



Fall 2003

# RMA

Resource Modeling Association

# Newsletter

[www.resourcemodeling.org](http://www.resourcemodeling.org)

## From the President

My last update, in March, 2003, commented on the prospect of spring after a long winter in the Northeastern U.S. Well, spring was something of a washout, and summer has flown by all too quickly. Classes at Cornell start this week (August 28th, to be exact).

While summer has flown by, it was not without significant events for the RMA. A successful RMA Meeting was held in Beaufort, North Carolina, organized by **Bill Smith** and **Bob Fray**. Photos and a review of those meetings appear elsewhere in this Newsletter. Thanks, Bill and Bob, for your hard work and organizational skill.

As noted in the last RMA Newsletter, **John Hearne** will be organizing the 2004 RMA Meeting, scheduled for Melbourne, Australia in December. This will be a great opportunity for those of us in the northern hemisphere to take the edge off winter, to meet our colleagues in Australia, and to learn more about the resource modeling taking place "Down Under."

Speaking of RMA Meetings past and future, we need to identify a site and a host institution for the RMA Meetings in 2005. A return to the west coast of North America would seem desirable. Anyone wishing to explore the possibility of hosting the 2005 RMA Meetings may contact me ([JMC16@cornell.edu](mailto:JMC16@cornell.edu)) or any of the other Board Members. (See the list of Board Members on page 2.)

As reported previously in the Newsletter, John Hearne was to serve as the next Editor of *Natural Resource Modeling (NRM)*. During John Hearne's transition to RMIT in Melbourne, **Rollie Lamberson** continued to serve as Editor of *NRM*. Given John's new responsibilities as Chair of the Department of Mathematics and Statistics at RMIT, as well as organizing the 2004 RMA Meetings, it was decided to seek a new editor for *NRM*. The Board is pleased to announce that **Catherine Roberts**, in the Department of Mathematics and Computer Science at the College of the Holy Cross, has graciously accepted our invitation to serve as the editor of *NRM*, for a three year term beginning January 1st, 2004. Thanks to Catherine, the RMA will have a session at the Joint Math Meetings in Phoenix, Arizona, January 7th - 9th, 2004. The session is entitled, "Mathematics in Natural Resource Modeling." Catherine will be editing a special issue for *NRM* based on the papers presented at that session.

For those of us at colleges and universities in the northern hemisphere, August and September mark the start of a new academic year, with tanned students, rested faculty, and the excitement of new beginnings. Its one of my favorite times of the year. The RMA can also benefit from fresh ideas and the energy that new (and old) members might bring to our organization this Fall. If you have opinions or comments on how to make the RMA more vital and interesting, please send me an email.

—Jon Conrad

## Natural Resource Modeling Names New Chief

### Longtime Journal Editor Retires

The big news at *NRM* is that Catherine Roberts will be taking over as editor of *NRM* on January 1, 2004. I have enjoyed the privilege of being editor for the past four year, but being a successful journal editor is highly dependent on the people you work with. One never fully appreciates how important editorial advisors, senior editors, and associate editors are until you have held the job of editor for a while. I want to thank them all for the many hours they have contributed to *NRM*. I want to particularly extend my thanks to Bob McKelvey for his advice and assistance at several critical junctures during my tenure as editor, and for the fact the four years ago he turned over to me a journal that was in good order. The people who have handled the bulk of the work over the past four years are the senior editors: Doug Brodie, Jon Conrad, Robert Haight, Stein Ivar Steinshamn, Jim M. Cushing, James Ianelli, Michael Mesterton-Gibbons, E.J. Milner-Gulland, Bill Reed, Catherine Roberts, and Gordie Swartzman. I couldn't have done it without them.

I would also like to report on the current state of the journal. The special issue on Individual-based Models (vol. 15 #1) has drawn a lot of attention from people who are not in the usual RMA crowd. I think it is one of our better issues. It covers individual-based models from software engineering issues to modeling consideration, analysis of models to on the ground application, and connection of individual-based models to the more abstract artificial life models. The two issues on Marine Protected Areas (vol 15 #'s 3 and 4) edited by Rashid Sumalia and Tony Charles have also gotten significant attention.

In the future you can expect several more special issues. The first to appear is an outstanding issue on *Modeling in Fisheries Science: Past, Present, and Future*. Most of the editing was done by Jim Ianelli. It is centered on Terry Quinn's excellent keynote address from the 2001 RMA meeting and will be appearing this fall as vol. 15 #4. Further

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## ***Sessions for Modelers at AMS/MAA Winter 2004***

The Joint Mathematics Meetings will be held January 7-10, 2004 in Phoenix, AZ. This is an extraordinary year for special sessions on topics that may be of interest to RMA members. There are several sessions that have a clear and direct link with natural resource modeling, as well as several others that will address nonlinear dynamical systems and partial differential equations. Consider these:

1. Competitive and Adaptive Dynamics in Ecology (organized by Carlos Castillo-Chavez from Los Alamos National Laboratory, Yang Kuang from Arizona State University, Bai-Lian Li from University of California Riverside and Horst R. Thieme from Arizona State University)
2. Discrete Dynamics and Difference Equations (organized by Saber N. Elaydi from Trinity University, Jim M. Cushing from University of Arizona, Gerasimos Ladas from University of Rhode Island and James A. Yorke from University of Maryland, College Park)
3. Mathematical Modeling in Neuroscience, Biomedicine, Genetics and Epidemiology (organized by Steven M. Baer, Hal L. Smith and Frank C. Hoppensteadt from Arizona State University, Ivo D. Dinov from UCLA)
4. Mathematics in Natural Resource Modeling (organized by Catherine A. Roberts from College of the Holy Cross and Suzanne M. Lenhart from University of Tennessee)
5. Mathematical Models of the Environment (organized by Karen D. Bolinger from Clarion University, W. D. Stone from New Mexico Institute of Mining and Technology and Ahlam E. Tannouri from Morgan State University)

Abstracts for contributed talks are due October 1. These talks are grouped together by themes and the speakers have 15 minutes to present their results. You can also communicate directly with the organizers of the special sessions to see if they still have a slot available. More meeting details, including instructions can be found for the submission of abstracts at [www.ams.org](http://www.ams.org). A special issue of the journal *Natural Resource Modeling* will be published from this meeting, but why wait to read the papers when you can travel to sunny Phoenix instead?

If you attend, be sure to check the conference message board under "RMA" for announcements about any social events that might spring up.

—Catherine Roberts

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### ***NRM*** (Continued from page 1)

into the future are special issues resulting from the RMA meetings in Greece and in North Carolina, a special issue to come from a special session on natural resource modeling to take place at the upcoming American Mathematical Society meeting, and a special issue on quantitative decision making.

Let me close by expressing my delight at passing the mantle of editor on to a very talented and energetic member of a new generation of resource modelers, Catherine Roberts. Up to now the editorship of the journal, and most of the offices in the RMA, have been held by those who were there at the beginning. But, the beginning was in 1982; it is time for new perspectives, new energy, and new leadership. I am confident the Catherine can provide all of that.

—Rollie Lamberson, Editor, *NRM*

## Highlights of the 2003 Conference

—Joe Apaloo

The 2003 World Conference, organized by Bill Smith with help from Bob Fray, was held at the Duke University Marine Laboratory (DUML) in the historic and beautiful town of Beaufort, North Carolina, USA. The conference started on the evening of June 16 with registration and an ice breaker. It was a pleasant evening with lots of intermingling, an excellent selection of wines, beers and other drinks, not to mention heavy-duty hors d'oeuvres. We drank and nibbled to our hearts content.

The conference presentation started on the morning of June 17, preceded, as on other days, by breakfast in the DUML dining hall. The conference was declared open by Herman Gucinski of the USDA Forest Service. The keynote speaker was Rolfe Leary, and invited speakers were Francis Fujioka, Ram Oren and Larry Crowder. The conference theme was "Quantifying, Monitoring, and Modeling Ecosystem Health and Sustainability". There were about 40 participants, 26 presentations and 5 posters. The contributed paper presentations were diverse with many on forestry and fisheries issues.

On Tuesday and Thursday evenings, there were pleasant 2-hour boat tours of the waters in the vicinity of Beaufort on the RV Susan Hudson. Sampling for marine species was done by both trawling and



dredging at different locations and some degree of biodiversity was present. After the boat tours many of the participants went to the Sanitary, a popular local seafood restaurant. Wednesday started with torrential rainfall yet participants came out in numbers for breakfast and for presentations. The rain continued for

much of the morning but we were lucky enough to have the rain slow down enough for us to go on two bus tours in the afternoon. Shortly after 3:00 pm, two vans left the DUML campus for field trip to Weyerhaeuser Company tree farm where we were given about an hour's presentation on tree farm management practices. The gods were with us, there were very few encounters with mosquitoes and participants were generous with their insect repellent and there were no encounters (hopefully) with the notorious chiggers.

From the Weyerhaeuser Company tree farm we headed for Croatan National Forest, but by now the gods had left us. The rainfall was very heavy and by the time we got to Haverlock there was about 1 foot of rain on the "lowways" and the natives were quick to point out that we were observing at least a 100 year rain record. The excitement was heightened when Bill (driving lead van) unpredictably left the "highway" onto the "lowway" for petrol and at one time it seemed that the van had metamorphosed into a duck boat. The flash flood and continuing rainfall changed our plans a little. The



"tour" of the Croatan National Forest was conducted inside the ranger's office but was still very informative.

Bill and Bob had the day well planned as all the activities were whetting our appetite for the final activity of the day, the banquet. Participants arriving at the banquet venue looked transformed and refreshed, and so did the dining hall. The banquet was special and the food was excellent. There was no shortage of drinks and the hall was filled with excitement. Flashes from cameras added glamour to the occasion. The eating part of the banquet ended as everything must end and then we headed to the lecture theatre for the banquet speech.

The banquet speaker was prerecorded, featuring some of the writings of Bill Coles, read by Bill Coles himself. The title was "Redemption at Pudge's Bar: A Mathematician's Fantasy, and Other Stories". Bill, sitting in his back yard and looking rather shy, read with great charm his humorous stories. Bill Smith gave a short presentation after the video, concluding a perfect day.

It wasn't easy getting up the morning after the banquet, but knowing that the world was waiting for our models, we came to presentations in the usual numbers. The conference officially ended on this day, but many stayed for a presentation on red wolf restoration at the Alligator River Wildlife Refuge, and to visit the Outer Banks.

All in all, thanks to Bob Fray and Bill Smith, we enjoyed an excellent, well-organized conference, one that sets the bar high for our next meetings, in Melbourne.

**Editors' Note:** The 2003 Student Award winner, Xiang Xiaorong from Notre Dame University, will be highlighted in the next issue.

John Hearne, Conference Organiser

Planning is under way for the 2004 conference to be held at RMIT University in the city centre of Melbourne, Australia. A great meeting is promised and there is lots to do and see around Melbourne, voted 'the most liveable city in the world' for 2003. The December date will give all the Northern Hemisphere RMA a chance to warm up in the southern summer. Learn more at [www.visitvictoria.com](http://www.visitvictoria.com)

### 2004 World Conference on Natural Resource Modelling

Two Elections, that is. The RMA must elect a new President-elect this year. There are three nominees for the position: **Rob Alexander**, **Bob Fray**, and **Bill Smith**. Rob has recently moved from New Zealand to Sweet Briar College in Virginia. He is a RMA board member and has been editor of our webpage for several years. Bob was long time chair of the mathematics department at Furman University. He has been active in the RMA since 1988 and was the organizer of the post conference outings for this summer's meeting. Bill was formerly in Forestry at North Carolina State University but is now employed by the US Forest Service. Bill has also been active in the RMA since 1988 and he took the lead in organizing the 2003 meeting. Once the presidential election is complete there will be an election for one or more board members. The number depends on the result of the presidential election. I will circulate an email ballot for president-elect in September and there will be a two-week period in which to vote. Once the results of that election are known, I will be asking for nominations for the RMA board with the election to follow shortly thereafter.

### Not One, But Two

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