

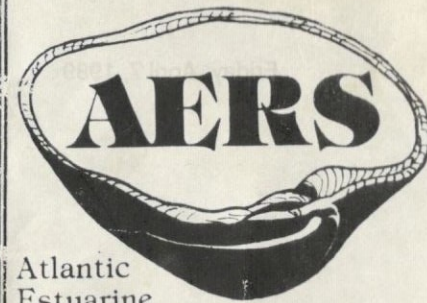
Linda C. Clements, SEERS Program Chairman  
 NMFS, Beaufort Laboratory  
 Beaufort, NC 28516



# Southeastern Estuarine Research Society



# Atlantic Estuarine Research Society



Atlantic  
 Estuarine  
 Research Society

Spring 1989

~ 160 ATTENRO  
 90 SEERS



## GREETINGS

The Southeastern Estuarine Research Society and the Atlantic Estuarine Research Society will be holding a joint spring meeting at the Duke University Marine Laboratory in Beaufort, NC, from Thursday evening through Saturday afternoon, April 6-8, 1989. Many thanks go to Liz Noble, of SEERS, for the excellent local arrangements.

Registration will cost \$10 and will begin Thursday evening at the Duke Lab auditorium, and will continue until Friday afternoon. The banquet on Friday night will be a clam bake to be held at the Duke Lab. Tickets for the clam bake (\$14) will be sold at registration.

SEERS will present the Patrick Adam Award (a cash award) to the best student paper. AERS will present awards for the best student paper in two categories: Ph.D. student presentations and masters/undergraduate presentations. Each will receive a one-year subscription to *Estuaries*.

### Schedule of Events

Thursday, April 6, 1989	1700-2000	Registration
	1900-2200	Beer Blast
Friday, April 7, 1989	0745-1500	Registration
	0800-1201	Presentations
	1201-1316	Lunch
	1316-1746	Presentations
	1750-?	Business Meetings and Student Awards
	1830-1930	Beer Blast
	1930-?	Clam Bake
	2030-2045	Patuxent Perspective -- a slide show by Kent Mountford (AERS)

See list of other special events on last page following program.

PLEASE BRING THIS PROGRAM WITH YOU

## PROGRAM

FRIDAY MORNING, APRIL 7, 1989

- 0800 Presidents' Welcome
- 0805<sup>(a)</sup> Vertical changes in light and photosynthesis gradients during a daily photoperiod within a microbial mat. G.K. Suba, University of North Carolina, Institute of Marine Sciences, Morehead City, NC. (SEERS)
- 0822 Red tide, the first occurrence in North Carolina: An overview. P.A., Tester\*, R.P. Stumpf\*\*, and P.K. Fowler\*\*\*. \*National Marine Fisheries Service, NOAA, Beaufort, NC, \*\*National Environmental Satellite Data and Information Service, NOAA, Washington, DC, and \*\*\*North Carolina Department of Human Resources, Shellfish Sanitation Program, Morehead City, NC. (SEERS)
- 0839 Observations of red tide effects on Atlantic menhaden eggs and larvae. L.C. Clements. National Marine Fisheries Service, NOAA, Beaufort, NC. (SEERS)
- 0856 Distribution and biomass of a winter dinoflagellate bloom in the Patuxent River Estuary. R.V. Lacouture\*, S.J. Cibik\*, K.G. Sellner\*, and A. Brindley\*\*. Academy of Natural Sciences, Benedict Estuarine Research Laboratory, Benedict, MD, and \*\*Versar, Inc., Columbia, MD. (AERS)
- 0913 Mississippi River discharge and the recruitment of Gulf menhaden. J.J. Govoni. National Marine Fisheries Service, NOAA, Beaufort Laboratory, Beaufort, NC. (SEERS)
- 0930<sup>(b)</sup> Mechanism for the reinvasion of the estuary by the megalopae of two species of brachyuran crab. K.T. Little and C.E. Epifanio. University of Delaware, College of Marine Studies, Lewes, DE. (AERS)
- 0947 The megalopae of the blue crab migrate onshore in the convergence zone over tidally forced internal waves. A.L. Shanks. University of North Carolina Chapel Hill, Institute of Marine Science, Morehead City, NC. (SEERS)
- 1004 **BREAK -- Poster Session** <sup>ANNOUNCEMENTS</sup> <sub>PHOTO</sub>
- 1019<sup>(a)</sup> Settlement patterns of brachyuran megalopae in Charleston Harbor. J. Boylan. Grice Marine Biological Laboratory, College of Charleston, Charleston, SC. (SEERS)
- 1036<sup>(a)</sup> Abundance and distribution of *Neomysis americana* in the Delaware River Estuary. W. Walker and C.E. Epifanio. University of Delaware, College of Marine Studies, Lewes, DE. (AERS)
- 1053<sup>(a)</sup> Seasonal and spatial utilization of saltmarsh nursery areas by larval and juvenile fishes near Charleston Harbor. C. Jackson. Grice Marine Biological Laboratory, College of Charleston, Charleston, SC. (SEERS)
- <sup>(a)</sup>SEERS student  
<sup>(b)</sup>AERS student -- PhD  
<sup>(c)</sup>AERS student, masters, or undergraduate



# PROGRAM

FRIDAY MORNING, APRIL 7, 1989

- 1127 Preliminary attempt to estimate survival of reef fish released by anglers. M.R. Collins. South Carolina Marine Resources Research Institute, Charleston, SC. (SEERS)
- 1130 1127 Update on commercial penaeid shrimp monitoring in South Carolina. L. Delancey, D. Whitaker, and J. Jenkins. South Carolina Wildlife and Marine Resources Department, Charleston, SC. (SEERS)
- 1144- 1153- A model for white shrimp landings in South Carolina. J.D. Whitaker\* and C.F. Lam\*\*. \*South Carolina Wildlife and Marine Resources Department, Charleston, SC, and \*\* Medical University of South Carolina, Charleston, SC. (SEERS) 2 1/2 M LBS/HA
- 1201 LUNCH

CRITICAL FACTORS

SAL IN AUGUST  
# DAYS < 8.3°C

# PROGRAM

FRIDAY AFTERNOON, APRIL 7, 1989

- 1316 Sea turtle distribution research in North Carolina. S.P. Epperly and A. Veishlow. National Marine Fisheries Service, Beaufort Laboratory, Beaufort, NC. (AERS)
- 1333<sup>(b)</sup> Utilization of picoplankton by oyster larvae. B.S. Baldwin, R.I.E. Newell, and T.W. Jones. University of Maryland, Horn Point Environmental Laboratory, Cambridge, MD. (AERS)
- 1350<sup>(b)</sup> Effects of early starvation periods on larval development of *Crangon septemspinosa*. I.S. Wehrtmann. University of Hamburg, Federal Republic of Germany; University of Maryland, Chesapeake Biological Laboratory, Solomons, MD. (AERS)
- 1407<sup>(b)</sup> Initiation of feeding, point of irreversible starvation, and the relationship of food density to survival and growth in larvae of the weakfish (*Cynoscion regalis*). D.M. Goshorn and C.E. Epifanio. University of Delaware, College of Marine Studies, Lewes, DE. (AERS)
- 1424 Starvation physiology of the hard clam *Mercenaria mercenaria*. A.E. Wilbur, L.A.J. Clements, T.J. Hilbish. University of South Carolina, Department of Biology, Columbia, SC. (SEERS)
- 1441<sup>(a)</sup> Desiccation increases susceptibility of mudflat algae to grazing by the mudsnail *Ilyanassa obsoleta*. R.N. Trindell. University of North Carolina, Institute of Marine Sciences, Morehead City, NC. (SEERS)

<sup>(a)</sup>SEERS student

<sup>(b)</sup>AERS student -- PhD

<sup>(c)</sup>AERS student, masters, or undergraduate

# PROGRAM

FRIDAY AFTERNOON, APRIL 7, 1989

- 1458<sup>(a)</sup> Influence of location in the salt marsh, attachment substrate and burial depth on the mortality of ribbed mussels from mud crab predation. J. Lin. University of North Carolina, Institute of Marine Sciences, Morehead City, NC. (SEERS)
- 1515 BREAK -- Poster Session
- 1530 Just what do secchi disc readings mean? J. Williams. U.S. Naval Academy, Oceanography Department, Annapolis, MD. (AERS)
- 1547<sup>(b)</sup> Assessing the risk of contaminants from aquatic sediments using the HPTLC/AMES screening assay. F.J. Reilly, Jr.\*, V.A. McFarland\*\*, and J.M. O'Connor\*. \*New York University Medical Center, Institute of Environmental Medicine, Tuxedo, NY, and \*\* Environmental Laboratories, U.S. Army Engineers, Vicksburg, MS. (AERS)
- 1604<sup>(a)</sup> Examination of biochemical and histological effects of cadmium on the grass shrimp *Palaemonetes pugio*. A.H. Thakkar. Grice Marine Biological Laboratory, College of Charleston, Charleston, SC. (SEERS)
- 1621 Increases in metal concentrations in Atlantic croaker livers with length and age. D.W. Evans, P.J. Hanson, and D.K. DoDoo. National Marine Fisheries Service, NOAA, Beaufort Laboratory, Beaufort, NC. (SEERS)
- 1638 Modeling wind-driven transport in Florida's Indian River Lagoon. N.P. Smith and P.A. Pitts. Harbor Branch Oceanographic Institution, Fort Pierce, FL. (SEERS)
- 1655 Choptank River oyster mortality study: An analysis of biological and physicochemical data associated with a study of four Choptank River oyster bars. J.F. Christmas and S.J. Jordan. Maryland Department of Natural Resources, Annapolis, MD. (AERS)
- 1712 Maryland coastal plain stream acidification and liming research. J. O'Dell. Maryland Department of Natural Resources, Annapolis, MD. (AERS)
- 1729 Ecological status and trends program -- EPA's approach to monitoring condition of the nations ecosystems. J.F. Paul\* and A.F. Holland\*\*. \*U.S. Environmental Protection Agency, Narragansett, RI, and \*\* Versar, Inc., Columbia, MD. (AERS)
- 1746 CONCLUDE
- 1750 Presentation of Student Awards, Business Meetings  
SEERS -- NMFS Conference Room  
AERS -- Duke Lab auditorium
- 1830 Beer Blast
- 1930 Clam Bake, Special Activities

PAPER FROM SAT 9:00

<sup>(a)</sup>SEERS student

<sup>(b)</sup>AERS student -- PhD

<sup>(c)</sup>AERS student, masters, or undergraduate



# PROGRAM

SATURDAY MORNING, APRIL 8, 1989

- 0800 The relationship between the structure of benthic communities and habitat quality in freshwater stream and river systems. M.T. Barbour. EA Engineering, Science and Technology, Inc., Baltimore, MD. (AERS)
- 0817 Benthos and secondary production in upper Chesapeake Bay. A.T. Shaughnessy and A.F. Holland. Versar, Inc., Columbia, MD. (AERS)
- 0834 Estuarine benthic ecology: Stressed communities and stressed researchers. D.M. Dauer. Old Dominion University, Norfolk, VA. (AERS)
- 0851 Hypoxia and its implications for the lower Savannah River estuary. ~~Richard~~ Winn and D. Knott. South Carolina Wildlife and Marine Resources Research Institute, Charleston, SC. (SEERS)
- 0908 Respiratory responses of blue crabs, *Callinectes sapidus*, during long term exposure to moderate hypoxia. P.L. deFur. Southeastern Louisiana University, Hammond, LA. (AERS)
- 0925 Estuarine generalizations: Do they characterize the polyhaline zone? L.C. Schaffner. Virginia Institute of Marine Science, Gloucester Point, VA. (AERS)
- 0942 The influence of mussel beds on nutrients in the Western Wadden Sea and Eastern Scheldt estuaries of the The Netherlands. R. Dame\* and N. Dankers\*\*. Coastal Carolina College, Conway, SC and \*\*RIN, Texel, The Netherlands. (SEERS)
- 0959 Predation by the benthic feeding fish *Leiostomus xanthurus* (spot) in tributaries of the Pamlico River. T.L. West. East Carolina University, Greenville, NC. (AERS)
- 1016 **BREAK**
- 1031 Short-term predation responses of adult bay anchovies, *Anchoa mitchilli*, to zooplankton prey availability in a South Carolina tidal creek. D.M. Allen\*, W.S. Johnson\*\*, M.V. Ogburn\*, S.E. Stancyk\*. \*University of South Carolina, Columbia, SC and \*\*Goucher College, Towson, MD. (SEERS)
- 1048 Habitat partitioning between the xanthid crabs *Panopeus herbstii* and *Eurypanopeus depressus* on intertidal oyster reefs (*Crassostrea virginica*) in southeastern North Carolina. D.L. Meyer. University of North Carolina, Wilmington, NC. (SEERS)
- 1105 The evolution of aposomatic coloration: Lessons from an estuarine crab. M. Luckenbach and R. Orth. Virginia Institute of Marine Science, Gloucester Point, VA. (AERS)

(\*)SEERS student

(\*\*)AERS student -- PhD

(\*)AERS student, masters, or undergraduate

# PROGRAM

SATURDAY MORNING, APRIL 8, 1989

- 1122 Boat wake wave energy and its potential impacts on seagrass communities in a coastal lagoon. W.J. Kenworthy, M.S. Fonseca, D. McIvor, and G.W. Thayer. National Marine Fisheries Service, NOAA, Beaufort, NC. (SEERS)
- 1139 Wave height reduction by four species of seagrass. M.S. Fonseca\* and J. Cahalan\*\*. \*National Marine Fisheries Service, NOAA, Beaufort, NC and \*\*University of North Carolina, Institute of Marine Sciences, Morehead City, NC. (AERS)
- 1156 Marsh and seagrass bed creation as a means of dredge material stabilization and fishery habitat development. M.S. Fonseca, G.W. Thayer, W.J. Kenworthy, D.R. Colby, M.W. LaCroix, D.L. Meyer, and B.A. France. National Marine Fisheries Service, NOAA, Beaufort, NC. (AERS)
- 1213 Distribution of total biomass of submerged vegetation and associated fauna along salinity gradients in northeast Florida Bay is perhaps a result of salinity fluctuation. C.L. Montague. University of Florida, Gainesville, FL. (SEERS)
- 1230 Habitat value of natural vs. recently transplanted eelgrass, *Zostera marina*, for the bay scallop, *Argopectan irradians*. I. Smith\*, M. Fonseca\*\*, J. Rivera\*\*, and K. Rittmaster\*\*. \*Duke University Marine Laboratory, Beaufort, NC and \*\*National Marine Fisheries Service, NOAA, Beaufort, NC. (SEERS)
- 1247 The influence of seagrass cover on growth and recovery of a suspension feeding bivalve. E. Irlandi. National Marine Fisheries Service, NOAA, Beaufort, NC. (SEERS)

1304 **CONCLUDE**

(\*)SEERS student

(\*\*)AERS student -- PhD

(\*)AERS student, masters, or undergraduate



## POSTER SESSION

Posters will be set up for display on Thursday evening, April 6, with presenters available for questions during the first hour of the Thursday evening social, and will remain on display through Saturday.

AERS--A historical and demographic perspective. M.T. Barbour. EA Engineering, Science, and Technology, Inc., Baltimore, MD.

Remote setting and post set strategies for growing *Crassostrea virginica* in Virginia. M. Castagna, M. Gibbons, and K. Kurkowski. Virginia Institute of Marine Science, Wachapreague, VA.

An infection study of the American oyster, *Crassostrea virginica*, by *Haplosporidium nelsoni* (W.S.X.). E.J. Lewis. National Marine Fisheries Service, Oxford, MD.

- (a) A comparison of phytoplankton assemblages and environmental relationships in three estuarine rivers of the lower Chesapeake Bay. H. Marshall, R. Alden, and C. Gregory. Old Dominion University, Norfolk, VA.

New records and taxonomic notes of macrobenthos from the Virginian Province. C.T. Morris, D.E. Russell, and N.K. Mountford. Cove Corporation, Lusby, MD.

- (b) Predation on blue crab megalopae: Effects of predator species, habitat and prey density. E.J. Olmi. Virginia Institute of Marine Science, Gloucester Point, VA.

A survey of *Perkinsus marinus* in oysters of North Inlet, SC. C. Roberts\* and M.P. Crosby\*\*. \* Coastal Carolina College, Conway, SC and \*\* University of South Carolina, Georgetown, SC.

Macrobenthic responses to long-term salinity changes in the Maryland portion of Chesapeake Bay. L.C. Scott and A.F. Holland. Versar, Inc., Columbia, MD.

- (c) Nitrogen dynamics in *Spartina alterniflora* -- Effects of grazing by feral horses. J.M. Stribling. University of Maryland Eastern Shore, Princess Anne, MD.

## STANDBY PAPERS

- (a) Chlorophyll and zooplankton variations in ponds stocked with a different density of *Penaeus vannamei*. P.T. Maier. Grice Marine Biological Laboratory, College of Charleston, Charleston, SC.

(a) SEERS student

(b) AERS student -- PhD

(c) AERS student, masters, or undergraduate

## SPECIAL ACTIVITIES

To commemorate the 40th anniversary of AERS, a number of special activities have been planned that promise to be a lot of fun for all the AERS and SEERS meeting participants. AERS is particularly pleased to share this anniversary and all the festivities with SEERS. Many thanks are due to Don Lear of AERS for conceiving many of these wild ideas and coordinating the activities.

**Early-Bird Activities:** For those of you who like to start out early, Bill Rizzo will guide you in some local birding on both Friday and Saturday mornings from 0600-0800. Also, there will be a 3-mile wake-up for joggers on Friday and Saturday from 0630-0730.

**Evening Activities:** There are a number of outrageous activities planned for Friday night, including an AERS-SEERS volleyball game, a **tacky** shirt contest (so bring your tackiest and win a prize), a penny poker palace which will be hosted by Jerry Williams, and some unorganized nightlife (Let's Boogie) at local establishments scouted by Liz Noble. There will be music, so bring your dance shoes, and watch out for Mike Castagna or he'll ask you to dance!

**T-shirts:** There will be AERS commemorative T-shirts on sale, organized by Marria O'Malley and Gail Mackiernan.

**History:** Gene Cronin is trying to gather all the charter members at this anniversary meeting. As usual, the president will present the order of the Venerable Clam to the most deserving and previously unrecognized venerable clam. Both Mike Barbour and Dan Lear will present posters telling (and showing) us about the history of AERS.

**Estuarine Art Exhibit:** An exhibit of members' art -- paintings, photos, and sculpture -- relating to estuaries will be shown at this meeting. All AERS and SEERS members and their families are invited to bring one or two pieces of their own work for this exhibit to Thursday's registration. The show will be hung Thursday evening and will be on display until Saturday noon. If you cannot attend the meeting, send your pieces with a friend. Please limit submittals to two per person, framed and ready to hang. There will also be limited table space for 3-dimensional work. For further information, contact Alice Jane Lippson at (301)745-5475.

**Post-Meeting Birding Convoy:** Don Lear is organizing a convoy to go northbound through the Outer Banks for birding. They will set out after the meeting Saturday afternoon and go through Sunday. For more information, contact Don Lear at (301)268-2259.

**Field Trips:** SEERS may be able to arrange some very interesting field trips. Look for information at registration.

Come prepared to have fun! Other crazy things may happen.



### AERS Executive Committee

Fred Holland, President  
Marria O'Malley, Past-President  
Gail Mackiernan, Secretary  
Linda Schaffner, Treasurer  
Michael Castagna, Member at Large  
Anson Hines, Member at Large  
Charles Epifanio, Member at Large

### Committee Chariman

Anna Shaughnessy, Program  
Robert Diaz, Membership  
Victor Kennedy, Constitution  
Dan Dauer, Nominating

### Other Positions

Donald Lear, Historian

### SEERS Executive Committee

David W. Engel, President  
Dennis M. Allen, President-Elect  
Vic G. Burrell, Jr., Past-President  
Ronald T. Kneib, Secretary-Treasurer  
A. Quinton White, Member at Large  
Lynn Barker, Student Member

### Committee Chariman

Linda C. Clements, Program

### ACCOMMODATIONS AND DIRECTIONS TO MEETING:

Meetings will be at the auditorium of the Duke University Marine Laboratory.  
Accommodations are available at:

Beaufort Inn, 101 Ann Street, Beaufort, NC (919)728-2600

Inlet Inn, 601 Front Street, Beaufort, NC (919)728-3600

Comfort Inn, Moorehead City (919)247-3434 or 1(800)422-5404

Day's Suites, Atlantic Beach (919)247-6400 or 1(800)325-2525

Dunescape Villas (condo), Atlantic Beach (919)247-3600 or 1(800)682-3702

Econolodge Moorehead City (919)247-2940 or 1(800)446-6900

Holiday Inn, Atlantic Beach (919)726-2544

From either the north or south, take Rte 17 or Rte 95 to Rte 70 east to Beaufort. See maps below.

