

# PROGRAM

## Southeastern Estuarine Research Society Semiannual Meeting

October 26–28, 2000  
Tampa, Florida





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:	Evan Chipouras	evan@alpha.utampa.edu
Secretary/Treasurer:	Lisa Muehlstein	lmuehls@ju.edu
Program Chair:	Geno Olmi	geno.olmi@noaa.gov
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Member-at-large:	Michael Mallin	mallinm@uncwil.edu
Student Representative:	Bonnie Willis	bonnie@sc.edu

SEERS would like to thank the Department of Biology and the College of Liberal Arts and Sciences at the University of Tampa for their contributions to this meeting. This program was produced by the NOAA Coastal Services Center.



**NOAA Coastal Services Center**  
LINKING PEOPLE, INFORMATION, AND TECHNOLOGY

## Southeastern Estuarine Research Society

### Semiannual Meeting

26-28 October 2000

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### PROGRAM

Thursday evening's registration and poster session and Friday evening's banquet are located in the Grand Salon of University Plant Hall. Posters will remain on display from Thursday evening through Friday evening. Other technical sessions (oral presentations) are located in the main auditorium of the John H. Sykes Business Building.

#### THURSDAY 26 OCTOBER

- |                  |                           |
|------------------|---------------------------|
| 6:00 – 8:00 p.m. | Registration              |
| 6:00 – 8:00 p.m. | Poster Session and Social |

#### FRIDAY 27 OCTOBER

- |                   |   |
|-------------------|---|
| 8:30 – 10:10 a.m. | Technical Session A   |
| 10:10 – 10:30     | Break   |
| 10:30 – 12:10     | Technical Session B   |
| 12:10 – 1:30 p.m. | Lunch   |
| 1:30 – 2:50       | Technical Session C   |
| 2:50 – 3:10       | Break   |
| 3:10 – 4:50       | Technical Session D   |
| 6:00 – 7:00       | <b>Journal Publishing</b><br>Stephen Threlkeld, managing editor of <i>Estuaries</i> , will host this session, which is recommended for first-time publishers and anyone interested in electronic publishing of journals |
| 7:00 – 7:30       | Poster Session  |
| 7:30 – 9:30       | <b>Banquet</b><br>Address by Anne Giblin, President, Estuarine Research Federation  |

**SATURDAY 28 OCTOBER**

<b>8:30 – 9:10 a.m.</b>	<b>Technical Session E</b>
<b>9:10 – 10:00</b>	<b>SEERS Business Meeting</b>
<b>10:00 – 10:20</b>	<b>Break</b>
<b>10:20 – 12:00</b>	<b>Technical Session F</b> Special Session: Managing Freshwater Inflow to Estuaries
<b>12:30 p.m.</b>	<b>Optional Field Trip</b> Evan Chipouras leads a boat tour of Tampa Bay (approximately 3.5-4 hours)

**TECHNICAL SESSIONS**

(\*) denotes undergraduate student presentation      (\*\*) denotes graduate student presentation

**ORAL PRESENTATIONS**

**Friday, 8:30 – 10:10 a.m.                      Session A                      Moderator: Evan Chipouras**

WELCOME. Evan Chipouras, University of Tampa, and SEERS President.

SETTING MINIMUM LIGHT REQUIREMENTS FOR SEAGRASS -- CAN WE REALLY DO IT?  
Lori Morris, Robert Virnstein, and Jan Miller, St. Johns River Water Management District

VEGETATIVE FRAGMENTATION OF *LAURENCIA POITEI* (CERAMIALES, RHODOMELACEAE) IN FLORIDA BAY

Laura A. Wick\*\* and Linda J. Walters, University of Central Florida  
Kevin S. Beach, University of Tampa

THE EFFECTS OF DENSITY AND AGGREGATION ON PREDATOR DETERRENCE BY BROMOPHENOL-PRODUCING INFAUNA

Deirdre Renee Edwards\*\* and Sarah Ann Woodin, University of South Carolina

ARE FISH GUT-CONTENT STUDIES BIASED?

David J. Gillett\*\*, University of Charleston  
Tiffany E. Lee, Savannah State University  
A. Fredrick Holland, Marine Resources Research Institute, South Carolina Dept. of Natural Resources

**Friday, 10:30 a.m. – 12:10 p.m.**

**Session B**

**Moderator: Michael Mallin**

MANGROVE RESPONSE TO ATTACK BY A ROOT BORING ISOPOD: ROOT REPAIR VERSUS ARCHITECTURAL MODIFICATION

Robert Allen Brooks\*\* and Susan S. Bell, University of South Florida

LATE HOLOCENE GEOLOGIC EVOLUTION OF A BARRIER ISLAND COMPLEX AND THE INDIAN RIVER LAGOON, EAST-CENTRAL FLORIDA

Troy Mayhew\*\*, Florida Institute of Technology

A TECHNIQUE FOR ESTIMATING PRESENT AND FUTURE NITROGEN LOADS, WATER QUALITY AND SEAGRASS (*THALASSIA TESTUDINUM*) DEPTH DISTRIBUTION IN LEMON BAY, FLORIDA

David Tomasko and Denise Bristol, Southwest Florida Water Management District

Judy Ott, Florida Department of Environmental Protection

INVERTEBRATE EGG MASSES AND THEIR SYMBIOTIC ALGAE IN INDIAN RIVER LAGOON: DO ALGAE PAY THE RENT?

Kimberly A. Peyton\*\*, Harbor Branch Oceanographic Inst. and Florida Tech

M. Dennis Hanisak, Harbor Branch Oceanographic Institution

Junda Lin, Florida Tech

SETTLEMENT PREFERENCES AND RECRUITMENT OF THE BRYOZOAN *BUGULA NERITINA* ON DRIFT MACROALGAE IN MOSQUITO LAGOON, FLORIDA

Marie-Josée Abgrall\*\* and Linda J. Walters, University of Central Florida

**Friday, 1:30 – 2:50 p.m.**

**Session C**

**Moderator: Dave Tomasko**

ANALYSIS OF HISTORIC VEGETATION CHANGES IN TWO GEORGIA ESTUARIES USING A GIS

Carrie B. Smith\*\*, Merryl Alber, and Alice Chalmers, Dept. Marine Science, University of Georgia

DOMESTICATED ANIMALS AS MAJOR SOURCES OF NUTRIENT LOADING TO THE NORTH CAROLINA COASTAL PLAIN

Michael A. Mallin, Lawrence B. Cahoon, Scott H. Ensign, and Virginia L. Johnson, University of North Carolina - Wilmington

A COMPARATIVE EVALUATION OF PHYSICAL WATER QUALITY PARAMETERS IN TWO CREEKS OF THE TIMUCUAN ECOLOGICAL AND HISTORIC PRESERVE

Kristen A. Herzog\*, Clay Montague, and Sandra Fox, Dept. of Environ. Engineering Sciences, University of Florida

THE EFFECT OF CAUSEWAYS ON THE DEPOSITION OF HEAVY METALS AND ORGANIC CONTAMINANTS IN SEDIMENTS WITHIN THE TIMUCUAN ECOLOGICAL AND HISTORICAL PRESERVE, DUVAL COUNTY, FLORIDA

Sandra Fox\*\* and Clay Montague, Dept. of Environ. Engineering Sciences, Univ. of Florida

Debra Hydorn, Mary Washington College

Ken Sulak, U.S.G.S., Biological Resources Division, Florida and Caribbean Science Center

**Friday, 3:10 – 4:50 p.m**

**Session D**

**Moderator: Bob Virnstein**

CRAB HERBIVORY ON THE RED MANGROVE *RHIZOPHORA MANGLE* L. WHEN FOUND IN PURE STANDS VERSUS WHEN IN ASSOCIATION WITH THE BLACK MANGROVE *AVICENNIA GERMINANS* (L.) STEARN AND THE WHITE MANGROVE *LAGUNCULARIA RACEMOSA* (L.) GAERTN

Amy A. Erickson\*\*, Susan S. Bell, and Clinton J. Dawes, Department of Biology, University of South Florida

IMPACT OF A TROPICAL ALGAL OVERGROWTH ON LOCAL FISH COMMUNITIES

Kerri Haught\*, Lisa Muehlstein, and Jim Beets, Jacksonville University

A NEW APPROACH TO SEAGRASS MONITORING USING A SONAR-BASED SURVEY SYSTEM

Lisa Muehlstein, Jacksonville University

Jeff Miller and Caroline Rogers, U.S.G.S., Biological Resources Division, Caribbean Field Station

EVALUATION OF GLASS PRISMS AS A BOAT DOCK CONSTRUCTION BEST MANAGEMENT PRACTICE

Alicia A. McKinney and Michelle M. Jeansonne, BCI Engineers & Scientists, Inc.

John W. Burns, Jr., St. Johns River Water Management District

FLORIDA BAY SALINITY TRANSFER FUNCTION ANALYSIS

Frank E. Marshall, III, Cetacean Logic Foundation, Inc.

**Saturday, 8:30 – 9:10 a.m.**

**Session E**

**Moderator: Merryl Alber**

COMPARISON OF LOWER ST. JOHNS RIVER ESTUARY MID-CHANNEL AND NEAR-SHORE WATER QUALITY CONDITIONS

Michelle Jeansonne and Alicia McKinney, BCI Engineers & Scientists (SJRWMD)

John W. Burns, St. Johns River Water Management District

IS SEAGRASS IMPROVING OR DECLINING IN INDIAN RIVER LAGOON? YES!

Robert Virnstein and Edward Carter, St. Johns River Water Management District

**Saturday, 10:20 – 1200 a.m.**

**Session F**

**Moderator: Geno Olmi**

**Managing Freshwater Inflow to Estuaries**

RESIDENCE TIMES IN THE ALTAMAHA RIVER ESTUARY: A PROGRESS REPORT

Merryl Alber and Joan E. Sheldon, Dept. of Marine Sciences, University of Georgia

SETTING MINIMUM INFLOWS IN TEXAS ESTUARIES

Paul Montagna, University of Texas Marine Science Institute

USING SUBMERGED AQUATIC VEGETATION TO ESTABLISH MINIMUM AND MAXIMUM FRESHWATER INFLOWS TO THE CALOOSAHATCHEE ESTUARY, FL

Peter H. Doering, Robert H. Chamberlain, and Daniel E. Haunert, South Florida Water Management District

DISCUSSION

## POSTER PRESENTATIONS

SEASONAL AND TEMPORAL CHANGES IN ESTUARINE / MARINE FISHES IN MURRELLS INLET AND HOG INLET, SC

Steven Crosby\* and Richard Moore, Coastal Carolina University

SOURCES OF SEDIMENTARY ORGANIC MATTER TO WINYAH BAY, SOUTH CAROLINA, REVEALED BY MULTIPLE STABLE ISOTOPES

Stefka Eddins, University of South Carolina

SPATIAL AND TEMPORAL PATTERNS OF SPAWNING BY THE HORSESHOE CRAB, *LIMULUS POLYPHEMUS*, IN THE INDIAN RIVER LAGOON SYSTEM, FLORIDA

Gretchen S. Ehlinger\*\*, Mark B. Bush, and Richard A. Tankersley, Florida Institute of Technology

FRAGMENTS OF THE SEAGRASSES *HALODULE WRIGHTII* AND *HALOPHILA JOHNSONII* AS POTENTIAL RECRUITS IN THE INDIAN RIVER LAGOON, FLORIDA: A PROPOSAL

Lauren M. Hall\*\*, St. Johns River Water Management District

M. Dennis Hanisak, Harbor Branch Oceanographic Institution

Robert W. Virnstein, St. Johns River Water Management District

EVIDENCE FOR AN IMPORTANT ROLE OF PHOTOSYNTHESIS IN THE NUTRITION OF *PFIESTERIA* SPP.

Alan J. Lewitus, University of South Carolina & SC Department of Natural Resources

Niels T. Eriksen, Aalborg University, Denmark

JoAnn M. Burkholder, Howard B. Glasgow & Matthew W. Parrow, NC State University

Kenneth C. Hayes, University of South Carolina & SC Dept. of Health and Environmental Control

THE EFFECT OF WATERSHED RUNOFF ON THE SALINITY DISTRIBUTION OF WINYAH BAY, SC

Edward Majzlik\* and Straud Armstrong, MARE, Marine Science Program, University of South Carolina

LIMITED HOME RANGES OF JUVENILE PINFISH (*LAGODON RHOMBOIDES*) IN A SALT MARSH CREEK

Michael T. Potthoff and Dennis M. Allen, Baruch Marine Field Laboratory, University of South Carolina

A STUDY OF SURFACE SEDIMENT GEOCHEMISTRY AND FLUCTUATIONS OF TOTAL SUSPENDED MATTER OVER A THIRTY-HOUR TIME SERIES EXPERIMENT, WINYAH BAY, SOUTH CAROLINA

Melissa Ranhofer\*, Marine Science Program, University of South Carolina

Jennifer Morgan, S.C. Honors College, University of South Carolina

Eddie Majzlik, Marine Science Program, University of South Carolina

Lindsey Wise, College of Engineering, University of South Carolina

INTERACTIONS BETWEEN THE BRYOZOAN *ZOOBOTRYON VERTICILLATUM* AND THE SPECIALIST PREDATOR *OKENIA ZOOBOTRYON*

Nicole Robinson\*, Linda Walters, Traci Fixx, Tami Hasse, and Neysa Martinez

Dept. of Biology, University of Central Florida

GROUND-TRUTHING OF THE CHEMTAX MODEL IN AN ESTUARINE SYSTEM

R. G. Tymowski, A. J. Lewitus, and M. S. Wetz, Baruch Institute, University of South Carolina

D. White, Marine Science Program, University of South Carolina

EXOENZYME ACTIVITIES AND FITC-LABELED DEXTRAN UPTAKE BY A CHRYSOPHYTE AND TWO DINOFLAGELLATES

Bonnie M. Willis\*\*, Marine Science Program, Univ. of South Carolina

Alan J. Lewitus, Baruch Marine Laboratory, Univ. of South Carolina

A STUDY OF WATER CHEMISTRY TO MEASURE THE EFFECTS OF POINT AND NON-POINT POLLUTION IN WINYAH BAY, SOUTH CAROLINA

Lindsey Wise\*, Marine Science Program and Department of Chemical Engineering

Melissa Clouse, S.C. Honors College and Department of Biological Sciences

Jennifer Morgan, S.C. Honors College and Department of Geological Sciences

Melissa Ranhofer, Marine Science Program, University of South Carolina