

ISSUE 1

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AN INTERVIEW WITH **STEVE NEWEL**

by Beth Richardson

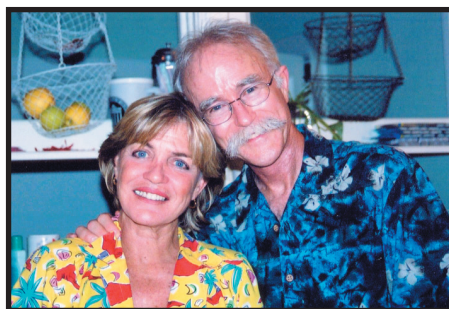
Steve kindly answered my questions about his career at the UGAMI and his plans for the future.

Q1. You have worked for the University of Georgia Marine Institute for over 20 years and I understand that your retirement date is set for February 1, 2005. Will you continue with your research as an emeritus faculty member or are you ready for other adventures?

A1. I am a member of the UGA Research Faculty, for which there is no emeritus option. I am ready to move to a new set of activities. My scientific research has been very stimulating and rewarding for me -- how much better can it get than to be the first person on earth to see and describe new natural phenomena?! Mother Nature has a great many more exciting fungal-ecological surprises for scientists to encounter, but I'll let some younger folks be the ones to be amazed at what their research turns up. There is a tiresome side to basic-scientific research, and that is the part that involves fighting for grant money. I will be glad to leave that behind.

In retirement, I hope to find useful and satisfying volunteer work in the fields of environmental advocacy, healthcare, assistance to folks having trouble with alcohol

or tobacco addiction, etc. I would like also to take time to improve my tennis skills, travel around the world, and get involved as a concerned citizen of Jekyll Island.



Steve and Bonnie Newell were married on June 12, 2004 at St. Andrews Beach - CONGRATULATIONS!

Q2. Recently, the New York Times did a nice article about your work with Brian Silliman on fungal farming in the marine environment by the snail *Littoraria irrorata*. Would you comment on having your work appear in the popular press?

A2. It was logical for Brian and I to combine our research efforts, since we were both working on Sapelo (he with periwinkle snails, and I with saltmarsh fungi), and we were aware that our target organisms were close associates in nature (periwinkles eat standing-decaying leaves that contain fungal mycelia). We wondered whether it might be the case that periwinkles could eat living leaves if fungi were present in them. (Ordinarily, green leaves contain too much of a bitter antifeedant chemical for snails

to find them palatable.) We discovered that the snails do graze surfaces of green leaves, and this scratching facilitates invasion by natural decay fungi. Once the fungi have grown in the wound, the snails can eat the leaf/fungal combination -- thus a primitive fungal-farming is performed by the snails. This concept was apparently considered quite exciting by the popular scientific press, and many outlets picked up the story after our paper was published in a scientific journal. It was quite a nice feeling, to realize that so many folks out there were very interested in the outcome of Brian's and my work. Ordinarily, research scientists working on basic-ecological questions must wait years for proclamations of recognition, and then they come primarily from one's peers rather than the general public.

Q3. Of your many publications, which one is your personal favorite?

A3. I can't narrow it down to one. Three of my publications that still give me a great feeling of satisfaction are: A) my paper with David Porter and Wilma Lingle on electron microscopy of the interiors of fungal-pervaded decaying leaves of marshgrass; B) my methods chapter in John Paul's *Methods in Microbiology*; and C) my *Limnology & Oceanography* paper on annual production by ascomycetes in saltmarshes. The central value of A) is that it represents the clearest demonstration ever produced of the lignocellulolytic (fiber digesting) activity of saltmarsh ascomycetes. For B), it is that this chapter

moves all of my years of hard work in developing methods for measuring fungal growth rates in naturally decaying solid substrates out where my peers can finally take it and use it to learn some exciting new information about fungal roles in ecosystems (including anthropogenic systems -- e.g., farm crops, where fungi can have negative effects, in contrast to the positive effects that they have in the saltmarsh). C) represents the most complete single piece of research that I ever did -- I used my new fungal-productivity technique seasonally in nine Sapelo marsh sites for three full years, enabling me to provide the scientific community with the first firm values for annual fungal production in an ecosystem. One surprising result reported in C) was that the cooler seasons exhibited substantially higher fungal crops and growth rates, perhaps partially because in the cooler seasons, there is less activity by fungus-eating organisms. In case anyone might be interested in reading these papers, the reference information is: A) Microscopy Research & Technique Volume 33, pages 32-46 [1996]; B) Methods in Microbiology, Volume 30. Marine Microbiology, pages 357-372 [2001]; C) Limnology & Oceanography, Volume 46, pages 573-583 [2001].

Q4. Looking back on your research career, would there be anything you would change or do differently? and if so what and why?

A4. No, I don't suppose that I would want to change the past, looking back at it. Fate dealt with me quite kindly more than once, and one can't ask for much more than that. E.g., at one point, in my Miami years, as a consequence of a grant-proposal declination, I was poised to enter a PhD-to-MD program -- I changed my mind when the UGA Marine Institute position was offered to me. Had I not moved to UGMI, I wouldn't have made the substantial advances in mycological science that I was able to accomplish (especially development of methods for measuring fungal biomass and productivity). Having moved these advances into the hands of very capable colleagues around the world gives me great satisfaction.

Q5. If you had one wish for the future of the UGAMI, what would it be?

A5. The one thing that the UGAMI needs the most just now is a new patron. Basic-research institutions such as the UGAMI yield as their product new, fundamental information. This information makes its way rather slowly into man's storehouse of knowledge. Eventually, along with kernels of information from elsewhere, the new knowledge is used to prepare products that are useful to mankind (e.g., soundly based regulations applied to coastal real-estate development, or man-

agement of fisheries). Because the products of an institution like the UGAMI are slow to enter the applied realm, public funding from state government is difficult to generate (the need for the Institute's product is long-term, rather than immediate). Therefore, one or more wealthy patrons in the form of foundations are essential parts of the financial structure of basic-science institutions, to go along with moderate funding by the State. The UGAMI lost its principal private sponsor some years ago, due to a change in the sponsor's goals. The UGAMI needs a new private sponsor, one that understands the value of a residential research faculty. One avenue through which a foundation might want to support the UGAMI research could be the long-term funding of faculty slots -- these could be fellowships that would be given names that the foundation would like to see honored in this way. This would not be inexpensive, but it would be an effective way of rebuilding the research capability of the the UGAMI.

A second (selfish) wish would be that the UGAMI would retain a new mycological ecologist after I leave my post. Now that we know that ascomycetous fungi are essential and major secondary producers in the saltmarsh ecosystem, we need to learn more of the details of fungal production and the flow of fungal material into the marsh foodweb.



Friends NEWS

Message
from
Bill Miller

Dear Friends of the UGA Marine Institute:

Plans for construction of a new dormitory and renovations of the historic Reynolds theatre/lecture hall and courtyard apartments are well underway. Plans are developing for using other historic buildings in the complex for a dining hall and new classrooms. (See master plan on page 4.) Besides the facility infrastructure, there is a renewed com-

mitment to the ecological stewardship of Sapelo Island. Measures have been taken to lessen the vehicular impact on the island and a system to deal with gray water is being studied.

**Got fund raising ideas?
We'd love to hear from you!**

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OR, WRITE TO:

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SPECIAL THANKS TO:

Jane Scott Boyd
Cheryl G. Dique
Sue Goldstein
Michael Griffith
Tim Hollibaugh
George H. Lauff
Liz McGhee
Mac & Brenda Rawson
Beth Richardson

Thank you all for joining the Friends and for making a financial contribution to the Friends!



to use. In the same light or for general transportation half a dozen used mountain bikes in good condition.

OTHER: We are hurting when it comes to staff - a VOLUNTEER WEEK-END - wash and wax the visitor fleet, super clean the housing, help with landscaping and cleaning up the water garden area - (most of this would require planning and careful supervision).

Until next time - Jon

Jon Garbisch is the Education Program Specialist for the UGAMI. Contact Jon at sapelo@uga.edu or 912-485-2125.



Apartment renovations are underway.

The **GOOD** news is that the consultant we hired to review the greenhouse structure says it is in the top 10 best he has ever looked at in regards to historical original-ness and state of preservation. He feels the structure is in excellent condition. All it really needs is new glass and vegetation removal. He will provide a very detailed report in another few weeks. It will be coached specifically to help us raise funds, too. He also thought it had a high level of historical importance.

BIG: I think we may need to consider raising funds for the Greenhouse - no idea how much yet but it seems we could do it in phases.

A fully functional 25-35 foot power boat (w/ cabin) would be useful, though I will soon have a 24' retired DNR law enforcement boat in the water soon.

We have just purchased 4 golf carts (Club Car - gas engine) - they seem to be meeting our expectations - so a donation of additional golf cart(s) would be very welcome.

In that light - an SUV or two would also be good.

SMALLER: I'm always looking for additional dissecting scopes and a 200 gallon aquarium I could set up in one end of the wet lab.

Traditional Georgia landscaping plants - we had a nice donation of a dozen azaleas last year (had to be removed for a construction project) - bloomed about a month ahead, camellias, etc. The donor could come down and help plant them. Just raising funds for grounds work or recruiting a few garden clubs to sponsor parts of our grounds.

A used commercial lawnmower or two in at least fair condition, and a small light trailer 1500 lb max capacity.

We have talked about ways to build community and make it easier to live on Sapelo - one item that has come up several times has been finding some older weight room equipment to set up a small gym area for people



Yes! I want to join the Friends of the University of Georgia Marine Institute!

Make your check payable to: **Friends of the Marine Institute Fund**

And mail your tax-deductible donation to:

Friends of the UGA Marine Institute

Marine Programs, University of Georgia, Athens, GA 30602

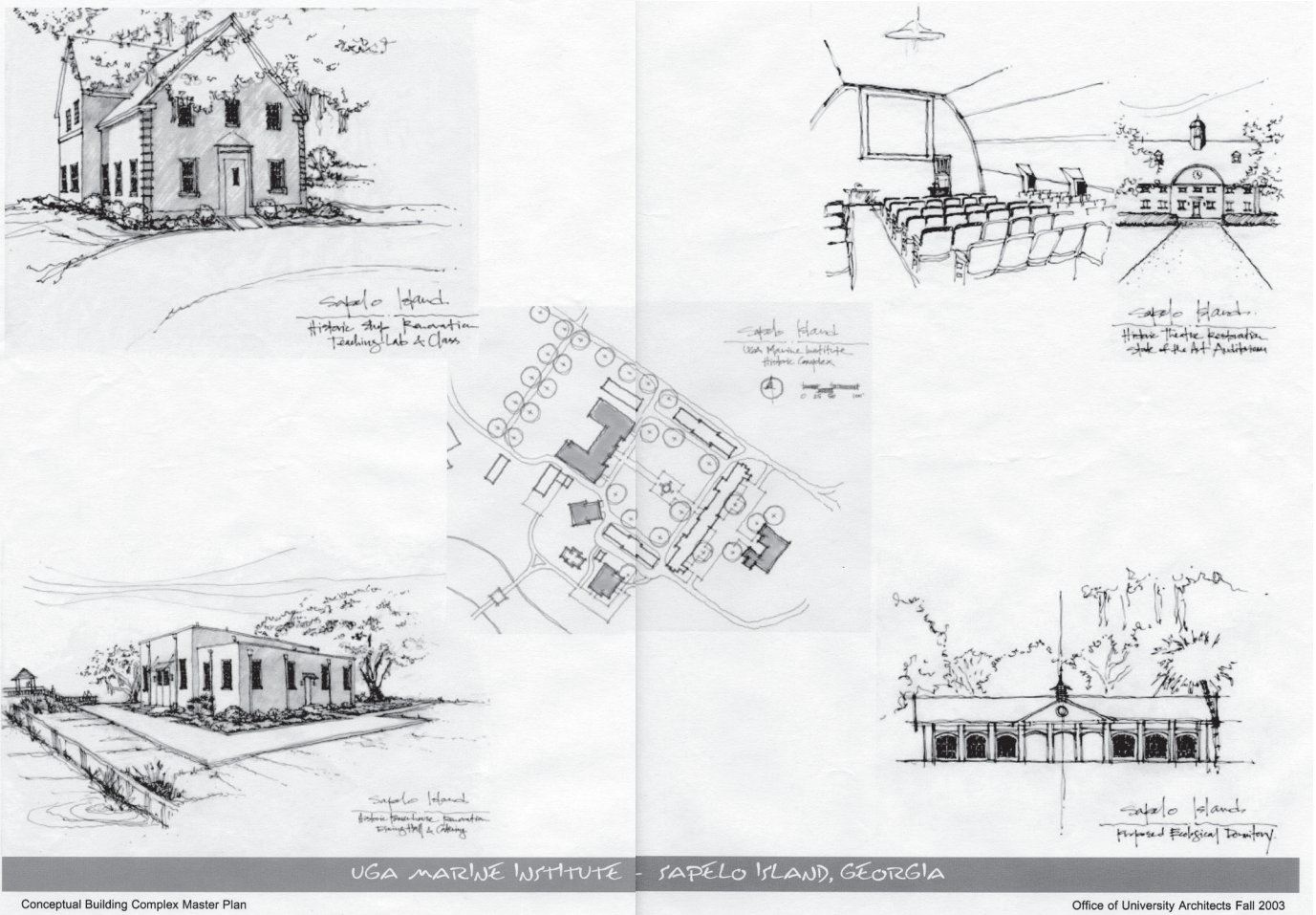
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