# National Shellfisheries Association Quarterly Newsletter

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# **President's Message**

I hope you have had a productive and enjoyable fall. Here in Maine, we had a beautiful and mild autumn and our shellfish have had a longer than average growing season. With the

shortening days comes the realization that all those seasonal projects need to be completed before the snow flies. This is also the time of year when Abstracts get written, so I hope you will consider submitting an Abstract to the 106<sup>th</sup> Annual Meeting of the NSA, which will be held March 29 – April 2 in Jack-



sonville, Florida. Abstracts need to be submitted online at the NSA web site (www.shellfish.org) and are due no later than January 1, 2014. This is also the date that applications for student awards are due as well as "early-bird" registrations for the meeting. And of course, NSA memberships need to be renewed by then as well. Since none of us want to be writing an Abstract on New Year's Eve, I suggest we get those Abstracts and applications written, memberships and registrations confirmed and that flight to Jacksonville and hotel room booked before the holiday rush descends upon us. Not only will doing so help you have a stress-free New Year's Eve but you'll also save money by taking advantage of those "early-bird" rates.

With this issue of the *QNL*, we sadly report another loss to our shellfish community with the passing of Sammy Ray. Sammy was a pioneering shellfish biologist and remarkable educator and mentor to students of all ages. Catching up with Sammy at NSA meetings was always a joy. He will be sorely missed.

It continues to be a privilege and honor to serve this 105 year old organization and I am fortunate to get to work with such talented and dedicated colleagues.

Chris Davis President

# The Passing of an Icon Sammy Ray

Sammy Ray, renowned oyster biologist, dedicated marine educator, and a founder of Texas A&M University at Galveston, died on October 14, 2013 at the age of 94. Sammy's first professional interest was ornithology. As an undergraduate

student he worked under the direction of ornithologist George Lowery at Louisiana State University (LSU), where he received his B.S. degree in 1942. There, he refined his skills as a taxidermist and made numerous contributions to the LSU Museum. In June 1942, he enlisted in the Navy as a pharmacist's mate. He saw intense action in the Pacific theater where he collected birds knocked to the ground by artillery fire



from both friend and foe. The specimens were shipped to the Smithsonian Museum, and are a part of its permanent collection of Pacific birds.

At the conclusion of the war he intended to attend medical school. An offer of a fellowship funded by Gulf Oil and the opportunity to attend Rice University and work with the parasitologist Asa Chandler diverted him from medical school to oyster biology. After World War II, exploration, drilling, and production of oil in the estuaries of Louisiana intensi-*Continued on page 5.* 

In this issue:

- Jacksonville meeting information
- Shellfish R & D
- The Epic Saga of Ming

### **Recruits' Corner**

Hello Recruits!

We hope this Newsletter finds you all well, and recovering from productive field seasons! This is just a friendly note to remind you of a few upcoming deadlines for student members of NSA. Abstracts for the 106<sup>th</sup> annual NSA meeting are due January 1, 2014!



This year's meeting, in Jacksonville, Florida from March 29-April 2, 2014, is sure to be a huge success. Students should check out the preliminary program online to see the list of special sessions and plenary speakers: http://www.shellfish.org/. We encourage all students to apply for the Student Endowment Fund Presentation and Travel Awards! There is money available to student presenters for lodging and travel assistance to Jacksonville. Applications are available online at http://www.shellfish.org/student-members. Guidelines for these awards are:

### **Presentation Awards**

• Submit an Abstract by the January 1, 2014 deadline via the Jacksonville meeting link at www.shellfish.org, and identify yourself as a student presenter.

• Register for the 106<sup>th</sup> Annual Meeting.

### **Travel Awards**

• Submit an Abstract by the January 1, 2014 deadline via the Jacksonville meeting link at www.shellfish.org, and select the 'Student Presenter' option during the Abstract submission process.

• Complete and submit the travel award application form (Word or PDF).

• Have your advisor or another faculty mentor submit a letter of recommendation on your behalf by email.

• Attach a cover letter file explaining your need for travel assistance.

• Register for the 106<sup>th</sup> Annual Meeting at www.shellfish. org.

• Submit a copy of your submitted Abstract.

This is a great opportunity for you to receive funding for your studies. We look forward to seeing everyone in Jacksonville! We have a special student session planned with seafood journalist Nikki Holmyard and NSA's own Sandy Shumway. They will discuss how students can get their science out to the public using the press efficiently, professionally, and accurately.

If you have any questions, don't hesitate to email us. We are happy to help!

And one last reminder: We are still looking for a new mem-

ber to be the next NSA Student Recruits Co-Chair. Get involved, meet some great people, and network with future employers and colleagues! We have loved our time as Chairs, and look forward to passing the baton to a new member. Thanks!

Your Recruits Co-Chairs,

Maria Rosa (maria.rosa@uconn.edu) Allison Fitzgerald (allison.mass@csi.cuny.edu)

# Jacksonville Attendees: We need your help judging student presentations!

We know, we know! Is the thought of running from room to room to judge all the student presentations too daunting? Is it too difficult to visit all the posters during the social hour? You aren't the only one thinking this and help is on the way. This year, we are implementing a new format for judging of student presentations. Talks will be divided into categories (i.e. disease, ecology, genetics/genomics, physiology, applied fisheries and maybe more). Judges will be asked to score all talks within a category with the rationale that these categories represent talks you would be attending anyway. As for posters, they will now be judged on their ability to express research studies and outcomes without in-person explanation. You can score them at your leisure, without the anxiety of trying to attend while students are at their posters.

Please consider dedicating some of your time to this effort. NSA has always supported our students and we would like to continue that tradition as best we can. If you are willing to judge student presentations, please indicate so online when you register for the meeting or contact Stan Allen (ska@ vims.edu) or Lisa Milke (lisa.milke@noaa.gov). As always, your dedication to and support of the students of NSA is appreciated!

### Stan Allen & Lisa Milke Student Endowment and Awards Committee

NSA 2014 Membership Renewals are now open at www.shellfish.org

### 2013 Memberships expire JANUARY 1, 2014

Late fees apply after January 31, 2014



# The 106<sup>th</sup> Annual Meeting is just around the corner

Make plans now to join your friends and colleagues in Jacksonville, FL, March 29 - April 2, 2014. Registration is open, the Abstract Submission site is live, and the Hyatt Hotel link awaits you.

It's a great time of year to visit Jacksonville, and there is a jam-packed program waiting for you. Plenary speakers will start each day with thought-provoking talks on shellfish physiology, climate change, carrying capacity models, and consumer traditions and the shellfish industry. There will be a special workshop session for students on dealing with the press, co-chaired by Nikki Holmyard, one of the plenary speakers, and Sandy Shumway. There are over 20 special technical sessions planned. The PRESIDENT'S RECEP-TION will kick off the conference on SATURDAY evening with the usual seafood feast. The technical sessions will begin on SUNDAY this year. The AUCTION will be held on MONDAY evening, complete with a buffet, libation, and entertainment. The BUSINESS LUNCHEON will be held TUESDAY. The meeting will conclude on WEDNESDAY with a closing Happy Hour. (Note: these are not typos - the meeting starts a day earlier than usual this year).

There's plenty to do in Jacksonville, beginning at the Jacksonville Landing, just a very short wander from the hotel. There's a large food court, several restaurants, bars (one with a mechanical bull), shops, museums, and a great view of the St. John's River. Just across the bridge is a brewery. Many outstanding beaches are near by.

Travel is easy, the airport is new and convenient, and it's a short cab or shuttle ride to the hotel.

Make your reservations early, get your Abstracts submitted, and then sit back and look forward to a fun and exciting time visiting Jacksonville in the spring!

Check out the web page (www.shellfish.org) for information and updates. Any questions, contact Sandy Shumway via email at sandra.shumway@uconn.edu.

### SEE YOU IN JACKSONVILLE!

### From the Editor's Desk

Your NSA Quarterly Newsletter Editors want to emphasize the importance of the Newsletter to the NSA mission - namely promoting information, association news, and knowledge to our membership. These days it seems that information about shellfish has a seemingly ever-widening audience. People regularly approach us and want to talk about their local shellfish gardening project or whether shellfish aquaculture practiced at large-scale has negative environmental effects, or if oyster larvae are impacted by corrosive seawater, and if so what does that all really mean? Furthermore, we encourage our membership to reach out when you have the opportunity and encourage family members and friends that might not regularly tune into the shellfish world to pick up the QNL and read about what's going on. On that note, let us know about what kinds of articles you would like to see published in the QNL. Our goal, not to mention our job, is to publish timely and interesting news and information to membership and beyond. You can help by letting us know what is of the most importance, whether it is simply information about our annual meeting or perhaps recaps of other national and international meetings. The sky's the limit and we as Editors want to be responsive to you as the membership we serve.

# Joth Davis and LeRoy Creswell Co-editors



# January 1, 2014 Deadlines



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Submit an Abstract to the 106<sup>th</sup> Annual Meeting

- Renew your NSA membership dues
  - Apply for student presentation and travel awards
- Register for the 106<sup>th</sup> Annual Meeting (to get the best rate)

### **Industry Perspective:** The "D" is the hardest part

One of the missions of NSA is for its membership to assist shellfish communities with research and development: R&D. A collaboration between academia/industry, researchers/beneficiaries, and/or employers/employees helps reach everyone's goals and objectives.

Research is an idea being tested. It denotes investigation, study, exploration, and inquiry. The scientific method we all learned in high school or college applies. Following standard methods or newly tested ones, observations are recorded to test hypotheses and identify significant differences with statistical validity. The result may be a contribution to science, or simply a validation of common sense. In either case, results can be cut and dry, easily explained, or confounding.

Development is an idea being applied. It denotes progress, improvement, growth, and change. Social science applies, skills we all acquire throughout our lives, both lived and learned. Observations are recorded or simply remembered, at best without bias, to achieve success. The result may be a contribution to a business, community, state or region, or simply encourage, or discourage, friendships and collaborations. In either case, the result can be expected, surprising, or disappointing.

From an industry perspective, development is the hardest part. It involves working with people to act towards a common goal, as does research, but more is invested. Capital is invested over short or long-terms for hopeful gain for both R & D, but development takes more time and fortitude.

A case in point....

Although intensive oyster culture methods (i.e., off-bottom) have been practiced for decades in other regions of the U.S. and for centuries in other countries, it is a new idea in the Gulf Region. Graduate research has compared gear types, stocking densities, and fouling control strategies, with statistically significant results leading to recommendations in gear selection and culture practices within months. Yet, because these culture methods are new to Gulf States, the development of policy and permitting for using them in coastal waters can take years. Legislation was required to change or create new state regulations, involving drafting and sponsoring bills, visiting legislators, attending committee hearings, and pressing the flesh. Once legislation is passed, more committee work is required to promulgate rules, develop new permitting procedures, application processes and review. Insurance and bonding may be required, including underwriting policies and financing. Community involvement is key to success, so presenting these new ideas to local planning councils and port commissions involves local commitment and investments in both cash and cause.

Innovators are needed to pave the way, test the waters and provide sweat equity. Markets need developing or expanding, which may involve taste testing, cooking demonstrations, restaurant or chef involvement, trade show participation, and timely media releases and interviews. All of these efforts can be for starting new culture or fishing methods, improving existing ones, or for product diversification.

Development requires leadership. Leadership requires honesty, delegation, intuition, inspiration, communication, confidence, commitment, creativity, a positive attitude and a sense of humor. Above all, development takes patience,

for sometimes fishermen have to learn to think like farmers, regulators have to learn how to say yes instead of no, or user groups have to learn how to accept instead of reject.



John Supan, Director of the There are plenty of examples Louisania Sea Grant College of successful R&D with Program shellfish, such as farming

mussels in Maine, geoducks in Washington, oysters in Virginia and Maryland, or clams in Florida. There are failures too, such as over harvested or capitalized fisheries. Does anyone remember producing soft-shell crawfish? Maybe it was just a Louisiana flop.

Is it any wonder developing new ideas takes so long? The answer may be found in innovation theory, which focuses attention on the characteristics of innovators and early adopters. It has a long history in analyzing the impact of technological change in agriculture. This theory provides a conceptual framework for understanding factors which influence behavior, specifically adoption and diffusion of new practices. Social and cultural settings have great influences on changing behaviors, with small coastal communities being difficult places to find acceptance of new faces and firms. Bottom up programming of ideas works best in these communities, the agricultural analogy of planting seeds of thought. It just takes time to allow them to germinate and grow, with a little or a lot of green invested.

### Research is by far easier!

John "Sup" Supan Louisiana Sea Grant College Program

**Online Meeting Registration and Hotel Reservations for the 106<sup>th</sup> Annual Meeting** are open at www.shellfish.org **Early-bird rates expire JANUARY 1, 2014** 

### Sammy Ray... continued from page 1.

fied greatly. Coincident with this heightened activity was high levels of oyster mortality, resulting in a lawsuit filed by oystermen against oil companies. Numerous oil companies combined efforts to fund a comprehensive study of the cause of the excessive mortalities of Louisiana oysters. The legacy of the effort was the discovery that the high mortalities were due not to oil industry activities, but to a previously undescribed parasite. John Mackin, Malcolm Owen and Albert Collier described the parasite in a 1950 article in the journal Science, and named it Dermocystidium marinum. Ray soon thereafter developed a technique to easily identify and quantify it. The technique is referred to as Ray's Fluid Thioglycollate Method, and is still widely used. In the latter part of his life, Sammy founded the web site Oyster Sentinel (www.oystersentinel.org) to disseminate information on distribution and abundance of the parasite, now called Perkinsus marinus. He was an advocate for the importance of maintaining adequate freshwater inflow to estuaries to control oyster disease, maintain oyster populations, and support other estuarine species.

Sammy mentored generations of students -- graduate, undergraduate, high school, and elementary. He witnessed the retirement of some of his former graduate students before his own, while introducing elementary students to marine science. He joined Texas A&M University in 1957 and later founded the first resident graduate and undergraduate teaching program at Galveston. One of his proudest accomplishments, however, was the founding in 1986 of Sea Camp which fosters in young students an interest in science. Over the years more than 1,600 students from 27 states and 6 countries have attended. His diminutive size and trademark blue overalls earned him the nickname "Papa Smurf" from his Sea Camp students. He embraced this moniker and used it to better connect to his young students.

From its humble beginnings as a marine station without classes or resident students, Ray was instrumental in the emergence of Texas A&M University at Galveston. During his career he served as Director of the Galveston Marine Laboratory, Head of the Department of Marines Sciences, Dean of Moody College, and Interim President of TAMUG. He is rightly called a founder of TAMUG, if not the father of the institution.

For his many friends and colleagues in the National Shellfisheries Association, he will be remembered not only for his extraordinary life and significant scientific contributions, but for his indomitable spirit and vibrant personality.

Tom Soniat University of New Orleans



# The Epic Saga of Ming

Researchers at Bangor University reported that an ocean quahog dredged off the coast of Iceland is the world's oldest living non-colonial animal, determined to be the ripe old age of 507 years (as recorded in the Guinness Book of World Records). *Ming* the clam - so called because it settled and metamorphosed during the Chinese Ming dynasty. The clam was found during an expedition by the Bangor University team who calculated its age by counting bands measured on the sectioned surface of the outer shell margin.

The researchers, led by Chris Richardson, were interested in studying ocean quahogs (*Arctica islandica*), for a couple of reasons. Firstly, these clams are known for their longevity, and could provide clues about the science of ageing. What intrigued the Bangor group was how these animals manage to escape senescence. This may be associated with some genetically influenced difference in cell turnover rates that we normally associate with much shorter-lived animals. Accordingly, the University has received funding from the UK charity *Help The Aged* to help support its research.

Beside the animal's remarkable age, it may offer clues on climate change. The oxygen isotopes in the mollusc's shell can determine what the ocean temperature was throughout its life.



"There are a number of methods to chart past climate on land, but for the marine environment we only have some very limited data. The *A. islandica* can help fill this gap in our knowledge and provide us with a very accurate picture of past climate," Rob Witbaard, of the Royal Netherlands Institute for Sea Research, said. "This is important to our understanding of how much changes in the oceans affect the climate on land. And the really amazing thing is that the pattern in the ocean quahog's growth rings actually recurs in tree rings."

> Addendum: Recent news stories in late November reported that Ming was sacrificed while researchers were taking measurements on the clam.

### **Pacific Coast Section News**

The 67<sup>th</sup> annual meeting of the Pacific Coast Section of the National Shellfisheries Association was held from October 1 - 3 at the Sun River Resort in Sun River, Oregon in conjunction with the Pacific Coast Shellfish Growers Association. The conference provides a forum for academics, industry, government agencies, and environmental organizations to get together and increase knowledge of shellfish. The PCS sincerely thanks the shellfish industry, the conference planning committee, Margaret Barette and especially Connie Smith for making this annual joint conference a great success. One hundred and eighty-six people attended the event of which 47 were NSA members.

David Batker, chief economist and executive director of Earth Economics and co-author of the book "What's the Economy for Anyway" gave the opening plenary address. He described the loss of natural capital over time and the failure of current valuation systems. He highlighted the inherent societal problem of evaluating anything for more than a 1 or 2 year socio-political cycle and posed the need for a systems approach that puts benefits of shellfish as natural capital (that has been sustained for millennia) at least on a par with human built structures. This was followed by a session devoted to ecosystem services where students, practitioners, and growers discussed methods for evaluating the ecological role of shellfish. Dan Cheney (Pacific Shellfish Institute) and Duane Fagregen (shellfish grower and Puget Sound partnership) gave a colorful travelogue and description over lunch of their journey to the World Oyster Congress in France. The afternoon was devoted to two sessions on ocean change and estuarine habitat and shellfish culture interactions. The former was highlighted by a thorough presentation of the latest research from the Burke Hales laboratory and Alan Barton (Whiskey Creek Shellfish Hatchery). Alan was later presented the industry's "Prince of Tides" award for his outstanding work helping shellfish hatcheries adapt to corrosive seawater upwelled along the West coast. Sessions on resource user conflicts, resource assessment and management, and restoration and protection efforts, along with a workshop on nursery practices were covered. An update on Vibrio and the IOOS monitoring program were presented the second day. Other sessions were devoted to burrowing shrimp, genetics and broodstock development,

and outreach and public engagement.

Student involvement continues to be the focus of the PCS mission and students from the University of Washington, Western Washington University, the Evergreen State College, Oregon State University, and California State University gave 11 presentations at the meeting. The best student paper was awarded to Gabriela Navas (Moss Landing Marine Labs, California State University) for her presentation entitled "Preliminary results on genetic differentiation and shell morphology of the Pacific Geoduck Panopea generosa in California. She was awarded a NSA membership and \$250. Support for students to attend the meeting was generously provided by the Ken Chew Student Endowment Fund, as well as contributions by Rock Point Oyster Company, Seattle Shellfish, and Taylor Shellfish. Also, special thanks are due to Sean McDonald and Bethany Stevick for all of their hard work and to Chris Kaplan who helped organize our first shellfish Spartan Sprint event. Thanks are due to all those who solicited and donated items for the silent auction (the fossil oyster was very cool). The proceeds from both events helped keep the PCS in the black this year and provided sponsorship for students attending the meeting.

The NSA-PCS also held its annual business meeting during the 2013 conference. PCS officers are: Brett Dumbauld (USDA-ARS, Chair), Sean McDonald (University of Washington, Vice Chair), Ralph Riccio, Secretary (Jamestown S'Klallam Tribe), Bethany Stevick (Washington Dept. of Fish and Wildlife, Treasurer), and members-at-large Chris Burns (Jamestown S'Klallam Tribe), Sarah Dudas (Vancouver Island Univ.), David Fyfe (Northwest Indian Fisheries Commission) and Molly Jackson (Taylor Shellfish Company).

The 2014 PCSGA/NSA-PCS conference will be held in Vancouver, Washington from October 1 - 3, 2014. Meeting details and a Call for Papers will be posted on the PCS and PCSGA websites in early spring. We need to get the word out to student recruits about what a great opportunity this meeting is, and I look forward to seeing a good turn-out of PCS members at the NSA meeting in Jacksonville too!

Brett Dumbauld Pacific Coast Section Chair

### LAST CALL FOR PAPERS 106<sup>th</sup> Annual Meeting of the NSA March 29 - April 2, 2014 ABSTRACTS ARE DUE JANUARY 1, 2014

Abstracts must be submitted electronically through the website (www.shellfish.org). Full instructions for Abstract submission can be found on the NSA website. No Abstracts will be accepted via fax transmission. If you are unable to submit an abstract using the NSA website or have any questions about Abstract submission, please contact Dr. Sandy Shumway, NSA Conference Manager (sandra.shumway@uconn.edu).

# Update on the George R. Abbe Student Research Award

The National Shellfisheries Association would like to thank everyone that made a donation to the George R. Abbe Student Research Award. The contributions by George's friends and colleagues have been placed in an endowment for an annual student scholarship devoted to crustacean biology and fisheries management – the subject of George's interest and dedicated research throughout his career. To date, over \$32,000 has been raised. Those who have donated to the endowment in memory of George Abbe as of December 3 include:

Judith Abbe & Karl Thomas, Suffield, CT Fred & Rebeca Benton, Saint Inigoes, MD George & Annie Berg, White Plains, MD William and Bonnie Berry, Waldorf, MD Charles G. & Sandra G. Boenig, Pomfret, MD John R. & Dorothy J. Butler, Salisbury, MD R. LeRoy & Danita Creswell, Fort Pierce, FL Marta Gomez-Chiarri, Jamestown, RI Chris Davis, Waldoboro, ME Joth Davis, Bainbridge Island, WA William E. & Carolyn Evans, Enumclaw, WA Alan G. & Barbara L. Evans, La Plata, MD Ms. Phyllis E. Frere, Bel Alton, Holly C. & Daniel B. Casey Frost, Burke, VA Howard & Sandra Hixson, Cobb Island, MD Henry & Ann Hofmann, Jr., Swarthmore, PA Ralph W. & Judith Kletzien, Kent, OH Ron & Nancy Kollman, Sheldon, IL

Katherine B. Kollman, Madison, WI Mike Kollman, Fitchburg, WI Scott & Kathy Lantz, Shelbyville, IL Conrad & Marjorie Marsh, Murfreesboro, TN Kevin McCarthy, Burke, VA John D. and Marylou McCarthy, Scituate, MA Carol B. McCollough, St. Michaels, MD Graham & Cassandra Mitchell, Roseville, NSW, Australia Cody Muller, Fowler, IN Richard W. Osman, California, MD Elgin S. Perry, Ph.D., Huntington, MD James and Susan Reiner, Jr., Glen Burnie, MD Fritz & Georgia Riedel, St. Leonard, MD Philip & Linda Roof, Jr., Port Republic, MD Daniel & Claudia R. Sansbury, La Plata, MD John and Carolyn Sauer, Jr., Brandywine, MD Eric & Aniela Schwab, Ellicott City, MD Donald & Dianne Shisler, White Plains, MD Sandra E. Shumway, Groton, CT Walter & Jeanette Smith, Gettysburg, PA Frederick & Mary Sturgis, White Plains, MD Godfrey and Patricia Trammell, Waldorf, MD Mary Ann Wade, La Plata, MD Maria Winter, Waldorf, MD

Again, thank you for your generous remembrance of our beloved friend and colleague, George Abbe and your support of the NSA Student Endowment Fund. If each NSA member were to contribute \$30, the Abbe fund would surpass \$50,000.

LeRoy Creswell and Joth Davis Co-editors, NSA Quarterly Newsletter

# **Upcoming Events**

Interstate Shellfish Sanitation Conference – January 25-31, 2014 at the St Anthony's Riverwalk Hotel in San Antonio, Texas. The registration form is posted on the ISSC website – http://www.issc.org/client\_resources/2013%20biennial%20 meeting/issc%20biennial%20meeting%20registration%20 form%202013.pdf

Aquaculture America 2014 – Taking Aquaculture to New *Heights Through Technology, Marketing, Collaboration.* United States Aquaculture Society (USAS), February 9-12, 2014, Seattle Convention Center, Seattle, WA, USA. For more information visit http://www.was.org/

**34<sup>th</sup> Milford Aquaculture Seminar.** February 24-26, 2014 at the Courtyard by Marriott, Shelton, CT. Abstracts are due January 1, 2014 and can be submitted online. For further

information on registration, abstract submission, presentation requirements, tentative schedule and hotel information visit, http://mi.nefsc.noaa.gov/seminarworkshop.html

**106**<sup>th</sup> **Annual Meeting of the National Shellfisheries Association.** March 29 – April 2, 2014, Hyatt Regency Jacksonville Riverfront Hotel, Jacksonville, FL, USA. For more information visit http://www.shellfish.org

If you would like to announce a meeting, conference, workshop, or publication that might be of interest to NSA members, please contact the *QNL* Editors, Joth Davis (jothpdavis@mail.com) or LeRoy Creswell (creswell@ufl. edu).

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