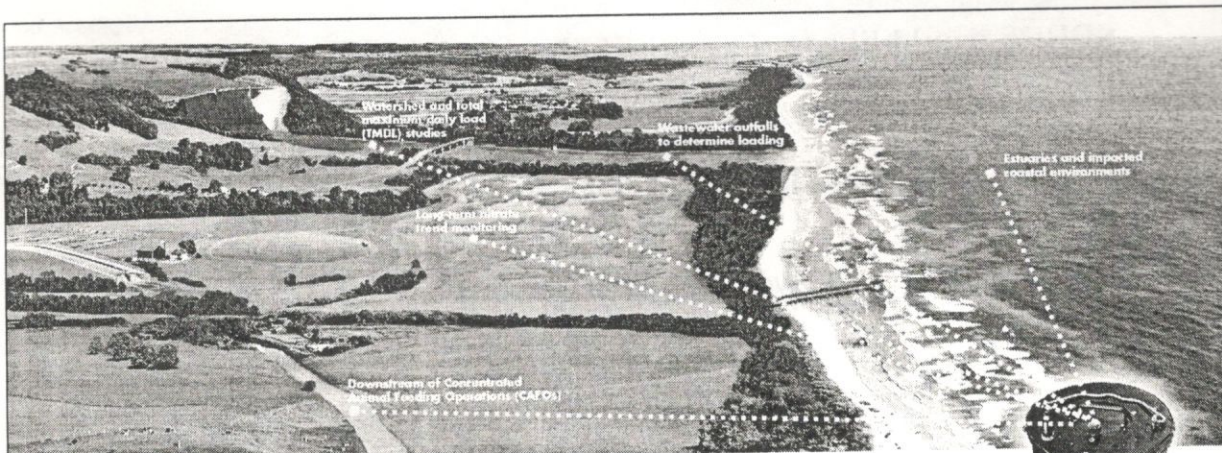
Grice Marine Biology Program, College of Charleston

**Special thanks to our local hosts:**

Marie DeLorenzo, NOAA

Paul Pennington, NOAA



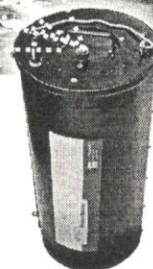


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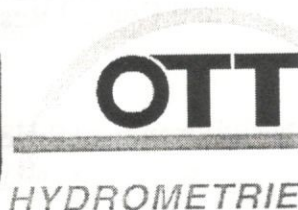
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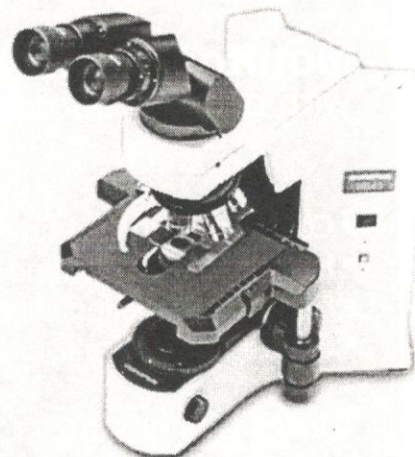
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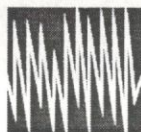


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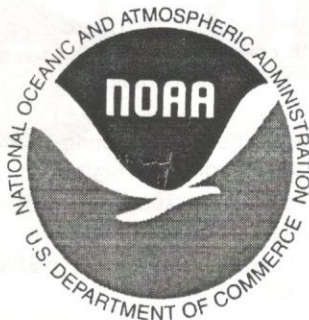
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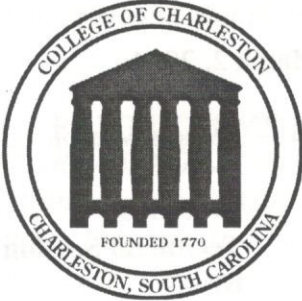
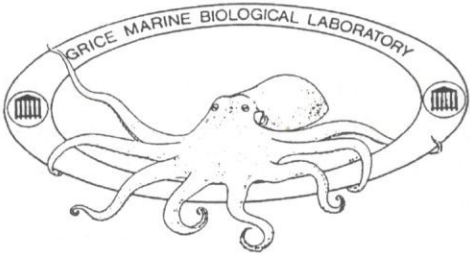


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*Office of Ocean and Coastal  
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## PROGRAM

Welcome to the Spring 2005 meeting of the Southeastern Estuarine Research Society (SEERS)! The meeting will begin with a social and poster session Monday evening (6:00-9:00 p.m.). On Tuesday, there will be oral presentations in the morning and afternoon followed by the Tuesday evening banquet. Wednesday morning the meeting will conclude with oral presentations and student awards. The poster social and presentations will be held at the Francis Marion Hotel. The banquet cruise will be aboard the *Spirit of Carolina*. Dinner and live entertainment will be provided while we tour Charleston from the water.

MONDAY February 28, 2005

**6:00 – 9:00 p.m.      Registration, Poster Session and Social**  
Francis Marion –Colonial Ballroom

TUESDAY March 1, 2005

**Technical Sessions – Francis Marion –Colonial Ballroom**

**8:20 – 8:40 a.m.      Breakfast and Welcome**  
**8:40 – 9:20            Technical Session I**  
**9:20 – 9:40            Break**  
**9:40 – 11:20          Technical Session II**  
**11:20 – 1:00 p.m.    Lunch**  
**1:00 – 2:40            Technical Session III**  
**2:40 – 3:20            Break**  
**3:20 – 5:00            Technical Session IV**  
**5:00 – 6:00            Business Meeting**  
**6:30 – 10:00 p.m.    Banquet**

WEDNESDAY March 2, 2004

**Technical Sessions – Francis Marion –Colonial Ballroom**

**8:20 – 8:40 a.m.      Breakfast**  
**8:40 – 9:20            Technical Session V**  
**9:20 – 9:40            Break**  
**9:40 – 11:40          Technical Session VI**  
**11:40 – 12:00        Student Presentation Awards**

*Don't      forget      to      purchase      a      SEERS      T-shirt!*



**POSTER PRESENTATIONS (posters are listed alphabetically)**

- **presenting author is underlined**
- **graduate student presenter (\*)**
- **undergraduate student presenter (\*\*)**

**Monday, 6:00-9:00 p.m. Registration, Poster Session and Social**

1. ANTIBIOTIC RESISTANT *ESCHERICHIA COLI* FOUND IN WILD DOLPHIN POPULATIONS. John A. Bemiss<sup>1</sup>, Barbara R Lyon<sup>1</sup>, Thomas W. Greig<sup>1</sup>, Gregory D. Bossart<sup>2</sup>, Patricia A. Fair<sup>1</sup>; <sup>1</sup> National Ocean Service, National Oceanic and Atmospheric Administration; <sup>2</sup> Division of Marine Mammal Research and Conservation, Harbor Branch Oceanographic Institution.
2. EUTROPHICATION AND HARMFUL ALGAL BLOOMS IN WITHERS SWASH, MYRTLE BEACH, SOUTH CAROLINA. Katherine E. Davis<sup>\*\*</sup>, Susan Libes, and Joe Bennett, Environmental Quality Lab, Coastal Carolina University.
3. SEDIMENT PREFERENCE OF BLACKCHEEK TONGUEFISH *SYMPHURUS PLAGIUSA*. Jody L. Frost and Matt Gilligan, Savannah State University.
4. LETHAL AND SUB-LETHAL EFFECTS OF SIMVASTATIN ON GRASS SHRIMP, *PALAEMONETES PUGIO*. Jennifer Hoguet, Pete Key, and Lou Ann Reed, NOAA, National Ocean Service, Center for Coastal Environmental Health & Biomarker Research.
5. THE EFFECT OF SALINITY AND AMMONIUM ON SEED GERMINATION IN *RUPPIA MARITIMA* L. FROM FLORIDA BAY. Amanda E. Kahn<sup>\*</sup> and Michael J. Durako, Center for Marine Science, University of North Carolina Wilmington.
6. SHELLFISH HARVEST AREA CLOSURE PREDICTION USING REMOTELY SENSED PRECIPITATION DATA AND DIGITAL FORECASTING PRODUCTS: PILOT STUDY. R. Heath Kelsey<sup>\*</sup>, Dwayne E. Porter, Arnold School of Public Health and Baruch Institute, University of South Carolina; Geoffrey I. Scott, NOAA/CCEHBR and Arnold School of Public Health USC and; Charles E. Newell, SC Department of Health and Environmental Control.
7. SUBLETHAL CELLULAR EFFECTS OF SHORT-TERM RAPHIDOPHYTE AND BREVETOXIN EXPOSURES ON OYSTERS (*CRASSOSTREA VIRGINICA*). Charles J. Keppler, Marine Resources Research Institute, SCDNR; Alan J. Lewitus, Belle Baruch Institute, University of South Carolina and Marine Resources Research Institute, SCDNR; Amy H. Ringwood, University of North Carolina – Charlotte; Jennifer Hoguet, Center for Coastal Environmental Health and Biomolecular Research, National Ocean Service; Tracy Staton, Elizabeth City State University.

8. TESTING PREDATOR-HERBIVORE-PLANT INTERACTIONS ACROSS THE LANDSCAPE: SURVEY OF *LITTORARIA IRRORATA* POPULATION STRUCTURE AND ITS IMPACT ON *SPARTINA ALTERNIFLORA* IN MULTIPLE SOUTH CAROLINA SALT MARSH COMMUNITIES. Shane Kersting\*\* , Esteban Sierra, Chris Morrow, Jeff Kilheffer and Danny J. Gustafson. Department of Biology, The Citadel.
9. ASSESSMENT OF GRASS SHRIMP (*PALAEMONETES PUGIO*) DENSITY IN SOUTH CAROLINA TIDAL CREEKS AS A FUNCTION OF SEDIMENT CONTAMINATION AND WATER QUALITY. Peter Key<sup>1</sup>, Blaine West<sup>1</sup>, George Riekerk<sup>2</sup>, Paul Pennington<sup>1</sup>, <sup>1</sup> NOAA/NOS/CCEHBR; <sup>2</sup> SCDNR.
10. ENVIRONMENTAL IMPACTS OF A FREE-RANGING RHESUS MONKEY COLONY (*MACCA MULATTA*) ON MORGAN ISLAND, SOUTH CAROLINA. Jeanette Klopchin\*, Paul Sandifer, Jill Stewart, College of Charleston, Hollings Marine Laboratory, NOAA, Center for Coastal Environmental Health and Biomolecular Research, NOAA.
11. A COASTAL WILDLIFE REFUGE: MONITORING CHANGE. Laura Kracker, Paul Bauersfeld, Malcolm Meaburn, Sachin Agnihotri, NOAA National Ocean Service Center for Coastal Environmental Health and Biomolecular Research.
12. BLUE CRAB PREDATION ON PERIWINKLE SNAILS: SUFFICIENT TO CONTROL SPARTINA? Michael Long\* and Robert J. Feller, Dept. of Biological Sciences, Univ. of South Carolina.
13. PRELIMINARY COST-BENEFIT ANALYSES OF SMALL-SCALE OYSTER REEF CONSTRUCTION. Matt Ridge\*\* and Keith Walters, Department of Marine Science, Coastal Carolina University.
14. GEORGIA OYSTER WATCH (GeOW) -- CAN OYSTERS BE UTILIZED AS INTEGRATIVE MONITORS OF BACTERIOLOGICAL AND CHEMICAL WATER QUALITY? M.C. Singleton\*<sup>1</sup>, J. M. Danforth<sup>2</sup>, M.E. Frischer<sup>2</sup>, P. Winnubst<sup>2</sup>, K.L. Smalling<sup>2</sup>, E.L. Pulster<sup>2</sup> and K.A. Maruya<sup>2</sup>; <sup>1</sup> Savannah State University, <sup>2</sup> Skidaway Institute of Oceanography.
15. NUTRIENT CYCLING IN INDIAN RIVER LAGOON MARSH IMPOUNDMENTS: USING ECOLOGICAL NETWORK ANALYSIS TO DETERMINE EFFECTS OF MANAGEMENT. Cassandra R. Thomas, NASA, Kennedy Space Center.
16. RESTORATION OF A FORMER MARINE WETLAND IN HUNTINGTON BEACH STATE PARK, MURRELLS INLET, SC. Eric Tosso\*\* , Joseph Bennett, Susan Libes, Amanda Hall and Azure Bevington. Burroughs and Chapin Center for Marine and Wetland Studies, Coastal Carolina University.



17. VOLUNTEER MONITORING INCREASES KNOWLEDGE OF SOUTHEAST PHYTOPLANKTON COMMUNITIES. *Wendy A. Wicke, Steve L. Morton, Julie A. Cahill, Kimberly J. Nowocin, Southeast Phytoplankton Monitoring Network (SEPMN), Marine Biotoxins Program NOAA/NOS/National Centers for Coastal Ocean Science, Center for Coastal Environmental Health and Biomolecular Research.*
18. SANDPIPER POND: A HISTORICAL LOOK AT COASTAL CHANGES OF A CAT'S-EYE POND. *Megan Willis\*\* , M. Scott Harris, Branden Kramer, Robert Pender, Eric Wright, and Susan Libes, Marine Science Department, Coastal Carolina University.*

## PLATFORM PRESENTATIONS

- **presenting author is underlined**
- **graduate student presenter (\*)**
- **undergraduate student presenter (\*\*)**

### **Tuesday, 8:20-8:40 a.m. Breakfast and Welcome**

- **Michael Mallin, SEERS President**
- **PROGRAM NOTES, Denise Sanger, SEERS Program Chair**

### **Tuesday, 8:40-9:20 a.m. Session I**

1. EVOLUTION OF THE SOUTHEAST COASTAL OCEAN OBSERVING REGIONAL ASSOCIATION (SECOORA). M. Richard DeVoe, *South Carolina Sea Grant.*
2. DEVELOPING AN OCEAN ECOSYSTEM INDICATORS ATLAS USING OCEAN OBSERVATIONS. Sandy Bernard, *SECOORA Program Coordinator, South Carolina Sea Grant.*

**BREAK 9:20 - 9:40 a.m.**

### **Tuesday, 9:40 a.m.-11:20 p.m. Session II**

1. CONTRASTING METHODS FOR THE MEASUREMENT OF DISSOLVED OXYGEN: A CASE FOR LUMINESCENT DISSOLVED OXYGEN SENSORS. Cary B. Jackson, *Edward Craig, and Chris Fair, Hach Company.*
2. PENETRATION OF UV-A INTO TIDAL CREEK HABITATS: RELEVANCE TO THE ASSESSMENT OF PAH PHOTOTOXICITY IN ESTUARINE SYSTEMS. John Weinstein, *The Citadel, Steve Diamond, U.S. Environmental Protection Agency*
3. WATER QUALITY RESTORATION FOR COASTAL SUBDIVISION RETENTION PONDS. Lorimar Serrano\* and *Marie DeLorenzo, NOAA/National Ocean Service, Center for Coastal Environmental Health and Biomolecular Research, College of Charleston, Graduate Program in Marine Biology.*
4. SHELLFISHING CLOSURES IN SOUTHWEST BRUNSWICK COUNTY, NORTH CAROLINA: SEPTIC TANKS VS. STORM WATER RUNOFF AS FECAL COLIFORM SOURCES. Lawrence Cahoon, *Jason Hales, Kevin Rowland, Erin Carey, Socratis Loucaides, Janice Nearhoof, Department of Biological Sciences, UNC Wilmington.*
5. PREDICTING BIOMAGNIFICATION OF PERSISTENT ORGANIC POLLUTANTS (POPS) IN BOTTLENOSE DOLPHINS (*TURSIOPS TRUNCATUS*) FREQUENTING SOUTHEASTERN U.S. ESTUARIES. Erin L. Pulster<sup>1,2</sup>, *Marthajane Caldwell*<sup>1</sup>, *Keith A. Maruya*<sup>2</sup>; <sup>1</sup> *Savannah State University* <sup>2</sup> *Skidaway Institute of Oceanography.*

**LUNCH 11:20-1:00 p.m.**



**Tuesday, 1:00-2:40 p.m. Session III.**

1. LONG-TERM OBSERVATIONS ON BROWN, PINK, AND WHITE SHRIMP IN SOUTH CAROLINA AND THE SOUTH ATLANTIC BIGHT. Lawrence B. DeLancey, James E. Jenkins, Elizabeth L. Wenner, and Mark B. Maddox, South Carolina Department of Natural Resources.
2. IMPACT OF JUVENILE WHITE SHRIMP ON BENTHIC MACROFAUNAL ABUNDANCES: REDUCTION BY PREDATION, DISTURBANCE OR EMIGRATION? J.J. Beseres\*, Marine Science Program, University of South Carolina; R.J. Feller, Marine Science Program, Department of Biological Sciences, and Center for Science Education, University of South Carolina.
3. AN ASSESSMENT OF BOPYRID ISOPOD PREVALENCE IN FOUR ESTUARIES AND ITS EFFECT ON TIDE-RELATED ACTIVITY PATTERNS OF THE GRASS SHRIMP *PALAEEMONETES PUGIO*. Sue A. Chaplin-Ebanks\* and Mary Carla Curran, Marine Sciences Program, Department of Natural Sciences and Mathematics, Savannah State University.
4. EFFECTS OF SALINITY ON THE SEQUESTRATION AND ELIMINATION OF THE BACTERIUM *VIBRIO CAMPBELLII* IN THE GILLS OF THE BLUE CRAB, *CALLINECTES SAPIDUS* (RATHBUN). Jennifer Ikerd\*, Lou Burnett, and Karen Burnett, Grice Marine Laboratory, College of Charleston.
5. IMMUNE DEFENSE REDUCES RESPIRATORY FITNESS IN CRUSTACEANS. Louis Burnett, Karen Burnett, Jeremy Holman, David Scholnick, Darwin Jorgensen, Grice Marine Lab, College of Charleston, Eckerd College, Roanoke College.

**BREAK 2:40-3:20 p.m.**

**Tuesday, 3:20-5:00 p.m. Session IV.**

1. NOAA'S NEW OCEANS AND HUMAN HEALTH INITIATIVE. Paul Sandifer, NOAA's National Centers for Coastal Ocean Science.
2. ESTABLISHING A CENTER OF EXCELLENCE FOR OCEANS AND HUMAN HEALTH AT THE HOLLINGS MARINE LABORATORY. A. Fred Holland, Hollings Marine Laboratory.
3. SOLICITATION OF INFORMATION, EXPERIENCES AND OPINIONS ON DELIVERING OCEANS AND HUMAN HEALTH RESEARCH TO VARIOUS AUDIENCES. Susan Lovelace, Center of Excellence in Oceans and Human Health, Hollings Marine Laboratory.
4. MICROBIAL SOURCE TRACKING IN SOUTH CAROLINA. J.R. Stewart<sup>1</sup>, B.C. Thompson<sup>1</sup>, L.F. Webster<sup>1</sup>, J.A. Gooch<sup>1</sup>, D.E. Graves<sup>2</sup>, D.A. Chestnut<sup>2</sup>, M.H. Fulton<sup>1</sup>, & G.I. Scott<sup>1</sup>; <sup>1</sup>National Ocean Service, Center for Coastal Environmental Health and

*Biomolecular Research, <sup>2</sup>South Carolina Department of Health and Environmental Control, Bureau of Water.*

5. NON-LINEAR TIME SERIES ANALYSIS OF SHRIMP IN SOUTH CAROLINA.  
*Robert W. Chapman, Jonas Almeida and Sara P. Garcia, South Carolina Department of Natural Resources, Hollings Marine Laboratory.*

***BUSINESS MEETING 5:00-6:00 p.m.***

***DINNER CRUISE 6:30-10:00 p.m.***



**Wednesday, 8:20-8:40 a.m. Breakfast**

**Wednesday, 8:40-9:20 a.m. Session V.**

1. PROJECT INTEGRATION IN THE LAND USE-COASTAL ECOSYSTEM STUDY (LU-CES): INVESTIGATION OF SECONDARY PRODUCTION IN TIDAL CREEKS. *Christopher Buzzelli, Hollings Marine Laboratory, Denise Sanger, South Carolina Department of Health and Environmental Control.*
2. BEHAVIOR OF STORMWATER DISCHARGE FROM AN OFFSHORE OCEAN OUTFALL IN MYRTLE BEACH, SOUTH CAROLINA. *Joseph T. Bennett and Amanda M. Hall, Environmental Quality Lab, Burroughs & Chapin Center for Marine and Wetland Studies, Coastal Carolina University.*

**BREAK 9:20-9:40 a.m.**

**Wednesday, 9:40-11:40 a.m. Session VI.**

1. LYSOZYME EXPRESSION IN THE PACIFIC WHITE SHRIMP, *LITOPENAEUS VANNAMEI*, AFTER EXPOSURE TO HYPOXIA AND CHALLENGE WITH *VIBRIO CAMPBELLII*. *EJ Burge<sup>1,2</sup>, DJ Madigan<sup>1</sup>, LE Burnett<sup>1,2</sup> and KG Burnett<sup>1,2</sup>; <sup>1</sup>Grice Marine Laboratory, College of Charleston; <sup>2</sup>Hollings Marine Laboratory.*
2. RECOVERY OF A SALT MARSH DIEBACK SITE ON TALAHY ISLAND, GA: A TWO-YEAR STUDY. *Mary Carla Curran and Benjamin F. Maher, Marine Sciences Program, Savannah State University.*
3. UPDATE ON INVESTIGATIONS INTO AN EMERGING AVIAN DISEASE AND LINKS TO WATERFOWL, FISH, INVASIVE AQUATICS, AND CYANOBACTERIA. *Susan Wilde, Sarah Habrun, Alan Lewitus, Baruch Institute, Univ. of South Carolina and SCDNR, Marine Resources Division. Thomas Murphy, Charlotte Hope, SCDNR, Wildlife and Freshwater Fisheries Division. Faith Wiley, Rebecca Smith, William Bowerman, Dept. of Environmental Toxicology, Clemson University.*
4. A WATER RESOURCES ASSESSMENT OF CAPE LOOKOUT NATIONAL SEASHORE, COASTAL NORTH CAROLINA. *Michael Mallin, Matthew McIver and Virginia Johnson, Center for Marine Science, University of North Carolina, Wilmington.*
5. MOVEMENTS AND RETENTION OF NEKTON IN INTERTIDAL CREEKS. *Dennis M. Allen, Baruch Marine Field Laboratory, Univ. of South Carolina, Kurt Bretsch, Marine Science Program, Univ. of South Carolina and Henrietta Hampel, Royal Belgium Institute of Natural Sciences, Brussels.*
6. SEAGRASS SUBMODELS IN SPATIALLY EXPLICIT HYDRODYNAMIC MODELS: HAVE YOU SEEN ANY RESULTS YET? *Clay Montague, University of Florida.*

**STUDENT PRESENTATION AWARDS 11:40 a.m.-12:00 p.m.**