

National Shellfisheries Association

QUARTERLY NEWSLETTER

OCTOBER 2004

WALDOBORO, MAINE



President's Message

This will be a brief message to leave lots of space for Philly news. As you can see from the rest of this Newsletter, plans for Philly are progressing at warp speed, several special sessions are being organized and the call for papers is now official. There is a short turnaround time, so start writing. Dee and her team are going all out to make this a fun and informative meeting, so please do your part to make it a success: submit your abstracts on time, get your auction items ready, volunteer to help at the sales table or just show up!!

You'll note that abstract submissions are WEB-based this time (there will be some glitches, so please be patient). Scott Siddall of the Longsight Group and LaDonn Swann, Webmaster have been working diligently with members of the EXCOM to revamp the WEB page and get the entire NSA infrastructure organized. Scott will be at the meeting in Philly to show off the new system and answer questions. Bring your suggestions for improvement and new material to the meeting or send it to LaDonn.

You will also note that there is a strict word limit on abstract submissions. This will ensure that four abstracts fit on a page of the *Journal*, cut down on the expenses associated with publishing them and generally look better. I get many requests for abstracts from individuals who think they are requesting a full paper – hint, hint – when you present a paper at the NSA meeting, please consider submitting a manuscript to JSR, it's where folks look for shellfish-related papers!

The ballot is almost ready and will be mailed at the end of November. Watch for yours and take a minute to vote.

Sandy

Liberty & Freedom for Shellfish Everywhere! Here we come PHILLY!

Be sure you don't miss the 2005 Annual Meeting in Philadelphia, the city of shellfishery (brotherly) love! It has been 20+ years since NSA last met in Philly, and this year's 97th annual meeting will be a "must-attend" event held at a hoppin' center city location. The downtown DoubleTree Hotel is situated on the Avenue of the Arts directly across from the new Kimmel Center on South Broad Street. Bring the family and take in the historic sites like the Liberty Bell, Independence Hall, Penn's Landing and the Betsy Ross House. Or, visit the famous Art Museum where Rocky ran, or the Edgar Allen Poe Museum, or trendy South Street, or.... just hang with the shellfish-heads at the more than 100 restaurants, pubs, nightspots and oyster bars within 4-5 blocks of the hotel! Those with a sense of the culinary landscape will know that Philly is now regarded



Continued on page 9.

In this issue:

- **Call for Papers**
- **Loosanoff Biography**
- **Student Awards**
- **Book Reviews**

Recruits Corner

Treasurer's Update and Call for Meeting Sponsorship

Just a brief note here to let everyone know that in the final accounting from Hawaii our losses were reduced from slightly over \$10,000 to \$8,714. Still hurts, but a little less. As described elsewhere here and in previous newsletters, the next meeting in Philadelphia is shaping up great and is one that you will not want to miss. I encourage any members to seek sponsors for the meeting. This could include businesses, government agencies, private foundations or even individuals. Sponsorships can be directed to support specific activities such as publication of the program, the cover for the program, coffee breaks, receptions, special sessions, student attendance, etc. If you know of a potential sponsor contact me, Danielle Kreeger or Gary Wikfors as soon as possible. Contact info is on the back of this newsletter.

Dave Bushek
Treasurer

Eat the Experiment!!!

In an effort to raise a little money and to have a good time, there will be a special evening event at the NSA Annual Meeting in Philadelphia. On Wednesday evening, at the Sansom Street Oyster House, one of the oldest oyster houses in Philadelphia, there will be an event not to be missed. This limited ticket event will showcase the "Most Expensive Oyster Slurp in History." We are attempting to get oysters from shellfish researchers and extension folks from the East and Gulf Coasts to compare and contrast the culinary differences of two species, various growout techniques and varying water bodies. The oysters will be paired with some great domestic and imported wines. More details will follow.

Gef Flimlin

Calling all Home Brewers!

Since many of us from the East Coast will be driving in, Philadelphia is the ideal place to bring samples of your Home Brew for the NSA auction and of course for a Taste Test Fest. So start brewing your best recipe (ale, lager, whatever), design a unique label, and box it up for the road trip to Philly. West Coast members - if you can't bring it on the plane, you'll have your chance for a West Test Fest next year in Monterey. Happy brewing!

Karolyn Hansen

It's that time of year again...time to submit abstracts for the NSA annual meeting. You will find the Call for Abstracts in this newsletter and online at www.shellfish.org. Have you visited the web site lately? If you haven't, surf on by. You will find lots of useful NSA info including membership applications, grant and award application information, contact info for top shellfish biologists (i.e. our society officers), and the new and improved Recruits web page (found through the "About NSA" tab on the homepage for now). I hope that many of you students are planning to join us in Philadelphia in April. Reading the last newsletter, there seems to be plenty to look forward to in Philly – hitting the cities hotspots, taking in a bit of history, and, oh yeah, cutting edge shellfish science. We are also in the planning stages for a special student session taking in inside look at the world of science publishing. Thinking you might not be able to swing a trip to the meeting, then you should definitely apply for the **Student Endowment Awards** when you submit your abstract in December. Please visit the Recruits web page for an application. The awards will cover registration or hotel room costs for a number of talented students. While you are at it be sure that you are considered for a presentation award as well. And one more opportunity for funding, if you get this newsletter in time, don't forget to apply for the **Carriker and Castagna Research Grants**. Again, see the Recruits web page for application information and deadline in November.

Now, it is my honor to be able to use this forum to send a humongous **THANK YOU** to **Steve Allen** for his years of service as chair (and co-chair) of the NSA Student Recruits. Steve led the Recruits during his tenure as a grad student in Charleston and recently completed his Masters – Congratulations Steve. Steve will be filling us all in on his plans in an upcoming Metamorphosis column, keep an eye open. So, when you see Steve in Philly, please be sure to shake his hand and thank him for his dedication to the NSA students. And while you're at it, introduce yourself to me, Nature, as I will be chairing the Recruits solo for a while. You can also 'meet' both of us on the Recruits web page (see how I keep coming back to that – just visit). I will continue to use this column to solicit comments and suggestions from the students, so let me hear what you think – namcginn@ucdavis.edu.

Here are a few more things to keep in mind while you gather your brilliant research together for an abstract. Membership – recruit your friends! Do you know someone with an interest in shellfish biology that is not an NSA member? Share your excellent experiences with the society and direct them to the web site for more info on

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Call for Papers Philadelphia 2005

INSTRUCTIONS FOR ABSTRACTS

Please read the instructions for submission of abstracts carefully because the procedure has been changed considerably. This year, **abstracts may be submitted on-line by visiting www.shellfish.org. Electronic submissions are strongly encouraged.** Alternatively, authors may still submit their abstracts and fees as described below. Those who have been invited to present in one of the special sessions, please see the instructions for Invited Papers.

Instructions for contributed papers: For those who wish to contribute an oral presentation or a poster but who are not an invited speaker of special sessions, please follow instructions below for preparing the abstract. **Abstracts must be received by December 13th, 2004.**

1. **Oral Presentations:** Submit your abstract on-line by visiting www.shellfish.org or send it to the Program Chair: Dr. Gary Wikfors, National Marine Fisheries Service Laboratory, 212 Rogers Ave., Milford, CT 06460 USA using the postal service. The submission fee (US\$35) must be sent directly to the Program Chair.
2. **Poster Presentations:** Submit your abstract on-line by visiting www.shellfish.org or send it to: Dr. Gary Wikfors, National Marine Fisheries Service Laboratory, 212 Rogers Ave., Milford, CT 06460 USA using the postal service. The submission fee (US\$35) must be sent directly to the Program Chair.

FAX and email submissions will NOT be accepted. Students who wish to be considered for the Nelson and Gordon Gunter Awards should indicate their student status on the abstract form.

Instructions for Invited Papers: If you have been invited to present a talk in one of the special sessions, please follow the instructions for preparing the abstract, then send your abstract to your session organizer (listed on page 6). Abstracts must be received by **December 13th, 2004**. Please note that the abstracts are to be sent to the session chair and **the submission fee with a copy of the abstract must be sent directly to the Program Chair**, Dr. Gary Wikfors, National Marine Fisheries Service Laboratory, 212 Rogers Ave., Milford, CT 06460 USA. The submission fee must be paid in order for your abstract to be published in the program and *Journal of Shellfish Research*.

PREPARING THE ABSTRACT

All abstracts not submitted on-line must be submitted as either a MS Word or RTF file on disk accompanied by a hard copy and the abstract form. You must also include the title and authors separately according to the two sample formats (Size 10 TIMES NEW ROMAN FONT) provided in the abstract form.

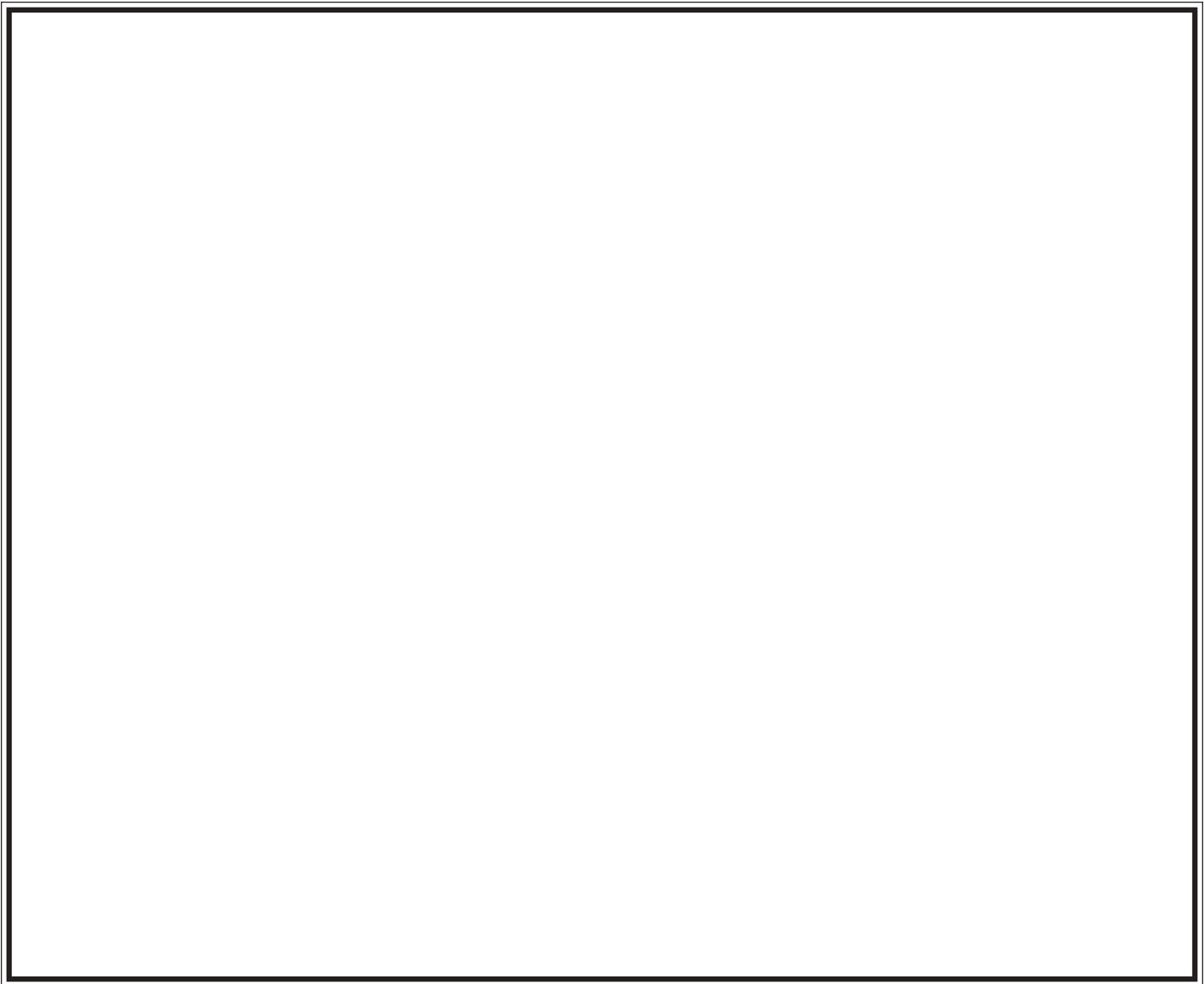
Type the title (all capitals) and name(s) of author(s) and address(es), punctuating as shown in the accompanying example. An asterisk (*) should be placed after the last name of the author presenting the paper.

The entire abstract must be less than 250 words and fit within the rectangular outline provided on the abstract submission form. When using abbreviations, spell out in full first, followed by the abbreviation in parentheses. **PLEASE PROOFREAD ABSTRACTS BEFORE SUBMISSION.**

The accompanying abstract form can be used for both oral and poster presentations; specify the preferred method of presentation in the space provided on the form. Check the appropriate box if the author is student or recent graduate and is eligible for the Thurlow C. Nelson or Gordon Gunter Awards.

If you submit an abstract by mail, a check (personal or institutional) or money order for US\$35 (checks must be drawn on a US bank and made out to the NSA) must be sent to Program Chair Dr. Gary Wikfors at the address above. No other form of payment will be accepted. All Abstracts and fees must be received by **December 13th, 2004**.

Special Instructions for Student Presentations: In order to maintain and expand student participation in the Association, a Student Endowment Fund has been established. For those students wishing to apply for travel support for presentation of paper or poster, please fill out a Endowment Fund application form on page 9 and submit it with a copy of your abstract to Dr. Fu-Lin Chu as detailed in the accompanying article found on page 7 in this issue. The deadline for receipt of the application is **December 13, 2004**.



Title/Author:

Author/Title:

Abbreviated title:

(seven words or less)

First author's mailing address: _____

(if different from above) _____

Telephone: _____

Email: _____

Preferred Method of presentation: _____ **Oral** _____ **Poster** _____ **Either**

Is this an invited paper for a special session? _____ **Yes** _____ **No** **If yes, which?** _____

Would you like to present at a special session? _____ **Yes** _____ **No** **If yes, which?** _____

IS FIRST AUTHOR A STUDENT OR RECENT GRADUATE? _____ **Yes** _____ **No**

(all student authors are eligible for the Thurlow C. Nelson or Gordon Gunter Awards)

SIZE AND DEPTH DEPENDENT LARVAL MORTALITY: A MODELING STUDY.

Margaret M. Dekhenieks,* Eileen E. Hofmann, and **John M. Klinck,** Center for Coastal Physical Oceanography, Old Dominion University, Norfolk, VA 23529; **Eric N. Powell,** Haskin Shellfish Research Laboratory, Rutgers University, Port Norris, NJ 08349.

The rates of mortality for larval stages of most marine organisms are difficult or impossible to measure, and as a consequence are largely unknown. This is problematic since mortality, in particular predation loss, is an important process determining recruitment and the structure of marine communities. Simulation models provide one means of testing the effects of different mortality losses on population structure. Thus, a time and depth-dependent model of the growth and behavior of larvae of the Eastern oyster, *Crassostrea virginica*, was developed to investigate the effects of different predation strategies on the survivorship of this species. Simulations that included a size-dependent mortality showed that the largest number of larvae survive to settlement size if predation loss decreases with larval size. Simulations that included depth-dependent predation loss showed that more larvae survive to settling size when predation is concentrated in surface waters. However, few larvae survive if benthic predation rates are high or if predation rates are constant with depth.

Title/Author:Size and depth dependent larval mortality: a modeling study
DEKHENIEKS, HOFMANN, KLINCK, POWELL

Author/Title:*Margaret M. Dekhenieks,* Eileen E. Hofmann, John M. Klinck and Eric N. Powell*
Size and depth dependent larval mortality: a modeling study

Abbreviated title:
Size and depth dependent mortality

(seven words or less) same

First author's mailing address: _____
(if different from above) _____

Telephone: 804-683-5550 **Email:** deks@ccpo.odu.edu

Preferred Method of presentation: Oral Poster Either

Is this an invited paper for a special session? Yes No **If yes, which?** _____

Would you like to present at a special session? Yes No **If yes, which?** _____

IS FIRST AUTHOR A STUDENT OR RECENT GRADUATE? Yes No
(all student authors are eligible for the Thurlow C. Nelson or Gordon Gunter Awards)

Special Sessions NSA 2005

Biom mineralization: William S. Fisher
US Environmental Protection Agency
Office of Research and Development
National Health and Environmental Effects Research
Laboratory
Gulf Ecology Division
1 Sabine Island Drive
Gulf Breeze FL 32561 USA
Phone: (850) 934-9394
Email: fisher.william@epa.gov

Lobster Biology, Disease, and Mortality:
Anthony Calabrese
36 Water Lily Lane
Guilford CT 06437 USA
Phone: (203) 457-1432
Email: acalabre@comcast.net

Bivalve Aquaculture Health Management:
Ralph Elston
P.O. Box 687
Carlsborg WA 98324 USA
Phone: (360) 681-3122
Email: aquatech@olypen.com

Introduced Species: Dianna Padilla
Department of Ecology & Evolution
678 Life Sciences Building
SUNY, Stony Brook NY 11794 USA
Phone: (631) 632-7434
Email: dianna.padilla@stoneybrook.edu

Starvation of Larval Shellfish: Roger Tollefsen
New York Seafood Council
Email: nyseafood@mns.com
Phone: (631) 728-3474

Disseminated Neoplasia: Update and Strategy for Research: Esther C. Peters
Tetra Tech Inc.
10306 Eaton Place Suite 340
Fairfax VA 22030 USA
Phone: (703) 385-6000
Email: peters@tetrattech-ffx.com

Special Student Session; Writing for Researchers:
Nature McGinn
Bodega Marine Lab
P.O. Box 247, Bodega Bay, CA 94923
Phone (707) 875-1973
Email: namcginn@ucdavis.edu
and
Dane M. Frank
Dept. of Marine Sciences, Univ. of Connecticut
1080 Shennecossett Road, Groton, CT 06340
Phone (860) 405-9235
Email: dana.frank@uconn.edu

Shellfish Issues in the Delaware Estuary:
Danielle Kreeger
Academy of Natural Sciences
1900 Franklin Parkway
Philadelphia PA 19203 USA
Phone: (215) 299-1184
Email: kreeger@acnatsci.org
and
John W. Ewart
Delaware Aquaculture Research Center
College of Marine Studies
University of Delaware
Lewes DE 19958 USA
Phone: (302) 645-4060
Email: ewart@udel.edu

Photo Quiz Answer

How many of these shellfish biologists of the NSA could you identify from the Summer issue? From left to right are Sandy Shumway, James Mason, Alan Ansell, Andy Brand and John Manzi. The photo was taken at the 7th International Pectinid Workshop, Sonesta Hotel in Portland, Maine in 1989.

Dr. Bruce Barber was the first person to correctly ID the people and date. Bruce will receive a copy of *Taming of the Oyster*.

Bonus question: Whose knees are visible in the lower right portion of the photo?



NSA-Student Endowment Fund

The National Shellfisheries Association Student Endowment Fund was established in 1989 to maintain and expand the participation of students in the Association. Contributions for the Fund are tax-deductible and are used to defray the costs associated with presenting oral and poster presentations at the Annual Meeting. The funds are administered by an appointed committee which reviews student applications and makes recommendations for disbursement of funds.

STUDENT ENDOWMENT AWARDS PHILADELPHIA 2005

Students participating in the 2005 NSA meeting in Philadelphia are invited to apply for both **travel awards** and **presentation awards**. For consideration for either award, students must present only their original research. Recent graduates will also be considered if they present only research gathered while a student and within one year of receiving their degree. A short description of these awards and the requirements for consideration follow. Please note that incomplete applications may not receive equal consideration for either type of award.

PRESENTATION AWARDS

At every annual meeting, the best oral and poster presentations by students are acknowledged.

The **Thurlow C. Nelson Award** is to be given for the outstanding **oral** presentation of research that represents a distinctive and valuable contribution to shellfisheries science. The award is named after the distinguished shellfish biologist who served as NSA President from 1931 to 1933 and contributed more than 125 papers, many relating to oyster biology. The award includes a certificate of accomplishment and membership for four years in the Association. Oral presentations are judged on the following aspects: a) written abstract, b) scientific content and relevance, c) oral and visual aspects of the presentation, and d) handling of questions.

The **Gordon Gunter Poster Award** is to be given for an outstanding **poster** presentation of research that represents a distinctive and valuable contribution to shellfisheries science. The award includes a certificate of accomplishment and membership for one year in the Association. Poster presentations are judged on the following aspects: a) written abstract, b) scientific content and relevance, c) quality of figures and text, and d) handling of questions.

STUDENT TRAVEL AWARDS

To facilitate the active participation by students in the 2005 meeting, travel awards will be granted to cover either registration and/or lodging. These funds are competitively awarded based primarily on abstract quality, and secondarily on financial need (i.e., distance of travel, support level) and the student advisors' recommendation.

AWARD REQUIREMENTS

Students will only be considered for travel and presentation awards if they complete all of the following items. Students who do not need travel assistance but still wish to be considered for a presentation award **must** still complete these tasks.

- 1) Fill out the abstract submission form or submit electronically via the NSA web site. Check the appropriate box(es) on the abstract submission form requesting consideration for student presentation and/or travel awards.
- 2) Fill out the Student Endowment Award application form on page 9.
- 3) Obtain one letter of recommendation from your advisor or other faculty mentor.
- 4) Enclose the Student Endowment Award Application in a separate envelope addressed to the Student Awards Committee. The application should consist of a) the **Endowment Award application form**, b) **letter of recommendation** and c) a **copy of the abstract** submission form.
- 5) Mail your complete set of Student Endowment Award application materials to Dr. Fu-Lin Chu (contact information on back page) by **December 13, 2004**.

Remember that the original abstract, abstract submission form and fee should also be submitted on-line or directly to the Program Chair, Dr. Gary Wikfors, at the address listed on back page (or session chair if applicable). Please forward any questions concerning student awards to either Fu-Lin Chu or Maureen Krause (contact information on back page). Good Luck!

Attention faculty advisors: Please don't forget to write letters of recommendation for your students applying for SEF travel awards! Your support is very important for your students to compete for the awards.

Attention students: Travel award recipients will be expected to assist at the meeting (e.g., manning the sales booth table or operating the A/V or other assistance as needed).

Carriker and Castagna Student Grants Awarded

The National Shellfisheries Association is pleased to announce that the second annual **Michael Castagna Student Grant for Applied Research** has been awarded to Ms. **Megan Stewart**, a Ph.D. graduate student in the School of Geography and Environmental Studies at the Leigh Marine Laboratory of the University of Auckland, New Zealand. Ms. Stewart's award will be used in support of her thesis research titled "The impacts of habitat change on cockle (*Austrovenus stutchburyi*) populations." This competitive research grant is named in honor of the late Michael Castagna, a distinguished and long-serving member of NSA who consistently invested heavily in student development throughout his career. The grant awards \$1000 for non-travel expenses associated with graduate research by a student member of the association.

We are also pleased to report that the sixth annual **Melbourne R. Carriker Student Research Grant** has been awarded to Ms. **Coren Milbury**, a Ph.D. graduate at the University of Delaware's College of Marine Studies. The award will be used in support of Ms. Milbury's thesis research, titled "Development of high-throughput genetic techniques for the assessment of restoration efforts using hatchery-produced oysters." This competitive research grant is named in honor of Professor Carriker, one of NSA's most distinguished Past-Presidents and current societal Historian. The grant awards a student NSA member \$1000 for non-travel related expenses associated with undertaking graduate research.

I am grateful to Lou D'Abramo, Sandy Shumway and others on the Board for help in reviewing the applications. The next opportunity to apply for both research grants is no later than **November 21, 2004**. Application details appeared in the summer issue of the *NSA Quarterly Newsletter* as well as at the NSA web site.

Danielle Kreeger

Editor's note: This article was inadvertently omitted from the Spring 2004 post-meeting issue of the Newsletter.

**Check out the revitalized NSA
Web site by visiting**

www.shellfish.org

ECSGA Update

The East Coast Shellfish Growers Association (ECSGA) continues to add new members and to represent the interests of shellfish farmers on the "right" coast. In the last few months we have contributed to Seafood Watch, the Slow Food movement, and the World Wildlife Fund, giving them accurate information to ensure that cultured shellfish are recommended in their food guides.

In July the ECSGA co-sponsored an Oyster Festival at the Spring House on Block Island featuring product from eleven of our member-growers. Everyone enjoyed themselves as we shucked over 3000 oysters to a zydeco beat and served them to a thousand guests. Most of the contributing farms were represented at the festival by company owners and representatives, offering the patrons special insights into the qualities of their particular oysters. The list included Jeff Gardner (Watch Hills) Jim Anderson (Oak Point Oysters), Tommy Leggett (York River Oyster), Travis Croxton (Rhappahannock River Oysters), K&B Seafood (Saddlerock Oysters), Rob Krause (Ninigret Cups), Skip Bennett (Island Creek Oysters), J.P. Shellfish (Cooks Cove Oysters), Perry Raso (Matunuck Oysters), Jim Markow (Mystic Oysters) and Bob Rheault (Moonstones). Three of these growers brought samples of their first crop!

The ECSGA is co-sponsoring the International Conference on Shellfish Restoration in Charleston in November, and will hold a meeting and shellfish reception on the evening of Thursday Nov. 18th. This will provide a more southern venue for growers and those interested in shellfish issues to get to know the ECSGA.

The ECSGA annual meeting will be held in conjunction with the Maryland Waterman's Show in Ocean City, Maryland, January 28-29. The actual meeting will be held on Friday the 28th at 3:00, followed by a reception that night. On Saturday Jan. 29th we will hold a half day shellfish seminar, featuring aquaculture related presentations on oyster and clam production, processing, marketing and current issues and trends.

Voting memberships in ECSGA are open to all east coast shellfish companies and distributors that derive at least part of their income from shellfish culture activities. In addition, a variety of non-voting membership opportunities are available. For information on ECSGA membership, activities and upcoming events visit them at their website www.ecsga.org.

Ed Rhodes, Executive Director

Philly... Continued from page 1.

as one of the hottest restaurant cities in the nation.

I recommend tagging on an extra day or more if you plan to take in the local attractions because you won't want to miss the meeting program or the various events that we have planned. The meeting itself will run from Sunday night (April 10th) to noon on Thursday (April 14th.) The local organizing committee of Dave Bushek, Sue Ford, and Gef Flimlin have worked hard with me to plan a fun and content-rich conference. Of course, with a return to the mid-Atlantic and high interest in many emerging shellfish issues in this area, we expect to have a powerful program. Please see the write-up by Gary Wikfors, the Program Chair for Philly, elsewhere in this newsletter. But in addition, you won't want to miss Ken Chew's traditional Chinese banquet (Monday night, by ticket), Sandy Shumway's student benefit auction (Tuesday night, start getting your auction items ready now), or Gef Flimlin's

special oyster tasting & shucking contest at a local oyster house (Wednesday night, by ticket).

Besides the meeting dates (4/10 to 4/14), please note the following important deadline dates. Abstracts are due to Gary Wikfors by December 13, 2004 (see Call for Papers this issue). And, early registration and hotel room bookings will be due by March 15th, 2005 (see next newsletter issue). Please be forewarned that the excellent rate we've reserved for this conference (\$139/\$149) will only be honored up to the 3/15 cutoff date. After that date, room rates at the hotel and elsewhere downtown are expected to be \$209, so please book early and you will want to definitely stay at the DoubleTree. For the most up-to-date information on Philly '05, please stay tuned to the www.shellfish.org. For more information, please contact me (see the page page for contact information).

Danielle Kreeger

STUDENT ENDOWMENTS AND AWARDS

APPLICATION FORM FOR STUDENT PRESENTATION AND TRAVEL AWARDS FOR THE 97th ANNUAL MEETING OF THE NATIONAL SHELLFISHERIES ASSOCIATION, PHILADELPHIA, PENNSYLVANIA, APRIL 10-14, 2005

NAME: _____

INSTITUTION: _____

PRESENTATION TITLE (Attach a copy of abstract form):

PRESENTATION FORMAT: ORAL POSTER (Circle one)?

DO YOU WANT TO BE CONSIDERED FOR A PRESENTATION AWARD? YES NO (Circle one)

DO YOU WANT TO BE CONSIDERED FOR A TRAVEL AWARD? YES NO (Circle One)

IF YOU ARE SELECTED FOR THE TRAVEL AWARD, WHAT IS YOUR PREFERECE OF THE AWARD? LODGING REGISTRATION WAIVER (Circle One).

ADDRESS:

PHONE: _____ **EMAIL:** _____

REFERENCE (Advisor / Mentor): _____

APPLICANT'S SIGNATURE: _____

DEADLINE FOR RECEIPT OF APPLICATIONS IS DECEMBER 13, 2004

Book Review

Hierarchical Perspectives on Marine Complexities: Searching for Systems in the Gulf of Maine by Spencer Apollonio; Columbia University Press, New York, USA, 2002, ISBN 0231124899, 229 pp.

The history of the Gulf of Maine (GOM) ground fishery is a poster child of how traditional approaches to fisheries management and inadequate regulation and enforcement have failed to stem the tide of over-exploitation. An area that was once teeming with cod, flounder, hake and pollock now has populations reduced to a fraction of their previous abundance. Portions of the region have been closed to commercial fishing, coastal economies and cultures have been dramatically impacted and the debate continues as to the best method for restoring the fishery. The author, a previous commissioner of Maine's Department of Marine Resources and former member of several fishery management councils, posits traditional approaches to fisheries management are inadequate given the ecological complexities of the region and new approaches are required.

Apollonio argues that the entire GOM ecosystem has undergone functional and structural changes due to over-harvesting and contemporary fisheries management simply lack the ability to incorporate ecosystem-wide behavior into effective resource management schemes. He suggests that hierarchical theory (HT) is a more realistic way of managing the GOM ecosystem. Indeed, many ecological systems are hierarchical in structure with higher levels ordering and constraining lower ones. Also, ecosystems have emergent properties that are best studied than their component parts. Hence HT has the potential of finding appropriate organizational scales for better understanding ecosystem structure and function and how these can be managed.

The book begins with a brief description of HT, followed by an overview of the relevant physical and biological properties of the GOM. Apollonio then applies HT concepts to the GOM ecosystem and examines how different hierarchies and their constraints influences ecosystem properties. For example, he suggests that because the GOM is geologically young it has had insufficient time to accumulate long-lived species with complex behaviors, and thus few higher level hierarchical components to insure ecosystem stability. With human exploitation primarily focused on long-lived species (e.g., cod, sharks, marine mammals), the GOM's inherent ecosystem predictability and stability have been further compromised. Rather than the continued development of more and more



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Florida's Clam Farms Get Hammered by Hurricanes

The onslaughts of Hurricanes Charley, Frances and Jeanne exacted an extensive toll on Florida's shellfish aquaculture industry. These hurricanes packing winds from 100 to over 145 mph passed over aquaculture leases producing wind-driven wave surges that adversely impacted hard clam crops in southwest Florida and along the Indian River on the east central coast. Descriptions of damage indicated that severe disturbance of the substrate resulted in clam bags being buried under excessive amounts of sand and sediment, as well as storm-scattered debris. Heavy rainfall across the state has resulted in coastal flooding and lowering of salinities in inshore waters. The Suwannee River has yet to crest on the west coast and crops in Cedar Key, the dominant production area in the state, may still be adversely affected. The Florida Department of Agriculture and Consumer Services (FDACS) estimates \$15 million in shellfish production losses. Substantial loss of infrastructure that supports clam production has also occurred. Docks, boats and processing plants in the affected areas were severely damaged by high winds and tidal surges. About one half of the seed suppliers in the state have suffered complete structural damage to greenhouses and buildings.

The pilot cultivated clam crop insurance program, administered by the USDA Risk Management Agency, will provide financial assistance to the industry. Disaster relief legislation currently being drafted by U.S. Congress will provide supplemental disaster assistance for crop losses. The Crop Disaster Program, to be administered by the USDA Farm Service Agency, specifically identifies clam and other shellfish producers. Other recovery efforts being

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Damage to a nursery in SW Florida due to Charley.

Hierarchical Perspectives...

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complex mechanistic resource management models, the author suggests that understanding ecosystem behavior in a more simplistic hierarchical manner may be of greater value.

The strengths of the book are its novel approach to addressing complex marine resource management issues and its clear and non-technical writing style in order to reach the broadest possible audience. While Apollonio attempts to provide applications of HT to human components of fisheries, these require further development to be useful to resource managers. As the author acknowledges, his goal is not to provide a “blueprint for the application of HT to marine systems”, rather to show the “value of developing such a blueprint”. He has achieved this goal and hopefully his efforts will provide the genesis for the continued incorporation of HT concepts into fisheries management practices.

Robert B. Whitlatch
Department of Marine Sciences
University of Connecticut

Hurricane... Continued from page 10.

discussed include a clam seed loan program using revolving loan funds and development of community efforts, such as land-based nurseries, in an effort to help growers acquire seed for replanting crops. Through these programs, Florida’s clam farmers can hopefully rebound from these recent hardships and renew production.

Leslie Sturmer, University of Florida, Shellfish
Aquaculture Extension Program
Mark Berrigan, FDACS Division of Aquaculture

Recruits... Continued from page 2.

member benefits and an application. History – be aware of our roots, we are turning 100 soon. Mel Carriker has put together an amazing history of NSA that is for sale now, please contact Sandy Shumway. Roommates – this is the first, but not the last, time you will hear from me that I am happy to match up people looking for roommates for the Philly meeting. Just e-mail me and I will try to find a roommate for you. Finally, keep in mind that NSA annual meetings are not only a great place to present your research and network, but there is always just a great time to be had by all. So, I’ll see you in Philly!

Nature McGinn

Metamorphosis

Vincent Encomio is now Dr. Encomio and beginning a Post-Doc with Aswani Voley in Florida. Congratulations Vincent!

Don’t Forget The NSA Auction!

The auction is only as successful as you make it – start cleaning those closets and for the Annual Auction. You can bring your treasures with you or send them to Sandy. Since many folks will be driving to the meeting this year, we are hoping for a large supply of home brew. Bottle openers will be provided. Remember, we can sell anything (and we do!) and all proceeds go to the Student Endowment Fund.



Sandy Shumway raising money for the Student Endowment Fund at Aquaculture '04 in Hawaii.

Reminder:

***The Past-Presidents
Luncheon will be held on
Monday, April 11, 2005***

Pioneering Shellfish Biologists Series

Victor L. Loosanoff

by Maille Lyons

Victor Lyon Loosanoff was born on October 3, 1899 in Kiev, Russia. As the son of an Imperial Russian Army officer, he was educated at Russian military academies. At the age of 17, he graduated from the Emperor Alexander First Cadet Corps in Osmk and served 4 years as an artillery officer in the Royal Russian Army. He escaped the 1917 Bolshevik Revolution, firing a machine gun from the back of a train¹, and finding his way through Siberia, China and Japan before immigrating to the west coast of the United States in 1922. He learned English while working in lumber camps and as a commercial fisherman before enrolling at the University of Washington in 1924. Under the guidance of Dr. Trevor Kincaid, he graduated three years later with a B.S. in Fisheries Science (with honors) and began working for the Department of Fisheries and Health in the State of Washington. In 1931, he moved to the east coast to become the Chief Marine Biologist of Virginia. The following year Dr. Paul Galtsoff, as the acting Director of the Woods Hole Bureau of Fisheries Laboratory, hired Loosanoff to go to Milford, Connecticut as an Aquatic Biologist with the U.S. Bureau of Fisheries. Shortly after moving to Connecticut, he began graduate studies under invertebrate zoologist Dr. Wesley R. Coe at Yale University, earning his Ph.D. in Zoology in 1936. From 1935 to 1962 Loosanoff served as the Director of the U.S. Fish and Wildlife Marine Biological Laboratory in Milford, CT. In 1962 he moved back to the west coast to become a Senior Scientist with the Bureau of Commercial Fisheries at the Bureau of Sportfish and Wildlife Laboratory in Tiburon, California. At the same time, he was appointed an Adjunct Professor at the University of the Pacific where he supervised marine biology students at the Pacific Marine Station. Although he retired in 1965, he remained active in research and consulting up until his unexpected death in 1987.

Victor Loosanoff spent most of his illustrious career at the Milford Laboratory. Starting with a mere one-room wooden building, his research focused on the struggling commercial oyster fisheries in Long Island Sound. Oyster stocks had been steadily declining for years and public attention turned toward experimental culture techniques for stock enhancement. His detailed, comprehensive work on the artificial propagation of shellfish larvae resulted in the development of revolutionary methods for the aquaculture industry. At that time, no one in the world could consistently maintain and develop substantial numbers of bivalve mollusc eggs to a large enough size to be planted as seed. Under Loosanoff's strict direction, his laboratory developed methods for year-round spawning of molluscs and in the process demonstrated that there was no relationship between oyster spawning and lunar phases as others had proposed. His methods allowed biologists in seasonal climates, such as Long Island Sound, to work with eggs and larvae throughout the year. Along with his colleague, H. C. Davis, he designed a novel technique to raise bivalve larvae focusing on the nutritional value of several species of naked flagellates for live food and of dried algae for preserved food. Loosanoff launched the career of Dr. Robert Guillard² who would go on to design and develop pioneering culturing techniques of phytoplankton. Loosanoff's team also described ecological and physiological requirements of bivalve mollusc



Victor Lyon Loosanoff (1899-1987)
(*Photograph: G. Sennfelder, Milford Laboratory*)

larvae including ranges and optima for salinity, temperature, pH and food concentration. His laboratory was the first to develop successful methods of rearing oysters through metamorphosis in a hatchery, and the first to rear larvae of the northern quahog, *Mercenaria mercenaria*. Earlier attempts to cultivate bivalve mollusc larvae failed, in part, because of mass mortalities from fungi, bacteria and protozoa. The Milford biologists discovered many disease-causing microorganisms were controllable via antibiotics, sulfa drugs, fine filters and ultraviolet rays. They provided immediate, practical advice to hatchery operators such as raising the water temperature by a few degrees above that tolerated by pathogens, but within that tolerated by larvae. Loosanoff generously shared his research and distributed microscopic preparations made from bivalve mollusc eggs produced, fertilized and raised in the laboratory to increase the accuracy of bivalve mollusc larval identifications at other laboratories. Due to his perseverance and success, the Bureau of Fisheries established a full-scale, permanent, research laboratory dedicated to shellfish research. This included the construction of a new 4,800 square foot brick building that Loosanoff helped design, including its laboratory, facilities and program. Victor Loosanoff began by continuing the preliminary work of Drs. Paul Galtsoff and Herbert Prytherch on the artificial propagation of oysters and eventually became “The Father” of U.S. Shellfish Hatcheries³. In addition to culturing techniques, Loosanoff was keenly interested in the control of oyster predators including the common (*Asterias forbesi*) and purple (*Asterias vulgaris*) starfish. He conducted thorough research on their basic biology, feeding behaviors and susceptibilities to chemical control methods. Loosanoff developed “an easy, inexpensive, and practical”⁴ method for tagging and tracking starfish in the field to describe their natural behaviors. He determined starfish have “no definite inshore or offshore migration”⁴ and the longest distance traveled by an individual was less than one nautical mile per year. Loosanoff’s tagging method transformed starfish from their natural color to a distinctive green or greenish-blue which lead to sensational stories of Irish starfish invading Long Island Sound.

Victor Loosanoff was an active member of the National Shellfisheries Association (NSA). At annual meetings he led enthusiastic discussions on diverse topics including: starfish problems in Long Island Sound (1937), spawning and setting of oysters in Long Island Sound and the chemical control of predatory starfish (1938), cultivation of the edible blue mussel and spawning of oysters at different depths (1942), mussel resources in the North Atlantic (1943), laboratory culture of quahog larvae (1949), oysters in low salinities (1951), and spawning, larval abundance, distribution and setting of oysters (1954). He served as president of NSA from 1947-49, a time that he described as “a new era in shellfisheries.”⁵ Loosanoff oversaw the transition from small groups of biologists independently conducting shellfish research, to larger, state centered and private research laboratories. He observed the expansion of shellfish research beyond the oyster to include commercial fisheries for hard and soft clams. He witnessed the change from older, traditional cultivation methods to newer harvesting devices and technologies. In 1963 he was elected an Honored Life Member and remembered for “the energetic, persistent, and often ingenious way he approached the problems of our industry”⁶ and as “one of our most distinguished and honored shellfish scientists.”⁶ He authored over 200 popular and scientific articles, many of which are still cited in current literature. He was also an active member in the American Society of Zoologists, Sigma Xi and the Connecticut Academy of Arts and Sciences. Among his numerous honors and awards, Loosanoff received the Distinguished Service Award from the Department of the Interior in 1965 for his contributions to fishery sciences and the *R/V Victor Loosanoff* is a 49-foot research vessel docked at the Milford Laboratory. The sponge, *Acervochalina loosanoffi* (Hartman, 1958), was also named in his honor.



Victor Loosanoff and a catch of starfish.

Those who knew him describe Victor Loosanoff as a man who never hesitated to speak his mind. He had a loud, commanding voice and was often harsh and uncompromising especially when he disagreed with a newly proposed theory. Loosanoff was an extraordinarily hard and meticulous worker and demanded as much from those with whom he worked. Although outwardly confident, he feared his laboratory would lose funds if papers were not regularly produced and thus he expected his staff to publish at least one paper per year. He liked to think of himself as an orchestra leader conducting an orchestra and his staff as

Continued on page xx.

Biography of Victor L. Loosanoff... Continued from page 13.

the instrument players⁷. Director Loosanoff visited each staff member every day and demanded a thorough progress report once a month. When he was upset with the strength of a report he would bellow that he wasn't "running a country club for college boys."⁷ If an employee was late, they were excused for the day, if it happened a second time, they were fired¹. His relationship with another prominent Russian biologist, Dr. Paul Galtsoff, was intense and to some degree competitive, but their spirited debates at meetings would inspire and entertain the younger, future leaders of the NSA⁸.

On June 15, 1987 at the age of 87, with his health deteriorating and his eyesight all but gone, Victor Loosanoff ended his life. He was survived by his loving and supportive wife of 59 years, Tamara. Tamara was a petite, pleasant woman known for calming Victor down whenever he got angry at a colleague. Tamara also explained his unusual practice of calling all female students and employees "sweetie"¹. Victor had trouble remembering the name of his secretary even though she worked for him for over 10 years. He often called her by other names, or referred to her as "you" or "lab secretary". On one occasion, after being called the wrong name, the secretary was "uncontrollably sobbing". Victor, not wanting to lose such a loyal employee, decided to "minimize" the problem by simply calling all the women he met "sweetie". Tamara admitted he occasionally even called her "sweetie"¹. The Loosanoffs lived in a house overlooking Milford Harbor, a convenient 35 feet from his laboratory, with as many as 50 mallard ducks. Loosanoff fed and observed the ducks daily, curious to see which males were loyal to their mates⁷. The Victor and Tamara Loosanoff Fellowship generously supports graduate students at the School of Aquatic Fishery Sciences at the University of Washington undertaking studies with marine invertebrates. Victor Lyon Loosanoff is remembered as one of the famous early shellfisheries biologists.

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Upcoming Meetings

11th International Conference on Harmful Algae: November 15-19, 2004, Cape Town, South Africa. For more information on the conference program and venue, or to register and submit abstracts, contact the conference office at phone +27 21 683 5522, email: aecon.e@mweb.co.za or visit <http://www.botany.uwc.ac.za/pssa>.

7th International Conference on Shellfish Restoration: November 17-20, 2004, DoubleTree Suites, Charleston, SC. Those interested in participating should request more information by contacting Elaine Knight: e-mail: Elaine.Knight@scseagrant.org. You may also find continuously updated information on ICSR 2004 at www.scseagrant.org.

4th Northeast Aquaculture Conference & Exposition: December 3-4, 2004, Center of New Hampshire Holiday Inn, Manchester, New Hampshire. For more information, visit <http://www.northeastaquaculture.com> or contact JJ Newman-Rode, NACE 2004 Conference Coordinator, c/o UNH Cooperative Extension, Durham, NH 03824-3515. Phone (603) 749-1565 or email to jj.newman@unh.edu.

International Workshop on Culture, Fisheries and Stock Enhancement of Portunid Crabs: January 20-22, 2005, Hotel del Rio, Iloilo City, Philippines. Hosted by the Aquaculture Department, Southeast Asian Fisheries Development Center. For more information, visit <http://inco-cams.seafdec.org.ph/workshop/eccamshome.html> or email INCO_CAMS@bigfoot.com.

Aquaculture America 2005: January 17-20, 2005, Marriott New Orleans, New Orleans, Louisiana. For more information, contact the Conference Manager, 2423 Fallbrook

Place, Escondido, CA 92027 or phone (760) 432-4270 or visit <http://www.was.org>.

Benthic Ecology Meeting: April 6-10, 2005, Williamsburg Hospitality House, Williamsburg, PA. For more information, visit <http://www.vims.edu/bem2005/>.

National Shellfisheries Association 97th Annual Meeting: April 10-14, 2005, Doubletree Hotel, Philadelphia, PA. Contact Dee Kreeger or Gary Wikfors for more information (see back page for contact information).

15th International Pectinid Workshop: April 20-26, 2005, Mooloolaba, Queensland, Australia. For more information, contact Mike Dredge at flatcalm@ozemail.com.au or Peter Duncan at pduncan@usc.edu.au.

World Aquaculture 2005: May 9-13, 2005, Bali International Convention Center, Nusa Dua, Bali, Indonesia. For more information, contact the Conference Manager, 2423 Fallbrook Place, Escondido, CA 92027 or phone (760) 432-4270 or visit <http://www.was.org>. Abstracts due November 1, 2004.

6th International Crustacean Congress: July 18-22, 2005, University of Glasgow, Scotland, UK. For more information, visit <http://gla.ac.uk/icc6>.

National Shellfisheries Association 98th Annual Meeting: March 26 - 30, 2006, Monterey Marriot, Monterey, CA. Contact Paul Olin at pgolin@ucdavis.edu for more information.

If you would like to announce a meeting, conference or workshop that might be of interest to NSA members, please contact Chris Davis (see back page for contact information).

Courses of Interest

IOC Training Course on Qualitative and Quantitative Determination of Algal Toxins
Alfred-Wegener-Institut für Polar und Meeresforschung, Germany
22 February to 3 March 2005

Application deadline is 1 December 2004

Full details and application form may be found by visiting: <http://ioc.unesco.org/hab> or contact: Henrik Enevoldsen, IOC Project Coordinator, IOC Science and Communication Centre on Harmful Algae, University of Copenhagen, Øster Farimagsgade 2D, 1353 Copenhagen, Denmark
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8th Advanced Phytoplankton Course - Taxonomy and Systematics
Stazione Zoologica "A. Dohrn", Napoli, Italy
2-23 April 2005

Application deadline is 10 November 2004

The course aims at training and upgrading qualified students in the identification of phytoplankton species. The course will provide an updated theoretical background for the morphology, taxonomy, classification and phylogeny of the most important phytoplankton groups. For more information, visit: www.szn.it/~apc8.

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