

American Malacological Society Newsletter

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CHARLESTON OLD AND NEW

ROB DILLON

The menu at the 68th meeting of the American Malacological Society featured, like its host city, a healthy serving of tradition spiced with a dash of innovation. A registered total of 128 scientists, students, and interested amateurs enjoyed the fine range of scientific and social programs that are traditional to our annual summer gathering. That the 77 oral presentations and 27 posters were neatly scheduled into three invited and seven contributed sessions, spanning just three days rather than the usual four, was a modest innovation for which Charleston has become famous. *The Program and Abstracts* document including all presentations at AMS 2002 is available as a PDF download elsewhere on this web site.

The scientific sessions commenced Sunday morning August 4 with a pair of plenary addresses on freshwater gastropods: Amy Wethington reminding us what marvelous model organisms these animals may be to address scientific questions of great generality, and Ken Brown highlighting their presently imperiled status. These talks segued smoothly into our featured symposium, "The Biology and Conservation of Freshwater Gastropods," a program comprised of 15 talks ranging broadly across the ecology, evolution, and



genetics of snails from Alberta to Zambia. The symposium was designed to build toward a meeting of the Freshwater Gastropods of North America project Sunday evening. Minutes of that eventful gathering are offered elsewhere in this Newsletter.

Monday featured a special session co-chaired by John Wise and Ellen Strong, "Multidisciplinary Approaches to Molluscan Phylogeny." The 14 invited presentations focused on the value of multiple data sets, the unique challenges of combining disparate data sources, and ultimately how such data may bring new insight into the phylogeny of mollusks. Data sources as various as morphology, molecular sequence, gene order, allozymes, biogeography, and paleontology were reconciled in a fascinating and informative showcase of the different approaches employed by the malacological community to address molluscan systematics.

On Tuesday the conference theme returned to freshwater snails, with Amy Wethington's special session, "Pulmonates in the Laboratory." The eight invited presentations and one workshop primarily involved *Physa* and *Biomphalaria* and focused on behavioral, morphological, and genetic questions. A central theme was the importance of environmental factors on shell morphology.

But there was much more to the Charleston meeting than the science. The reception in the College of Charleston's (1828) Randolph Hall Saturday evening

offered a marvelous opportunity to renew old acquaintances and cement new ones. Dick Petit returned to his old and rare form as auctioneer at the Student Endowment Auction Monday evening. And who could forget the piano concert by Silvard Kool in the lobby of the Francis Marion Hotel afterward? Lunch at the business meeting Tuesday was another modest innovation. The dinner cruise on Charleston Harbor Tuesday night offered a magical view of the city that had hosted us so well, as darkness fell and the shore lights twinkled on. And read about the Wednesday field trips to Bull Island and Charleston Harbor elsewhere in this issue of the Newsletter.

My thanks, and indeed the appreciation of the entire Society, are due to the staff of the College of Charleston's Lightsey Conference Center under the directorship of Ms. Trish Bryce-Jacobs, particularly Ms. Leslie Whaley, Ms. Regina Semko, and Mr. Jim Walker. College students Tom Smith and Matt Rhett were a big help. Thanks are also due to Dick and Liz Petit for spearheading the auction (and tending to many side chores as well), and to Janice Voltzow and Becca Price for helping haul all those books up from the Stern Center Ballroom after the air conditioner broke. Finally, a big kiss to my wife Shary, without whom the programs would not have been printed, nor the shirts dispensed, nor the parking permits issued.

See you all in Ann Arbor!



REPORT OF THE AMS COUNCIL MEETING, 2002, CHARLESTON, SC—3 AUG 02

In attendance: Roland Anderson, Heather Bennett, Paul Calloman, Gene Coan, Sue Cook, George Davis, Rob Dillon, Rob Cowie, Gene Keferl, José Leal, Jim McLean, Harold Murray, Diarmaid Ó Foighil, Bob Prezant, Rebecca Price, Gary Rosenberg, Ellen Strong, Ron Toll, Ángel Valdés, Janice Voltzow

The meeting was called to order by President Dillon, who reported that the evening's reception would be held in Randolph Hall.

The agenda was approved.

SECRETARY'S REPORT (ANDERSON):

The minutes from the last meeting were approved as published in the Newsletter. It was determined that the minutes of Council should be approved by the President before distribution via email to the members of the Council. The Secretary will look into the usage of our website—numbers of "hits," etc. The outgoing Secretary Anderson remarked that it had been a pleasure serving on Council and that as of 2003, the Secretaryship will pass to incoming Secretary Calloman.

TREASURER'S REPORT (KEFERL AND COOK):

Gene Keferl gave the first part of the treasurer's report, since he was treasurer for the first half of the AMS fiscal year. Basically, our portfolio decreased by \$22,000 due to unforeseen expenses, largely due to the Vienna meeting, although we did not take any money from out endowment funds. Costs of publishing our Bulletin have gone up and our membership has gone down. Although we have some funding from the AFS from publishing the mollusk "names" book, this funding source has gone toward our

student grants. There was some discussion over the fact that we are behind in suppling the AMB to members in a timely manner. After much discussion, it was agreed that we would raise our membership dues to cover this shortfall. It was recommended to the membership that individual dues be raised to \$60 and student dues be raised to \$20, while affiliate memberships (other clubs and societies) would also be raised to \$60.

The Treasurer recommended that we make available to the incoming President (Ó Foighil) \$3567 in symposium funds for

Incoming Treasurer Cook reported she is becoming familiar with the appropriate software for keeping records and is working closely with the outgoing Treasurer to maintain the records and stability.

AUDITING AND BUDGET COMMITTEE:

No report given. There was some discussion as to the value of this committee. There was some discussion as to our annual meeting budget. President Dillon remarked that our bylaws tell how our annual meeting is to be budgeted and that it is self-evident.



the next year's annual meeting.

There was some discussion on the allocation of our endowment funds. Several years ago we wanted the funds to be more aggressive to take advantage of the then bull market. Now, in a bear market, we are glad that we kept our funds in relatively conservative funds.

The Council applauded outgoing Treasurer Keferl for his well-prepared report and for his many years of service.

ENDOWMENTS COMMITTEE (DAVIS):

Our conservative investment strategy has served us well. Our endowment funds have grown from \$33,000 in 1993 to \$93,000 in 2000. There was some discussion as to whether we should maintain our funds in Vanguard mutual funds or put them in FDIC insured fixed incomes. We agreed that we should maintain them in a balanced portfolio, but assess them constantly.

PUBLICATIONS COMMITTEE (VOLTZOW):

The Editor reported that AMB Volume 16(1/2) is published and that 17(1) is ready to go out in August, although we are behind several issues. The plan is to increase our publication rate of issuance and get back on schedule. Voltzow expressed appreciation to Ángel Valdés who has accepted the position of Managing Editor. There was some discussion over page rates, actual dates of publication, right of first refusal to AMS symposium papers and our electronic presence. Editor Voltzow expressed a need for more submitted papers to the AMB and will make that announcement at the members' meeting.

ARCHIVES COMMITTEE (ROSENBERG):

Archivist Rosenberg reported our archives are doing fine at Philadelphia. They are somewhat difficult to access and need to be organized. Keferl has material that needs to be archived. Gene Coan will write up an archives protocol.

MEMBERSHIP COMMITTEE (STRONG):

The membership brochure has been updated including the website address and a description of the resources available online. In the past three years, our membership has dropped dramatically and has been cut almost in half. We need ideas on how to increase our membership. Much discussion ensued. Ideas were submitted, including more internet presence, multi-year memberships (see Treasurer's Report, above), more lifetime memberships, etc. There was a strong suggestion that we need to provide more to members (on time issuance of the AMB and the Newsletter, for example).

STUDENT AWARDS COMMITTEE (BENNETT):

Bennett reported that there were 18 fine proposals submitted for consideration for AMS student research grants. The chair thanks committee members John Wise and Steve Lonhart for helping determine the best projects. The winners this year were:

1. Audrey Aronowsky, Department of Integrative Biology, University of

California, Berkeley. "Expanding the Search for Answers: The Biology of Ampullospirine Naticid Gastropods" (\$990).

2. Anuschka Faucci, Department of Zoology, University of Hawaii, Manoa. "Genetic Population Structure in Relation to Dispersal Potential in Hawaiian Vermetids" (\$895).

Connie Boone prizes for best student talks and posters. There were 14 oral presentations and 3 posters competing for the Connie Boone award this year. The chair thanks John Wise, José Leal, and Bob Prezant for their help in determining the winners.

We need to publicize our giving of research grants more.

CONSERVATION COMMITTEE (COWIE):

The AMS continues as a member of the Endangered Species Coalition supporting the strengthening of the Endangered Species Act, with Cowie as the AMS contact. The Conservation Committee welcomes input from all members of the AMS regarding activities that they might wish the Committee to play a part in. The AMS brochure, developed largely by Chuck Lydeard and focused strongly on mollusk conservation, was reported on in previous reports. Cowie reminds Council this is available for distribution.

Specific AMS members conservation activities reported: Terry Frest has published a checklist of Idaho mollusks with conservation recommendations. Barry Roth is developing a checklist of California land snails and slugs, which will be important in their conservation and management. Chuck Lydeard is actively involved with conservation genetics research in freshwater mollusks. Kevin Cummings is heavily involved with the Freshwater Mollusk Conservation Society. Rob Cowie continues to publish the newsletter "Tentacle," which is available online. Alison Kay has made presentations to the Hawaiian Malacological Society in which she stresses that one should not collect live specimens of rare species.

SYSTEMATICS AND COLLECTIONS COMMITTEE (ROSENBERG):

At the Natural Science Collections Alliance meeting it was noted that guidelines had been broadened beyond the traditional natural history museum focus. Web-searchable interfaces for several databases have come on line this year. Several online databases of museum collections now exist. The chair has submitted an article for advanced shell collectors on computerizing shell collections for the AMS publication "How to Study and Collect Shells." The chair will attend a meeting in Washington on the Ocean Biogeographic Information System.

AMS BYLAWS COMMITTEE (MURRAY):

President Dillon has charged the chair with updating our bylaws. The process is to propose the needed changes to Council, then have the membership vote to approve them. The chair made several changes already and proposed them to Council. The Council suggested several changes to Murray, who will revise them and resubmit them.

RESOLUTIONS COMMITTEE (TOLL):

The chair presented two resolutions to the Council, both of which were passed:

1. The duties of the AMS Secretary shall be amended to include preparation of individualized letters of thanks for all persons joining the AMS Council and those serving as committee chairs, at the start of their term of service and letters of appreciation to those same persons at the end of their term of service. Also, that the service of these people be recognized by the outgoing President at each year's Executive Council meeting and at the annual general membership meeting.
2. The AMS Executive Council, under the supervision of the President-elect, will present a plaque at the annual membership meeting to the current year's outgoing President recognizing his/her contribution to the Society.

NOMINATING COMMITTEE (BULLOCK, IN ABSENTIA):

President: **Diarmaid Ó Foighil**
President -elect: **José Leal**
Vice President: **Dianna Padilla**
Secretary: **Paul Calloman**
Treasurer: **Susan Cook**
Past President (4–10 yrs): **Alison Kay**
Past president (over 10 yrs): **Alan Kohn**
Councilor-at-Large: **Ángel Valdés**
Councilor-at-Large: **Arthur Bogan**

The nominations from the committee were approved after some discussion.

2002 MEETING NOTES (DILLON):

We have 124 registered attendants for this year's meeting. We have received \$32,657 so far for the conference. We have 77 oral presentations (17 symposium, 14 session on phylogeny, 9 session on pulmonates). We have 13 student oral presentations and 3 student posters.

2003 MEETING (Ó FOIGHIL):

The 2003 meeting will be held at Ann Arbor Michigan at the University of Michigan on June 25–29. The website for the meeting will be up by Halloween. The budget will be the same as this year. He has several symposia lined up.

2004 MEETING (LEAL):

The 2004 meeting will be held at Sanibel Island, Florida on July 31–August 4. Local shell clubs and the Shell Museum will assist. The symposium will be on systematics and/or phylogeny of neogastropods. The COA meeting will be held in Florida also and it will be possible to go to both, back to back.

OTHER NEW BUSINESS (DILLON):

1. There was a proposal to sell our mailing list. There was a motion not to do so, which was passed; we will not sell our mailing list.
2. There was much heated discussion about our falling membership. It was suggested that our publications must not fall behind schedule. It was also suggested that our group photograph was important. Incoming Secretary Paul Calloman volunteered to take a group photo this year and put it on our

webpage. This was agreed upon. Dillon will arrange the group photo.

3. There was also much discussion on the report from the nominating committee. It was suggested that nominees for president should have served on Council, be active members attending meetings and keep their dues paid, although no motions were passed regarding this issue.
4. Our membership in the AIBS was discussed. Dillon feels we are being well served by our membership in this organization.
5. A report about black carp was given by Rob Cowie. It was agreed that Cowie and Dillon would draft a letter against the introduction of such a molluscivorous fish into the US.

AMS GENERAL MEMBERS MEETING—NOON, 6 AUG 02

President Dillon welcomed the membership to Charleston and commented on the first lunch meeting of the AMS.

The minutes of the last year's meeting were approved as published in the newsletter.

The treasurer reported that we have \$43,000 in checking and money market accounts and \$105,000 in endowment (symposium and student grant) accounts. In 2001 we spent \$22,000 more than we took in, due to an expensive Bulletin to publish, increased student support, and expenses from last year's Vienna meeting. So far this year we have income of \$15,000 and expenses of \$17,000 spent on the annual meeting, student grant awards, the symposium, and a grant to the University of Hawaii. The treasurer's report was approved as given.

Dillon reported on the major motions of the 2002 annual Council meeting. They were:

1. The members' dues will rise next year to \$60 for regular members and \$20 for students.
2. The dues may be paid in advance at the rate of \$60 for one year, \$105 for two years, and \$145 for three years.

3. Affiliate memberships will cost the same as regular memberships.
4. The endowment proceeds of \$3567 are available for the symposium in 2003.
5. The AMS secretary is charged with preparing letters of appreciation to those joining the Council and those serving as committee chairs at the start of their service and at the ends of their terms. Also, the President shall recognize such people at the annual business meeting.
6. The Council, under the direction of the President-elect, will present a plaque to the outgoing President at the annual business meeting.
7. The Council will not sell our mailing list to anyone.

These major motions were approved by the membership.

The student awards chair (Bennett) reported that research grants were given to:

1. Audrey Aronowsky, Department of Integrative Biology, University of California, Berkeley. "Expanding the Search for Answers: The Biology of Ampullospirine Naticid Gastropods" (\$990).
2. Anuschka Faucci, Department of Zoology, University of Hawaii, Manoa. "Genetic Population Structure in Relation to Dispersal Potential in Hawaiian Vermetids" (\$895).

The winners of the Connie Boone prizes for best student papers and posters were announced at the evening banquet cruise.

The Editor in Chief (Voltzow) announced that Ángel Valdés has agreed to be managing editor of the Bulletin and that we need more paper submissions for the Bulletin, "so let's get those paper written about your research, people, and get those submissions in to Janice Voltzow!"

Bylaws committee chair Harold Murray is revising our bylaws to make them more accurate. We will be hearing about these revisions and getting a chance to vote on them in the future.

Conservation committee member Kevin Cummins reported that the AMS is writing a paper against the introduction of black carp, since they are molluscivores and are eating endangered mollusks.

President-elect Ó Foighil led the members' applause in appreciation of outgoing President Rob Dillon and Treasurer Gene Keferl for their fine years of service to the organization, then gave a brilliant Power Point presentation on the next year's meeting in Ann Arbor, MI. The meeting will be held June 25–29. Possible symposia are Diversification in the Sea, non-marine molluscan exotics, and other workshops. There may be a Show (Shell) and Tell session on special mollusks, where members can demonstrate their special shells or problem shells, to involve shell collectors.

Vice President José Leal reported on the 2004 meeting, which will be held on Sanibel Island, FL, beginning in July 31. The shell museum will provide support. A symposium on phylogeny of neogastropods is being considered. There will be the opportunity also to attend the COA meeting in Florida, which will be held shortly after the AMS meeting.

Fred Wells gave a report on the Unitas Malacologica's World Congress of Malacology meeting in Perth, Western Australia in 2004, July 11–16. More information can be found at <http://www.amonline.net.au/malsoc/confer4.htm>

UNDER NEW BUSINESS, THE 2002–2003 BUDGET WAS APPROVED.

There was much discussion from the members as to whether we should increase our dues when our membership is declining. It was generally agreed that we should get our AMB and Newsletters out on time, to give membership something for their money.

The slate of officers for 2002–2003 was presented and approved:

President: **Diarmaid Ó Foighil**
President -elect: **José Leal**
Vice President: **Dianna Padilla**
Secretary: **Paul Calloman**

Treasurer: **Susan Cook**
Past President (4–10 yrs): **Alison Kay**
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There was general acclamation for the meeting staff at the conference center, the Council and Committees, and the honorary life members who were present (Harold Murray and Dick Petit), whereupon the meeting was adjourned.

Respectfully submitted, Roland Anderson, AMS Secretary

AMS 2002 R/V ANITA FIELD TRIP

ALAN J. KOHN

Like the presentations at the meeting itself, quality rather than quantity characterized the trawling trip in Charleston Harbor on Wednesday August 7, a fine sunny day with a nice breeze, low humidity and air temperature in the mid-80's F. In fact, upon our return Rob Dillon remarked that it was the finest August day in Charleston in 20 years. Of course he didn't know of my penchant, attested to by generations of students, for arranging to have good weather for marine biological field trips.

After a substantial lunch under the trees, we embarked from the dock at Fort Johnson, once an impressive military installation from revolutionary times through the War Between the States. A sturdy structure built as a magazine during the War of 1812 now serves for volatile chemical storage for the impressive complex of marine research facilities that now occupies the site. These belong to the College of Charleston (The Grice Marine Laboratory), the Medical University of South Carolina, NOAA, the National Institute of Standards and Technology, South Carolina Sea Grant, and the South Carolina Department of Natural Resources. Randy Beatty skippered the R/V *Anita*, belonging to the last named institution, Rob Dunlap was the resident biologist for our cruise, which made three stations on different bottom types, all with a small otter trawl, and Amy Wethington was the able AMS field trip leader.

The first station, in the Charleston South Channel at a depth of about 7.5 m, produced only one live mollusc, a small octopus, and a few hermit crab-occupied shells, of *Acteocina*, *Littorina*, and *Ilyanassa*.

The second haul, in about 10.5 m in Folly Channel north of Fort Sumter, was the richest. The largest animal in the haul was a female horseshoe crab, *Limulus polyphemus*, about 25 cm across. On her carapace was a big female *Crepidula fornicata*, about 35mm long, with her husband comfortably ensconced on her shell. Several loose specimens of the flat, white *C. plana* had probably dislodged from shells. The most interesting gastropods were two yellow *Simnia* (or *Cymbula*) *acicularis*. Both were on specimens of the sea whip or gorgonian *Leptogorgia virgulata* on which they prey, one quite cryptic on a yellow host, the other quite obvious on a purple one. Other gastropods in the haul were several *Polinices duplicatus*, a small *Thais haemastoma*, and a shell of *Nassarius albus* occupied by a hermit crab. One specimen of the arcid *Anadara ovalis* was present—within the stomach of a starfish *Luidia clathrata*.

The final haul, taken on Crab Bank in about 9 m, was on a bottom comprised of empty broken shells, mainly of oysters (*Crassostrea virginica*) and quahogs (*Mercenaria mercenaria*), but also including some large fragments of large *Busycon carica*. The last formed a substrate for many specimens of *Crepidula plana*. The only living gastropod was a dorid nudibranch, probably *Doris verrucosa*, on the red sponge *Microciona prolifera*. The only live bivalves were *Anadara ovalis* and the very interesting pholad *Diplothyra smithii*, which bores into oyster and clam shells. A single seemingly ancient quahog valve held several of these small borers, whose excavation mechanism is unknown but is likely entirely mechanical. A large piece of wood hauled up earlier in the day contained numerous specimens of the related pholad *Martesia* sp.

A fine time was had by all, and we are most appreciative of all the logistic arrangements smoothly handled by Amy Wethington and John Wise.

AMS 2002 BULL ISLAND FIELD TRIP

EUGENE P. KEFERL

At 8 a.m. on August 7, 2002, twenty eager AMSers, led by Dr. Julian Harrison, made their way to Bull Island. Bull Island is part of the Cape Romain National Wildlife Refuge. We arrived at Moore's Landing where we met by Tonya Bernard and Chris Crolley. Tonya and Chris are naturalists for Coastal Expeditions, Inc. We boarded the pontoon boat *Island Cat* for a 30 minute trip to Bull Island. En route Tonya talked to us about the importance of the *Spartina* marsh to the ecology and the coastal fisheries.

Most of us stayed together and walked with Tonya and Chris to *Boneyard Beach*. Chris identified plants and told us of their medicinal uses. Along the way we admired the Black Swallowtails, Palomedes Swallowtails, Monarch and Zebra Longwing butterflies. Birds are one of my particular interests. Along the way we passed Lower and Upper Summerhouse Ponds. I have lived in the south for 27 years and I have seen a lot of alligators, but the Bull Island population was impressive. We were greeted by over 70 alligators in one small freshwater pond. One of them must have been at least 12 feet long. Needless to say we did not find out what kind of hydrobiids were in this pond. Another pond had at least one to two dozen one and two year old gators. There were quite a few birds in these ponds as well.

We reached *Boneyard Beach*, ate lunch, and Chris told us about how this beach was formed. The "bones" are the remains of a

maritime forest on the north end of Bull Island that has eroded away. You could spend the day taking pictures of this unique landscape and not see the same image twice. But wait, we are not herpetologists, geologists, botanists, lepidopterists or ornithologists, we are malacologists and this was our first real chance to see mollusks.

It was not long before Lyle Campbell, James Mclean and others discovered mollusks living in and on those "bones", particularly *Brachidontes exustus* (I think) and *Littorina ziczac*. I didn't know that *Littorina ziczac* was this far north. I believe some 30 species of marine bivalves and gastropods were observed over the course of the day. Not a lot of species, but the beach was fantastic. There were no condos, ATVs, or even sunbathers on this beach; it was all ours for the day.

Probably one of the most exciting observations made that day, at least for me, were the fresh the Red Wolf tracks and scat. There is a pair of breeding Red Wolves on Bull Island. If I am not

mistaken they have raised at least two litters of pups so far.

When we got back to the picnic tables and restrooms we met the rest of our group. Tim Pearce and several others were looking for terrestrial gastropods. The following nine species were observed: *Haplotrema concavum*, *Helicodiscus parallelus*, *Ventridens cerinoideus*, *Euglandina rosea*, *Zonitoides arboreus*, *Glyphyalinia indentata* complex, *Triodopsis hopetonensis*, *Strobilops* sp. and *Polygrya postelliana*. The last mollusk many of them saw was *Melampus bidentatus*, discovered in the marsh rack just before disembarking for the mainland.

I think we all had a great day, even though we did not make any great discoveries. We learned something and had a pleasant time together. Oh yes, I did manage to observe 47 species of birds. A special thanks to Chris, Tonya, Julian and Rob for arranging a very nice field trip.



Mollusk hunting on Bull Island.
Photo: Paul Callomon

American Malacological Society

69th Annual Meeting

Ann Arbor, Michigan

June 25-29, 2003



The 2003 American Malacological Society meeting will be held at the University of Michigan's Central Campus, Ann Arbor, during the last week of June. We hope you can join us for what promises to be an informative and fun conference. In addition to diverse contributed paper and poster sessions, we anticipate the following events:

SYMPOSIUM I DIVERSIFICATION IN THE SEA — WHAT CAN COMPARATIVE MOLECULAR DATA TELL US?

Molecular datasets are providing exciting new insights into the genesis of marine molluscan biodiversity. Invited speakers include Rachel Collin (*Crepidula*), Tom Duda (*Conus*), Michael Hellberg (*Tegula*), Taehwan Lee (*Brachidontes*), Chris Meyer (Cowries), John Wares (North Atlantic Phylogeography), and Suzanne Williams (Tropical Littorinids). Plenary speaker: Baldomero Olivera (Conotoxin Evolution). Organizer: Diarmaid Ó Foighil (diarmaid@umich.edu).

SYMPOSIUM II NON-MARINE MOLLUSCAN EXOTICS — THE FUTURE IS A FOREIGN ECOSYSTEM.

Until recently, oceanic barriers to dispersal biotically insulated non-marine malacofaunas. The symposium will consider salient case histories illustrating the spread and impact of molluscan exotics in recipient ecosystems. Prospective speakers include Rob Cowie (Pacific Island exotics), Gustavo Darrigran (*Limnoperna fortunei*), Diarmaid Ó Foighil (New World *Corbicula*), and Geerat Vermeij (Perspective on Biological Invasions). Organizer: Rob Cowie (cowie@hawaii.edu).

SPECIAL SESSION I PEET MEETS MOLLUSCAN TAXONOMY.

NSF's PEET program has sponsored a number of significant molluscan taxonomic projects. This special session will highlight the diverse new research emerging from these projects and will facilitate an exchange of information between PEET and the malacological community. Organizer: Terrence Gosliner (Tgosliner@calacademy.org).

SPECIAL SESSION II J.B. BURCH — HIS STUDENTS SPEAK.

Jack Burch has had a long and influential career in malacology. This is a special session in his honor and will feature research presentations focusing on freshwater and terrestrial molluscs by his former students. Organizer: Tim Pearce (pearcet@carnegiemuseums.org).

Other projected activities include workshops on Bayesian Phylogenetics and on the use of ROV's in riverine studies, a conchological "show and tell" session, book auction, a tour of the UMMZ Mollusc Collection, and aquatic and terrestrial field trips.

Conference events, accommodation (choice of hotel or college dorm) and social amenities will be within walking distance. Ann Arbor is a culturally lively college town and in late June holds its annual Summer Festival with free nightly outdoor entertainment. See you there!

Diarmaid Ó Foighil, AMS President, UMMZ, University of Michigan, Ann Arbor, MI 48109-1079

For details, check out our website at: <http://www.ummz.lsa.umich.edu/mollusks/ams2003.html> (this site will become operational in November 2002).

HARVARD PALEONTOLOGIST STEPHEN JAY GOULD DIES

By Tim McLaughlin

BOSTON, May 20 (Reuters) - Paleontologist Stephen Jay Gould, who unlocked the mysteries of evolution for millions of readers with essays on the panda's extra thumb and helped bring natural history museums to popular audiences, died on Monday at his home in New York after a long battle with cancer.

Gould, a Harvard professor best known for modifying Charles Darwin's theories, died at 10:35 a.m. EDT (1435 GMT), a spokeswoman at his Harvard office said. He was 60.

Some of Gould's best-known works are "Ever Since Darwin," "The Panda's Thumb," which won an American Book Award in 1981, and "The Mismeasure of Man," which won the National Book Critics Circle Award for 1982.

"He connected science with other areas of pursuit such as baseball . . . Most people aren't scientists. They need those connections," said Michael Novacek, provost of science at New York's American Museum of Natural History.

"Probably more than anyone else, he provided a contextual sense of science that was incredibly effective. His writings influenced so many people, scientists and nonscientists."

A Harvard professor since age 26, Gould wrote chatty, educational essays using unusual details such as the flamingo's smile or the panda's extra thumb to introduce readers to more general themes in an exciting way.

In "The Panda's Thumb," discussing a type of mite, he wrote: "Fifteen eggs, including but a single male, develop within the mother's body. The male emerges within his mother's shell, copulates with all his sisters and dies before birth."

"It may not sound like much of a life, but the male *Acarophenax* does as much for its evolutionary continuity as Abraham did in fathering children into his 10th decade."



Stephen J. Gould. (Staff photo by Jon Chase)

CHOCOLATE BARS TO LAND SNAILS

Technically his field was fossils but Gould taught geology, biology, zoology and the history of science, and wrote about everything from chocolate bars to baseball to Bahamian land snails—on which he was probably the world's foremost expert.

"Science is not a heartless pursuit of objective information," Gould wrote in his 1977 book "Ever Since Darwin." "It is a creative human activity, its geniuses acting more as artists than as information processors."

In July 1981, when he was 40, Gould learned he had abdominal mesothelioma, a rare and deadly form of cancer that is usually associated with exposure to asbestos.

Gould researched the disease and wrote in an article in *Discover* magazine in June 1985: "The literature couldn't have been more brutally clear. Mesothelioma is incurable, with a median mortality of only eight months after discovery."

He went on to say that "most people, without training in statistics, would read such a statement as, 'I will probably be dead in eight months.'"

But he added, "all evolutionary biologists know that variation itself is nature's only irreducible essence . . . I had to place myself amidst the variation."

During his illness, Gould continued to write and teach while undergoing experimental treatment for the disease.

Born on Sept. 10, 1941, in New York, Gould decided to be a paleontologist after his first sight, at age 5, of a 20-foot (6-metre) high reconstructed dinosaur in the American Museum of Natural History.

HELEN DUSHANE

By Dan Yoshimot

It is with great sadness that I announce the death of one of the great ladies of malacology, Helen DuShane. Helen died in her sleep last Saturday, May, 18, 2002, at home with her daughter Renee.

For me and my wife, Hiromi, it was always a great pleasure to spend time with Helen, not only because she was extremely brilliant, but also a generous person with her time and talents. For the

past few years Helen had become a bit recluse but she always greeted us with a big smile and "it's been too long that we haven't seen you guys." Helen was the caretaker of her daughter Renee, up to the last few years, but Renee has taken over the responsibility of her mom up to the end.

Three years ago, the Lost Coast Shell Club "adopted" Helen as our first Honorary Member, an honor she had received often from many of the shell clubs and organizations from across the country. She was best known for her

exacting works on worldwide Epitonids and Panamic species that she or her "fellow" malacologists had collected.

If you'd like to send a note to her daughter, Renee, her address is: Renee DuShane, 9460 S. Friendly Woods Lane, Whittier, California, 90605-1657

I'm sure that she would appreciate hearing from the people that knew and loved her mom.

Dan & Hiromi Yoshimot, 01164 Vista Dr., Eureka, California, 95503-6018, USA, e-mail: yoshells@humboldt1.com

FWGNA MEETING

SUBMITTED BY AMY WETHINGTON & ROB DILLON

The fourth meeting of the Freshwater Gastropods of North America project convened at the Lightsey Conference Center Sunday evening, August 4, with Rob Dillon chairing.

Jay Cordeiro opened with a presentation on NatureServe, the nonprofit organization of ecologists and contract specialists dedicated to identification and protection of biodiversity. NatureServe maintains the "heritage status" (distribution and rarity) of an extensive list of organisms from the United States and Canada, including the freshwater snails, with which it identifies potentially imperiled species and biodiversity hot spots. All 50 states of the U.S., 10 Canadian provinces, and 12 Latin American countries share data with NatureServe. Its web site (www.natureserve.org) features a database "Explorer" which is a rapid and easy tool for retrieving conservation information.

Discussion followed regarding the method by which heritage ranks may be revised or updated, and the reliability of the database upon which heritage ranks rest. The NatureServe data are based on published reports and museum records, which admittedly may be old and incomplete. New data on all species are welcome at any time.

The chair offered a slide presentation reviewing the history of the FWGNA project. Landmark dates have included the 7/98 establishment of the project at the World Congress of Malacology in Washington, the 11/98 formation of a gastropod committee within the Freshwater Mollusk Conservation Society (FMCS), the 3/99 second meeting at FMCS Chattanooga, and the 3/01 third meeting at FMCS Pittsburgh. The next meeting of the FMCS is planned for Raleigh 3/03. More can be learned about the Freshwater Gastropods of North America Project at our web site: <http://www.cofc.edu/~dillonr/fwgnahome.htm>

Some detail was offered regarding the NSF proposals of 11/99 and 11/00, which involved many collaborators, and which ultimately were less than successful. But

while the large, centralized effort has proven difficult to jumpstart, successful local freshwater gastropod surveys have begun in Virginia, North Carolina, South Carolina, and Mississippi, among others.

These considerations led the chair to offer a new model for the FWGNA project. The talking points were as follows: 1) The effort should be decentralized. Regionally-based individuals and small teams may be best positioned to conduct freshwater gastropod inventories. 2) Political boundaries do matter. 3) Modern data are critical. 4) Local funding sources are important. State and regional funding should be sought, voucher specimens (in ethanol) deposited locally, and reports designed primarily to suit the needs of the resource agencies focused on particular watersheds and political boundaries. 5) Project coordination should be at the database level. A central office might both coordinate with NatureServe, and (ultimately) compile a guidebook to the freshwater gastropods at the continental level.

A lively discussion followed regarding whether the projected guidebook should feature broad ranges or more precise locality data. Although dot-maps are certainly more helpful for management, concern was expressed that endangered species might become vulnerable to overcollection. It was suggested that detailed data might be reserved for the agencies, which could then regulate its dissemination. Amateur collectors are not the enemy, however.

There was also discussion regarding funding sources. In the last couple of years, federal and state support for biotic surveys has become more difficult to obtain. Options include designing surveys that involve specialists in all freshwater taxa, not simply the gastropods, and involving large private benefactors.

Noting the lateness of the hour, the Chair yielded the floor to Gary Rosenberg (AMS Systematics Committee), for a review and discussion of database standards in systematic collections. As he did so, he made this final plea: Any worker willing to survey his local freshwater gastropod fauna is encouraged to email Rob Dillon. Then do it!

BOOK REVIEWS

VISTA NIEVE: THE REMARKABLE TRUE ADVENTURES OF AN EARLY TWENTIETH CENTURY NATURALIST AND HIS FAMILY IN COLOMBIA, SOUTH AMERICA

By MELBOURNE R. CARRIKER

Blue Mantle Press (Rio Hondo, TX), 312 pp., \$18.95

This is the heartwarming story of malacologist author Carriker's family and early childhood reminiscences of their life on a coffee plantation in Colombia, South America in the early 1900s. His maternal grandfather started as a plantation on the foothills of the Sierra Nevada mountains, above the town of Santa Marta. Orlando Flye was very innovative, starting the town's first ice factory and inventing a road grader drawn by horses before the advent of automobiles.

The majority of the book is about the author's father, Melbourne A. Carriker, who was a noted ornithologist, a museum bird collector, and researcher on bird parasites. He spent many interesting and hazardous collecting trips for the Carnegie and other museums in South America, which are described here. He met a Flye daughter there who he later married, and established the nearby coffee plantation of Vista Nieve, "Snow View," and continued his bird collections and raised a family, including our own Melbourne R. Carriker, who spent his early years on the plantation and helped his father on his collecting trips.

The author tells us in an engaging manner of his early childhood on the plantation and the travails of having no electricity, isolated from most social contact and being taught by a governess. He relates the stories of his father's collecting trips with humor and compassion. One of his most interesting stories was his encounter with a seven meter long anaconda and the results of that encounter.

The author is an honorary life member of the American Malacological Society and has published more than 160 scientific articles, mostly about marine mollusks. Although retired, he remains active in the malacological field. This is his first book.

Reviewed by Roland C. Anderson

THE OCTOPUS AND THE ORANGUTAN By EUGENE LINDEN

Dutton Press (NY), 242 p., \$23.95 US

This book is billed as true tales of animal intrigue, intelligence, and ingenuity. Linden begins by attempting to define animal intelligence and how it might have evolved. As an example he relates the engaging story of chimpanzee Fu Manchu at the Omaha Zoo. Fu managed to escape his cage several times by picking the lock with a piece of wire which he hid in his mouth. He got the wire from a chimp in an adjacent cage by trading some food for it. Because of his lock-picking ability, the chimp was awarded an honorary membership in the American Association of Locksmiths.

Fu's actions demonstrated a number of higher mental abilities, including the obvious tool making and tool use, but also cooperation with conspecifics, problem solving, and deception in keeping the wire hidden from his keepers. Linden describes how this whole scenario could have evolved and cautions us against ascribing a higher mental capacity from an animal's behavior than if the behavior could have arisen from coincidence, serendipity, or even simple association (Morgan's Canon). He points out that "animals do their best when it serves their own purpose." He also cautions against ascribing too much intelligence to animal behavior when we don't know what the behavior means or how it evolved or if it was instinctive. Yet, some of the behaviors he describes are extraordinarily compelling.

He goes on to describe tool use, play behavior (including that of octopuses), deception (yes, animals can lie and deceive), and even weapon use by animals. He relates how some animals have even trained humans to do what they want. He describes how killer whales at Sea World would hoard bits of food on the bottom, then let one bit at a time float to the surface to lure in a seagull, whereupon the orca would lunge up, grab the seagull and take it for an unwanted underwater swim. While most of these incidents were "catch and release fisheries," sometimes the seagull became a tasty snack for the whale.

He relates at some length the intelligence of the titled octopus and how unlikely a

candidate it is for higher intelligence: it has about 50% of its neurons in its arms, it is asocial with other octopuses, and it has a short life span. He points out that the octopus may use its mental ability more efficiently and may even have "distributed intelligence." The octopus just may think differently than we do, but it does it well. He describes the usual octopodan tales of octopus personalities, human recognition, maze solving, tool use, play behavior, and flexible problem solving, some of which this reviewer has helped to describe. Considering the range of behaviors indicative of higher intelligence, he posits that the riddle of the octopus's possession of intelligence may force us to rethink the brain/body size ratio as indicators of animal intelligence, since the octopus may use a different way of thinking.

Linden is well-qualified to write such a work. He has written other books on animal behavior and the environment: *The Parrot's Lament*, *The Future in Plain Sight*, and *Silent Partners*. In 2001 he was awarded the Yale Poynter Fellowship for his environmental writings. He will donate a portion of the proceeds from this book to the Humane Society.

Reviewed by Roland C. Anderson

GOV'T TRIES TO SAVE MO CAVE SNAIL

WASHINGTON (AP) - The government placed a rare Missouri cave snail on the federal list of endangered species Wednesday.

Tumbling Creek Cave snails have died off in such great numbers that scientists are worried about the health of the cave stream and its water source, an aquifer that serves both animals and the surrounding community.

Snails are a barometer of water quality, said Tom Aley, a water scientist who is leading the effort to save the snail.

"I think the snail is an indicator of the health of the whole aquatic ecosystem we have in the cave," Aley said. "It's the place where we can see the results of groundwater contamination more readily than we can with other species."

Aley and his wife, biologist Catherine Aley, own Tumbling Creek Cave and

operate Ozarks Underground Laboratory in southwest Missouri, not far from the country music town of Branson.

With its 110 different and diverse species, including endangered gray bats, the cave has been declared a national natural landmark by the U.S. Department of Interior.

The snail, *Antrobia culveri*, may be the cave's most unique animal, because it is the only species within its genus.

Aley makes a comparison to trees to explain the significance: "There are many different kinds of oak trees, but all oak trees are in one genus. So this snail is as different from other snails as oak trees are from beech trees."

The snail is white with a pale yellow shell that has two or three whorls. It looks similar to other snails, but its tiny size (about one tenth of an inch) makes it nearly invisible to the untrained eye, said Paul McKenzie, an endangered species biologist for the Midwest region of the U.S. Fish and Wildlife Service.

"Someone like me can pick up a rock and look underneath and with the naked eye pick out a cave snail, but it takes training and a keen eye," McKenzie said.

Researchers have not agreed on what has caused the snail's sharp decline over the past six years. Peggy Horner, endangered species coordinator for the Missouri Department of Conservation, said there are a number of possible culprits, particularly runoff and erosion that add silt to the cave stream gravel where the snails make their homes.

Other possibilities include temperature changes, fluctuations in water flow or a new predator or competitor.

The federal "endangered" designation will help get federal funds to help the snail, and it puts together a team of government and university researchers and other experts to develop a plan for the animal's recovery.

Fish and Wildlife Service's Midwest endangered species: <http://midwest.fws.gov/Endangered/>

Submitted by Carole Marshall, 08/14/02 18:11 EDT, Copyright 2002 The Associated Press.

SHIP SITE OFF KEYS MAY HAVE MORE GEMS

EMERALD TURNS UP NEW TWISTS IN TREASURE HUNT

By KEVIN LOLLAR, [KLOLLAR@NEWS-PRESS.COM](mailto:kllollar@news-press.com)

The surprising origin of a 40.2-carat emerald found inside a queen conch shell 30 miles west of Key West raises and answers some interesting questions about two of the world's most famous sunken treasure ships.

On Sept. 4, an elementary school teacher and part-time salvage diver was working on the wreck site of the 17th-century Spanish galleon Santa Margarita; as he searched for treasure and artifacts, he collected a few shells for his students.

While the teacher, whom salvage company officials declined to identify, was cleaning the shells at his North Florida school, a 1 X 1-inch raw emerald rolled out of a conch.

As a salvage diver, the teacher works for Amelia Research & Recovery of Amelia Island, the salvage company hired by Mel Fisher Enterprises to work the Santa Margarita.

"He called our on-site guy and said, 'I was cleaning this shell and this little rock fell out, but I don't want to get carried away,'" Amelia President Doug Pope said. "He wasn't sure what it was. He thought it might be a piece of a Heineken bottle. So he brought it over here, and we looked it over. I knew it was an emerald."

The emerald's path to the conch began Sept. 4, 1622, 380 years to the day before the teacher plucked the shell from the sea floor. On that day, 28 Spanish ships, including the Atocha and Margarita, set sail for Spain, loaded with tons of plundered New World gold, silver and copper. A hurricane drove the fleet toward the Florida Keys (near the Marquesas) and sank the Atocha and Margarita, which carried most of the loot.

Mel Fisher started hunting for the ships and their treasure in 1964 off Matecumbe, then moved the search to the Marquesas in 1970. Fisher's crews found the Margarita's starboard hull timbers and \$35 million in gold and silver bullion in 1980, but then Fisher decided to concentrate on the Atocha. Finally, in 1985, Fisher hit what has come to be known as the Mother Lode, more than \$400 million in treasure from the Atocha. Most of the treasure was on the ship's manifest, which is still on file in Spain, but salvage crews also pulled \$40 million in raw emeralds from the Atocha—these stones were not on the manifest, which means they were smuggled aboard so their owner could avoid paying taxes on them.

Although divers have recovered thousands of raw emeralds from the Atocha, the conch emerald is the first from the Santa Margarita. At first, everyone assumed the emerald was Colombian; after all, every Atocha emerald was from

Colombia's famed Muzo mines. But according to Fisher's appraiser, the stone is from Brazil—the appraiser has not yet put a dollar value on the emerald.

"What this is is an archaeological mystery," said Pat Clyne, vice president of Mel Fisher Enterprises, who helped recover the Atocha's emeralds. "To have a Brazilian emerald on the Margarita that wasn't on the manifest means emeralds were being smuggled and opens a whole bunch of questions. The ships were carrying the exact same types of treasures—the same coins, the same silver bullion. So why would it be different in the emeralds? They were both contraband, but why the difference?"

Finding the emerald might mean that salvors have finally found the Margarita's scatter trail. When a treasure ship sank, it often left a trail as treasure and artifacts tumbled overboard or fell through holes in the hull—like a wounded animal leaving a blood trail through the woods. A scatter trail can lead to the wreck's largest deposit of treasure. For years, salvors have thought the Margarita's trail was north of the starboard-timber site discovered in 1980, but recently the Amelia crew started sniffing the trail southward. The conch emerald was found south of the starboard timbers.

Another intriguing question raised by the emerald: How many millions in Santa Margarita treasure remains to be recovered? "This has changed everyone's outlook," Pope said. "It wouldn't have mattered if it was 2 carats or 100 carats. It's the fact that it's an emerald."

"It's not a high-quality emerald, but the value is that it tells us the ship was carrying emeralds. The Margarita's manifest tells us there's still \$60 million to \$100 million down there. Now there's the possibility of this other. It's pretty neat."



PRECIOUS GEM: This emerald was found 30 miles west of Key West, near the wreck site of the 17th-century Spanish galleon Santa Margarita. Special to The News-Press