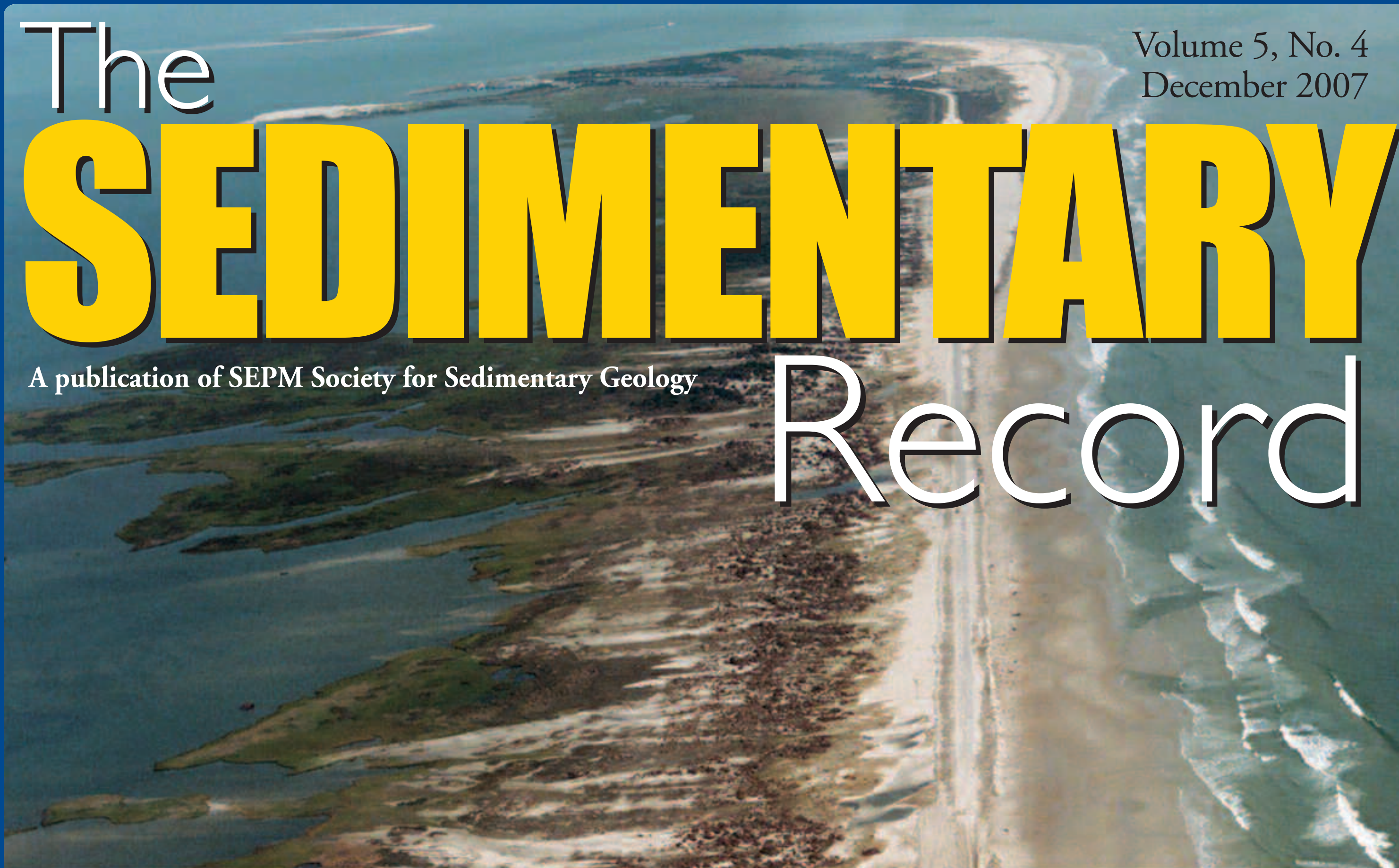
The SEDIMENTARY Record

A publication of SEPM Society for Sedimentary Geology

Volume 5, No. 4
December 2007



INSIDE: LATE HOLOCENE BARRIER ISLAND COLLAPSE: OUTER BANKS, NORTH CAROLINA, USA

PLUS: TIME SCALE CREATOR
NETWORKING-PRICELESS
PRESIDENT'S COMMENTS

1926 SEPM
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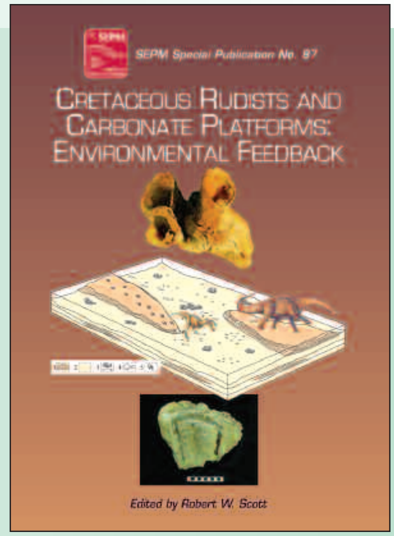
SEPM Special Publication #87

Cretaceous Rudists and Carbonate Platforms: Environmental Feedback

Edited by: Robert W. Scott

Sedimentologists, stratigraphers and paleontologists will find new data in SP 87. The papers of the Proceedings of the Seventh International Congress on Rudists are organized into three themes: (1) Depositional Environments of Cretaceous Carbonates has been an overarching theme of the Working Group on Cretaceous Carbonate Platforms, Study of rudists, which produced great volumes of carbonate sediment, is central to understanding processes and reservoir prediction. Some of the world's great hydrocarbon reservoirs are rudist debris beds. (2) The Origins, Events, and Demise of Rudist Paleocommunities signal significant local and even global events in Earth systems. Rudist communities responded to oceanic anoxic events and to complex factors that lead to oxygenation of deep ocean water masses. (3) Theme Towards Rudists Taxonomy, Biogeography, and Phylogeny focuses on the paleobiology and systematics of rudists. The foundation of all interpretations of biogeography and paleoecology is solid taxonomy that is agreed upon by the majority of specialists. This is a core, ongoing scientific pursuit.

Catalog #40087 • SEPM Member Price: $85.00



SEPM Miscellaneous #7, a joint SEPM/GSL publication

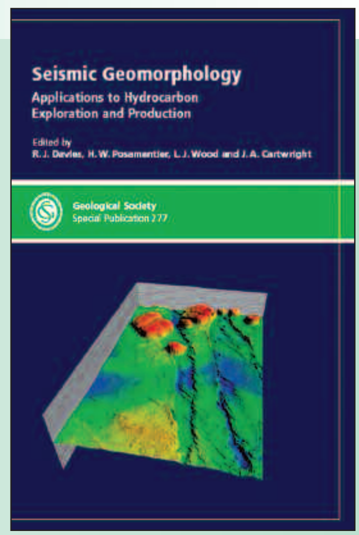
Seismic Geomorphology: Applications to Hydrocarbon Exploration and Production

Edited by: R. J. Davies, H. W. Posamentier, L. J. Wood, and J. A. Cartwright

We are poised to embark on a new era of discovery in the study of geomorphology. In recent years an entirely new way of studying landscapes and seascapes has been developed through the use of 3D seismic data. Just as CAT scans allow medical staff to view our anatomy in 3D, seismic data now allows Earth scientists to do what the early geomorphologists could only dream of - view tens and hundreds of square kilometres of the Earth's subsurface in 3D and therefore see for the first time how landscapes have evolved through time. This volume demonstrates how Earth scientists are starting to use this relatively new tool to study the dynamic evolution of a range of sedimentary environments.

SEPM is the North American distributor for this publication. International orders need to be placed through the Geological Society of London.

SEPM/GSL Member Price: $70.00



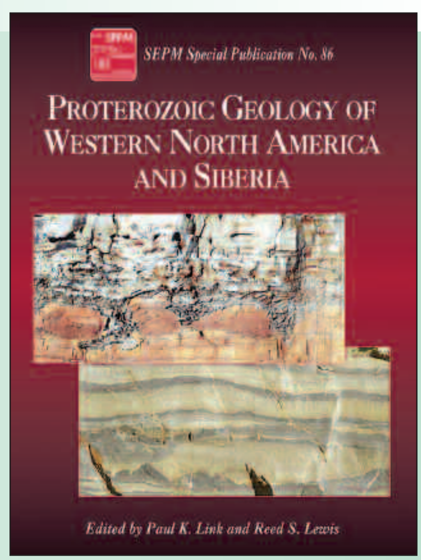
SEPM Special Publication #86

Proterozoic Geology of Western North America and Siberia

Edited by: Paul K. Link and Reed S. Lewis

This volume is a compendium of research on the Belt Supergroup. It is an outgrowth of Belt Symposium IV, held in Salmon, Idaho, in July, 2003, in conjunction with the Tobacco Root Geological Society annual field conference. Because of the geographic extent and great thickness of the Belt Supergroup, years of work have been required before conclusions are “bona fide”. The Mesoproterozoic Belt Supergroup of western Montana and adjacent areas is geologically and economically important, but it has been frustratingly hard to understand. The previous Belt Symposium volumes offer an historical view of the progress of the science of geology in the western United States. The advent of U-Pb geochronology, especially using the ion microprobe (SHRIMP) and laser-ablation ICPMS, has injected geochronometric reality into long-standing arguments about Belt stratigraphy. Several papers in this volume utilize these new tools to provide constraints on age and correlation of Belt strata (Chamberlain et al., Lewis et al., Link et al., and Doherty et al.).

SEPM Member Price: $98.00



Cover Photo: Images of the Outer Banks of North Carolina. Provided by Stephen J. Culver, et al.

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The Sedimentary Record (ISSN 1543-8740) is published quarterly by the Society for Sedimentary Geology with offices at 6128 East 38th Street, Suite 308, Tulsa, OK 74135-5814, USA.

The Sedimentary Record is provided as part of membership dues to the Society for Sedimentary Geology.

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Late Holocene barrier island collapse: Outer Banks, North Carolina, USA

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ABSTRACT

We document here the threat of large scale destruction (collapse) of barrier islands based on the study of many cores taken along the Outer Banks and in Pamlico Sound, North Carolina. Around 1,100 cal yr BP, probably as the result of hurricane activity, portions of the southern Outer Banks must have collapsed to allow normal salinity waters to bathe southern Pamlico Sound for several hundred years. Such collapse could occur again during our current regime of global warming, rising sea level and increased tropical cyclone activity. The economic effect of barrier island break collapse on Outer Banks communities would be devastating.

INTRODUCTION

Large-scale destruction by recent hurricanes of Gulf Coast barrier islands, extending from Santa Rosa Island in the Florida Panhandle to the Chandaleur Isles in Louisiana, demonstrates their ephemeral nature. For example, sand was stripped from large sections of Dauphin Island, Alabama and deposited in Mississippi Sound during Hurricane Katrina (2005) (http://coastal.er.usgs.gov/hurricanes/katrina/lidar/dauphin-island.html). Parts of the Chandeleur Isles were destroyed (eroded to below sea level) due to the impacts of Hurricane Ivan (2004) and Hurricane Katrina (2005) (http://coastal.er.usgs.gov/hurricanes/katrina/photo-comparisons/chandaleur.html). Removal of large (several km or more) sections of the subaerial component of barrier islands resulting in a submarine shoal is herein termed "collapse." The potential for barrier islands to collapse has global significance given the continuing increase of coastal populations and the economic importance of coastal industries.

We have used foraminiferal assemblages collected from vibracores taken on and behind the barrier islands, to investigate the stability and longevity of the Outer Banks, North Carolina (Fig. 1). High resolution data from an 8.21 m vibracore (PS03) in the estuarine south-central Pamlico Sound (Fig. 1) provide the best preserved record yet recovered of change within this system and are used here to illustrate our findings. The unexpected presence of subtropical to tropical planktonic foraminifera and *in situ* normal salinity neritic benthic foraminiferal assemblages in this and at least three adjacent cores suggests that large portions of the southern Outer Banks collapsed approximately 1,100 cal yr BP, allowing normal salinity, shelf waters to enter the Pamlico basin. For several hundred years, until the barrier islands were rebuilt just prior to the arrival of English settlers in North Carolina in 1584, the southern Pamlico basin was an open bay rather than a restricted estuary.

The Outer Banks are generally low and narrow barrier islands extending for ca. 300 km along the northeast coast of North Carolina (Fig. 1A). Currently, just five inlets cut the barrier. The barrier islands are perched on the last glacial maximum Hatteras Flats Interstream Divide (HFID) (Fig. 1B) that in the late Pleistocene and early Holocene separated southwest flowing Pamlico Creek (Fig. 1B) from a similar drainage basin immediately to the east (Riggs and Ames, 2003; Mallinson et al., in review). Post-glacial sea-level rise flooded the Pamlico Creek drainage, the Tar and Neuse River valleys (Fig. 1B), and the paleo-Roanoke River valley underlying Albemarle Sound to the north (Fig. 1A). This flooding, which occurred approximately 9,000 to 7,000 cal yr BP (Sager and Riggs, 1998; Mallinson et al., 2005), formed estuaries and bays, which eventually became sounds when the Outer Banks barrier islands formed (Riggs and Ames, 2003). This paper reports on the intriguing sedimentary and micropaleontological record of several vibracores that indicates that the southern Outer Banks barrier islands underwent significant destruction, presumably as the result of a major hurricane or hurricanes, approximately 1,100 cal yr BP.

METHODS

More than 100 vibracores have been taken over the past ten years in Pamlico Sound and on the barrier islands from Pea Island to Core Banks (Fig. 1A). These cores can be placed in the geologic framework provided by extensive geophysical profiling (Fig. 1B). Vibracore PS03, taken in 6.5m of water in south-central Pamlico Sound (Fig. 1) near the thalweg of Pamlico Creek, was sampled for foraminifera

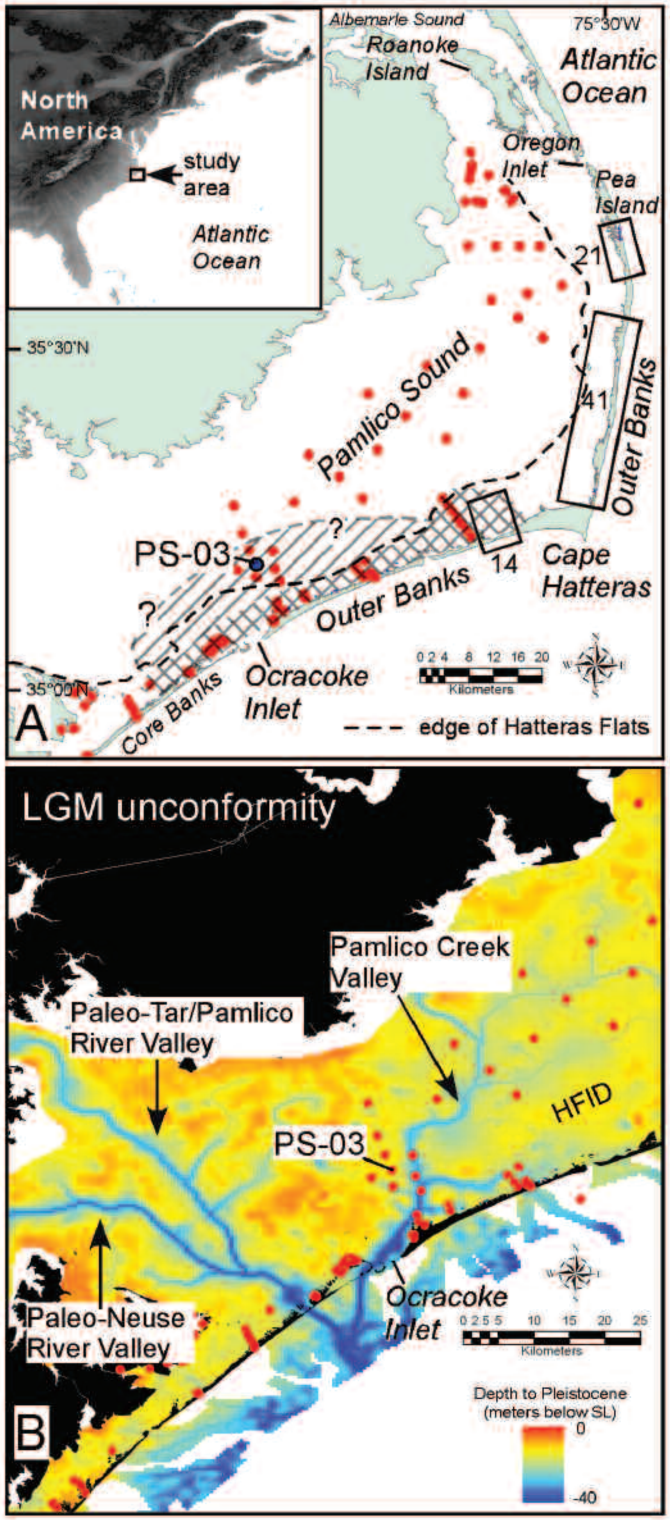

Figure 1. A, Location of vibracore PS03 and other vibracores (dots) in the Pamlico Sound region. Boxed areas along barrier islands indicate areas covered by (and the number of) closely spaced vibracores. The distribution of ca 1,200-500 yr old inner shelf foraminiferal assemblages within Pamlico Sound and beneath the barrier islands is indicated by cross-hatching. The projected extent of the ca 1,100-500 yr old shelf foraminiferal assemblage with planktonics is indicated by diagonal lines. The black dashed line is the western boundary of Hatteras Flats. B, Structure contour map (m) of the top of the Pleistocene (last glacial maximum, LGM, unconformity) based on seismic data. Location of vibracore PS03 and paleo-drainages of the Neuse and Tar rivers and of Pamlico Creek are indicated. HFID, Hatteras Flats Interstream Divide.

in 2 cm contiguous intervals. Six calibrated (Bronk Ramsey, 2005; Hughen et al., 2004; Reimer et al., 2004) 2-sigma radiocarbon ages from PS03, each on ca.1000 specimens of the benthic foraminifer *Elphidium excavatum*, and one on bulk organic matter, provide the temporal framework for the micropaleontological and lithologic data. Additional radiocarbon and optically stimulated luminescence age (OSL) estimates from other vibracores provide a regional chronostratigraphic context (Mallinson et al., 2007; Smith et al. 2007).

ENVIRONMENTAL CHANGE IN SOUTHERN PAMLICO SOUND

The lowermost 2.31 m of core PS03 (Fig. 2) are generally barren of foraminifera. Flaser-bedded upward-coarsening muddy sand containing estuarine diatoms and abundant organic matter is interpreted to represent estuarine conditions as post-glacial sea-level rise flooded the paleo-Tar River, the paleo-Neuse River, and the Pamlico Creek drainages commencing about 6,980-7,330 cal yr BP. Pamlico Creek flooded up the thalweg and was restricted from open marine conditions by the Hatteras Flats Interstream Divide (HFID) to the east (Fig. 1B).

Deposition of the overlying upward-fining muddy unit (5.88 to 5.08 m; Fig. 2) began about 4,070-4,340 cal yr BP. Based on comparison with modern foraminiferal distributions in Pamlico Sound (Abbene et al., 2006), samples in this unit that are dominated by *Elphidium excavatum* and *Ammonia parkinsoniana* indicate highly brackish estuarine conditions. These two euryhaline taxa also live today on the North Carolina inner shelf where they occur with stenohaline benthic taxa (Schnitker, 1971). Samples in this section of PS03 dominated by *E. excavatum* and *A. parkinsoniana*, but also containing varying abundances of characteristic neritic benthic species (e.g., *Bolivina striatula, Hanzawaia strattoni*; Schnitker, 1971), indicate commencement of incursion of more saline waters over the HFID (Figs. 1B, 3A).

Burrowed muddy sand from 5.08 to 4.17 m (Fig. 2) was deposited in a relatively short time, from about 3,910-4,140 to 3,740-3,990 cal yr BP. It contains a benthic foraminiferal assemblage typical of the inner shelf today (dominated by the euryhaline *Elphidium excavatum* and *Ammonia parkinsoniana*, with the stenohaline *Hanzawaia strattoni, Nonionella atlantica* and *Buccella inusitata* as subsidiary species), together with Gulf Stream planktonic foraminifera (e.g., *Globigerinoides ruber, Globorotalia menardii*) (Fig. 2). This assemblage differs from modern inlet assemblages (Abbene et al., 2006) both in its composition and in its preservation. The modern inlet assemblages typically occur in sand and are composed of large specimens that have been broken and abraded by transport, whereas the muddy sand assemblage includes well preserved specimens of all sizes, i.e., ranging from young to mature individuals. The composition and characteristics of the muddy sand assemblage indicates that normal-salinity shelf waters extended into the southern Pamlico basin as rising sea level overtopped the HFID adjacent to the paleo-drainages and formed an open southern Pamlico Bay. The benthic assemblage lived at this location whereas Gulf Stream planktonics were transported into southern Pamlico Bay perhaps within Gulf Stream frontal filaments (Fig. 3A) (see Pietrafesa et al., 1985). Normal salinity benthic foraminiferal species occur with estuarine species up-core from 4.17 to 3.42 m in a generally fining-upward section of core (Fig. 2). Planktonic foraminifera, however, are absent indicating an increasingly less open aspect to Pamlico Bay from 3,740-3,990 cal yr BP until 3,450-3,750 cal yr BP.

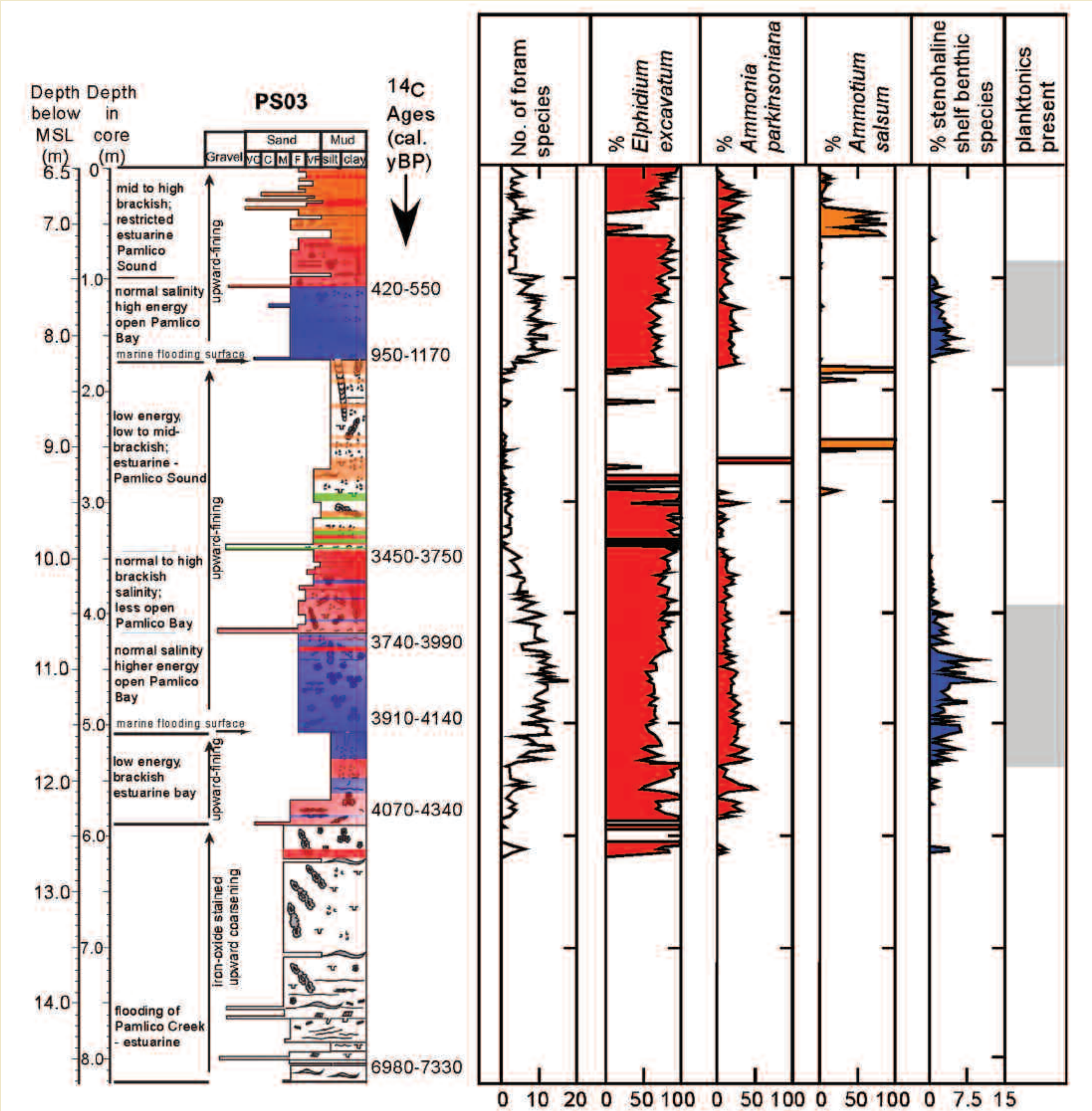

Figure 2. Lithologic log of vibracore PS03 from south-central Pamlico Sound and associated foraminiferal, chronologic and sedimentologic data. Paleoenvironmental interpretations based on these data are given to the left of the log. Colors indicate foraminiferal assemblages as defined by cluster analysis. Blue = normal salinity bay; red = high brackish estuary; orange = low to mid brackish estuary; green = undifferentiated estuary. Note that **Elphidium excavatum** *and* **Ammonia parkinsoniana** *are euryhaline species that occur today both in high brackish estuarine and normal marine salinity shelf settings.*

Fining-upward sediments continue from 3.42 to 1.72 m. This core segment (Figure 2) contains sparse specimens of the typical low to mid-brackish (Abbene et al., 2006), estuarine agglutinated benthic foraminifer *Ammotium salsum*, indicating that open Pamlico Bay had evolved into a back-barrier estuarine system (i.e., Pamlico Sound) by about 3,500 cal yr BP (Fig. 2), the approximate age of the oldest barrier island beach ridges yet dated on the Outer Banks by OSL methods (Mallinson et al., 2007).

Fine sand from 1.72 to 1.07 m overlies the estuarine mud and is characterized by a foraminiferal assemblage similar to that from 5.08 to 4.17 m (Fig. 2). The *in situ* benthic assemblage (*Elphidium excavatum, Ammonia parkinsoniana, Hanzawaia strattoni, Buccella frigida, Cibicides lobatulus, Fissurina laevigata*) indicates normal marine salinity and planktonic species (e.g., *Globigerinoides ruber, Globorotalia menardii*) a Gulf Stream influence. Accelerator mass spectrometry (AMS) C-14 ages of 950-1,170 cal yr BP near the base of this unit

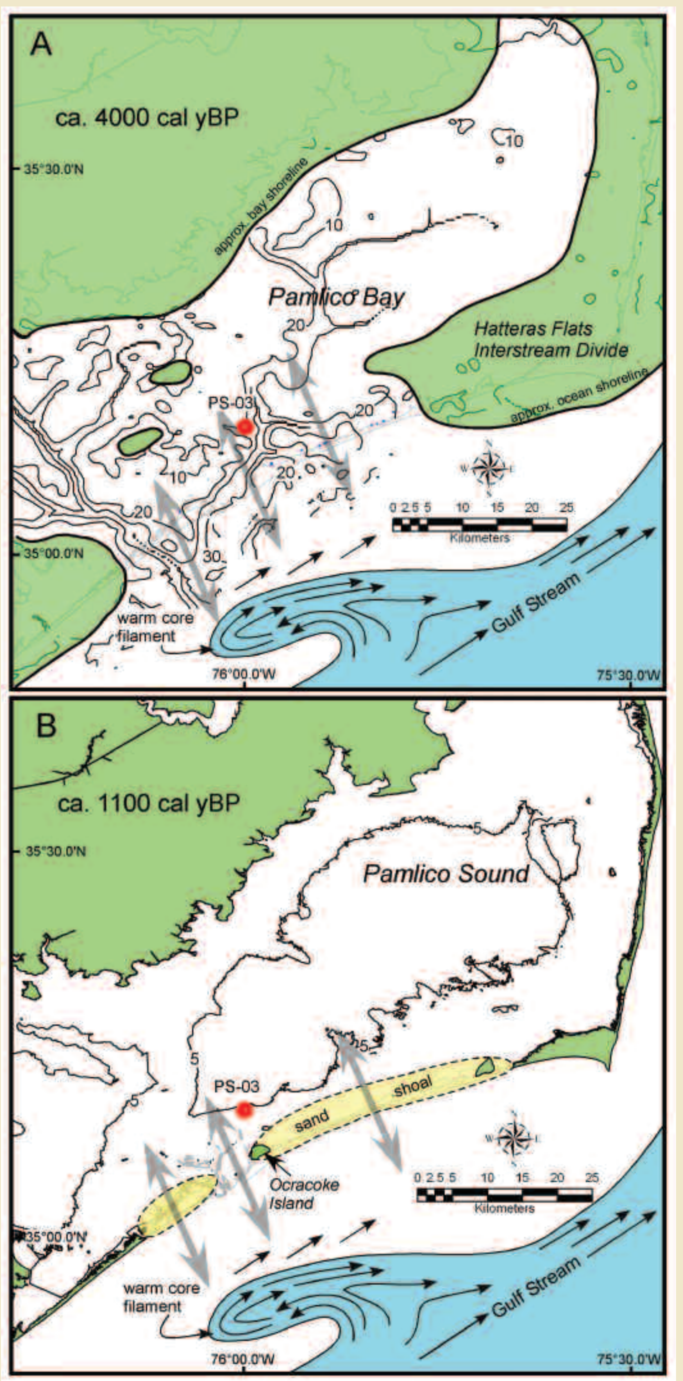

Figure 3. Diagrams to illustrate environmental conditions in the southern Pamlico basin at ca 4,000 cal yr BP and ca 1,100 cal yr BP. A, Flooding occurred across interstream divides separating paleo-valleys through which tidal exchange took place. Valleys initially flooded ca. 7,000 cal yr BP. As sea level rose, by ca. 4,000 cal yr BP flooding of sections of the Hatteras Flats Interstream Divide adjacent to the paleo-drainages allowing normal salinity waters into the southern Pamlico basin. Grey arrows indicate tidal exchange. Contours indicate the depth (meters below present mean sea level) to the Pleistocene surface and define the paleotopography that controlled the timing of flooding and morphology of Pamlico Bay. B, Barrier islands formed by ca. 3,500 cal yr BP. Barrier island collapse along the southern margin of Pamlico Sound ca. 1,100 cal yr BP resulted in a shallow, submarine sand shoal over which normal salinity waters, derived from northward migrating Gulf Stream warm-core filaments, were advected into the southern part of the Pamlico basin in response to wind-forcing. Contours indicate modern bathymetry (meters below mean sea level) within Pamlico Sound.

and 420-550 cal yr BP near the top (Fig. 2) indicate that shelf waters returned to the southern Pamlico basin for 400 to 700 years. For this to have occurred, substantial collapse of the southern Outer Banks barrier islands must have taken place about 1,100 cal yr BP. Collapse involved a total loss of supratidal habitat as the barrier island sand body was smeared out across the Hatteras Flats (Fig. 3B). We envisage gaps several km in width in the barrier islands (i.e., wider than an inlet) and water depths of a few meters above the submarine sand shoal such that water from Gulf Stream frontal filaments (Pietrafesa et al., 1985) could be advected into the southern Pamlico basin in response to wind-forcing (Fig. 3B). Because the maximum depth of modern Pamlico Sound is only 6 to 7 m, it is likely that the depth of water over the shoal was less than this.

The uppermost 1.07 m of core consist of muddy sand with foraminiferal assemblages (dominated by E. excavatum, A. parkinsoniana and A. salsum) (Fig. 2) typical of the mid-to-high brackish conditions that characterize Pamlico Sound at the site of vibracore PS03 today. Thus, restricted estuarine conditions returned to this area approximately 500 years ago and an open southern Pamlico Bay, once more had become an estuarine, back-barrier Pamlico Sound (Fig. 2).

ENVIRONMENTAL INDICATIONS FROM ADDITIONAL VIBRACORES

Sixty-two vibracores from Core Banks, Ocracoke Island, Hatteras Island (west of Cape Hatteras) and from the adjacent HFID (Fig. 1A) reveal the presence of a variably shelly medium sand unit (ca. 2 to 7 m below mean sea level), containing moderately diverse, open inner shelf benthic foraminiferal assemblages, underlying barrier island and modern estuarine shoal sand that is generally barren or that contains few foraminifera. AMS C-14 and OSL age estimates from the shelly sand unit (labeled “sand shoal” on Fig. 3B) show that normal salinity inner shelf conditions characterized this region around 1,200 to 500 cal yr BP. AMS C-14 ages on basal back-barrier salt marsh peat indicate that the modern barrier islands were present by 500 cal yr BP. These data are consistent with the timing of barrier island collapse and reformation inferred from PS03. To the north of Cape Hatteras, foraminiferal assemblages from beneath the barrier islands and Hatteras Flats indicate intervals of partial island collapse between ca 3,000 and 500 cal yr BP, in addition to a complex history of numerous inlet openings and closings. Sand units containing shelf benthic foraminiferal assemblages with Gulf Stream planktonics have been found in four southern Pamlico Sound cores but are absent in northern Sound cores (Fig. 1A), indicating that the major collapse of barrier islands that occurred a little over 1,000 years ago was restricted to the southern Outer Banks.

POSSIBLE CAUSES OF BARRIER ISLAND COLLAPSE

Tsunami and hurricanes are potential causes of barrier island collapse. Unfortunately, foraminiferal signatures of tsunami are not yet sufficiently well defined (e.g., Hawkes et al., 2006). Major hurricanes (category 3 and greater) hit coastal North Carolina several times a century, but vibracore PS03, three adjacent cores, and more than 30 cores across the Hatteras Flats and through the modern barrier islands, indicate just one substantial collapse, several centuries in duration, since the barrier islands formed around 3,500 cal yr BP. A major hurricane, or a closely spaced series of major hurricanes, such as hit the Gulf Coast in 2004 and 2005, is the most likely proximal causal agent in this North Carolina coastal region that was dubbed

"Hurricane Alley" in the 1950s. The collapse, and subsequent interval characterized by an open southern Pamlico Bay, spans the Medieval Warm Period (Cronin et al., 2003). Perhaps warmer temperatures during this interval resulted in increased hurricane intensity or activity. The combination of currently rising sea level and continuing high or increasing level of hurricane activity (e.g., Emmanuel, 2005; Trenberth, 2005; Webster et al., 2005) during a period of global warming constitutes a burgeoning threat to the future of North Carolina's Outer Banks. If barrier island collapse occurs again, the economic impact on Outer Banks communities, and on the tourist industry, in particular, would be devastating.

ACKNOWLEDGEMENTS

This research is part of the North Carolina Geology Cooperative program (NCCGC). Funding for USGS cooperative agreement award 02ERAG0044 and NSF Cooperative Agreement number OCE-9807266 and support from the Cushman Foundation for Foraminiferal Research and the East Carolina University Research Fund is gratefully acknowledged. Acknowledgement is also made to the donors of the American Chemical Society Petroleum Research Fund for partial support of this research. We thank J. Watson, J. Woods, M. Keusenkothen, S. Dillard, D. Ames, C. Hillier and D. Merritt for their assistance and Robert Weisberg (USF) for his advice on physical oceanography.

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Accepted October 2007

NSF Workshop on:

Community Sedimentary Model for Carbonate Systems

We are soliciting interest in participation in an NSF sponsored workshop on carbonate systems, to be held at-

Colorado School of Mines in Golden, CO, February 27-29, 2008,

Hosted by—

CSDMS (Community Surface Dynamics Modeling System) Integration Facility (http://csdms.colorado.edu).

The workshop will identify the grand challenges for fundamental research on ancient and recent carbonate systems that include recent findings on the influences of climate, ocean systems, and ecology, on carbonate platform development and numerical process models. Topics include:

- **What are the critical questions to advance our understanding of this important Earth system?**
- **What are the main processes at different time and space scales?**
- **How should we model diagenesis?**
- **What lessons can be learned from other advanced modeling communities?**

The workshop will develop forward plans involving multiple disciplines in carbonate geology, biology, climatology, oceanography, and numerical modeling.

Interested participants should email to the workshop organizers a short description of their current research, including a statement on why they should attend the workshop. There are limited NSF travel funds available.

Organizers:
Evan Franseen (Univ.Kansas and Kansas Survey) evanf@kgs.ku.edu
Rick Sarg (Colorado School of Mines) jsarg@mines.edu
Gene Rankey (Univ. Miami, Florida) grankey@rsmas.miami.edu

Image: GoogleEarth2007

TIME SCALE CREATOR

Free Reference time scales and graphical output system

http://tscreator.com

Database coordinator - James Ogg (*Secretary-General, ICS*) and Software design - Adam Lugowski

"TimeScale Creator" is a time-scale database with visualization package (in Java, which should work on most platforms). This is the second installment of our dream of having time-scale graphics "generated on demand". Everyone is invited you to give it a whirl, and provide feedback (to *jogg@purdue.edu*) about any aspects of the output and underlying databases.

WHAT IT DOES:

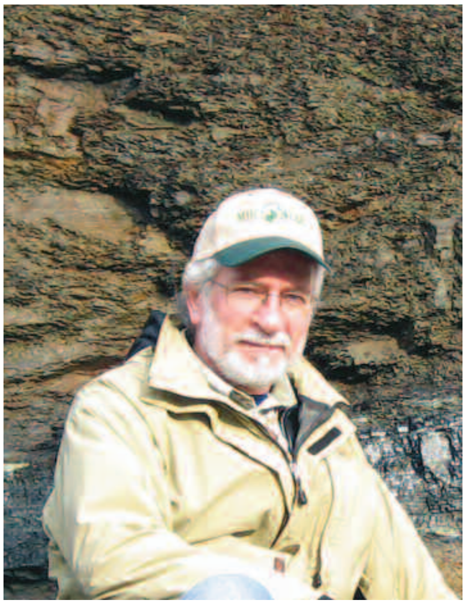
Screen display of user-selected time-span and selected columns of geologic time scale information (stages, bio-zones, bio-events, magnetics, sea-level, geochemistry). Vertical-scale, width, color, titles, column ordering, range charts and other features are designated by the user. Optional popups provide additional background information on columns and events.

Save the final graphic as an SVG (scalable vector graphics) file for direct import into Adobe Illustrator or other common drafting software. All text, boxes, colors, etc transfer as "objects", therefore these can be modified by graphics software packages.

Database (*approximately 10,000 event-age entries are included in the tables of this version*): TS-Creator version 2 has a very detailed Cenozoic-Mesozoic suite, a basic Late Paleozoic suite, and an Early Paleozoic framework. There are over 200 stratigraphic columns grouped into about 60 categories. All events are calibrated to *Geologic Time Scale 2004* (Gradstein et al., 2004, Cambridge University Press). A list of stratigraphic categories is under the "*Choose Zonations*" menu, and clicking on a category directory displays sub-column choices. The database includes the following:

- Divisions of International Geologic Scale (era-period-epoch-stages through Precambrian, plus substages for Mesozoic)
- Magnetic polarity zones (Phanerozoic).
- Microfossil zones with first/last appearance datums (planktonic and benthic foraminifers, calcareous nannofossils, dinoflagellate cysts, radiolarians, diatoms, etc.).
- Ammonoid zones and subzones of Boreal, Tethyan and North America Western Interior regions.
- Paleozoic graptolite, trilobite, conodont and fusulinid zones (depending on each period).
- Oxygen-isotope and Carbon-isotope curves for the past 65 million years, and detailed Ice-Core deuterium and carbon-dioxide abundances for the past 0.7 myr.
- Sequences (detailed sets for Devonian to Present from various publications, plus major and longterm
- Sea-level trends for entire Phanerozoic.

Research Conference $500, Special Publication $85, Networking-Priceless



While visiting the SEPM booth at the recent GSA meeting in Denver, I purchased copies of two new SEPM books that were on display: *Incised Valleys in Time and Space* (SP 85) and *Proterozoic Geology of Western North American and Siberia* (SP 86). The disparity suggested by the titles might lead one to think that I had just made a random impulse purchase, but in reality my interest in these two books came about through research and teaching opportunities created through the serendipity of networking and my involvement in SEPM.

In 2002, I was fortunate enough to attend the SEPM Research Conference in Casper, Wyoming ("Incised Valleys: Images and Processes") that sparked the inception of the SP 85. The conference clearly was a platform for intense and focused scientific interchange, but at least in my case, it was also a springboard for developing new professional connections and research opportunities. At the meeting I struck up both a professional relationship, as well as a lasting friendship, with Erik Kvale that was born from our mutual interests in tidal sedimentology and Carboniferous geology. A couple of years later, I was contacted by Ed Belt from Amherst College, who asked me to evaluate some laminites from Pennsylvania rocks in Maryland that he thought might contain possible tidal rhythms. As it turns out, Ed had previously contacted Erik to do the work, but since Erik had too many projects in the pipeline, he suggested that Ed contact me. So, from there Ed and I struck up a professional relationship. Fast forward to 2006 when I received an email from Mark McMenamin at Mount Holyoke College, asking we to collaborate on a project sponsored by the Keck Geology Consortium. The project was a sedimentological and paleoecological study of ediacaran-bearing, Neoproterozoic laminites in the Boston area. Given that I primarily study Carboniferous rocks in the Appalachian basin, I was surprised that Mark was asking to me join him as a co-investigator. However, there once again was a connecting point. Mark had contacted Ed Belt, hoping that he might recommend a sedimentologist who would be interested in studying laminites. Ed suggested me as a potential research collaborator, and so in the summer of 2007 I found myself doing urban geology in the Boston area rather than measuring sections along back roads in West Virginia. We presented some of the initial results of our work at the GSA in Denver this fall. At the meeting I made a point to peruse several presentations on Proterozoic geology since I was a newcomer to that research arena. While working my way through a series of posters, I meet Don Winston from the University of Montana who was presenting on his longstanding work in the Belt Group. Through a fascinating conversation with him I became aware of SP 86 (Don has a paper in that volume). Shortly thereafter I ended up at the SEPM booth purchasing SP 86-a book that was not even on my wish list a year ago, but had now ascended to my "must read" list. So, yes indeed, SP 85 and SP 86 cover rather disparate topics, but in my case they are connected by a chain of networking events that started at the 2002 SEPM Research Conference in Casper, Wyoming.

As a professor at a public undergraduate institution, I find that networking opportunities are absolutely crucial to survival and professional growth. My career has been profoundly enriched by the new research opportunities that trace back to the SEPM research conference in Casper. But of equal importance, the professional vitality that is generated by these networked opportunities floods quite spontaneously into my teaching. This vitality has renewed and deepened my commitment to educating and inspiring the next generation of sedimentary geologists as well as building a geologically literate citizenry. Networking through the society is a heck of a bang for the buck, if you ask me.

Jack D. Beuthin, Professor,
University of Pittsburgh at Johnstown

PRESIDENT'S COMMENTS

Lions! And Tigers! And Dues! Oh my!

In the September *Sedimentary Record*, this column focused on various volunteer efforts in which all SEPM members can participate. Volunteer contributions are one way that members can work to strengthen the Society and promote sedimentary geology. This month, I focus on membership because this is the time of year most of us pay our membership dues.

Membership will continue to cost only $85 this year. There are many individual benefits to being a member of SEPM. All members receive online access to the journal of their choice and a year-end CD for that journal. But, as the June *Sedimentary Record* noted, if individual members wish to receive a print copy of either journal, they will now be charged a fee to cover the cost incurred in printing a copy of the journal. Although the actual cost is $50 for each journal, members will be charged $25 per journal for 2008. That fee will gradually ramp up over the next few years. In addition, every member is entitled to ~ 40% discount on the price of any SEPM publication, and to similar discounts for registration at any SEPM Research Conference or other meetings (for example, membership in SEPM allows you to pay a reduced registration fee for AAPG and GSA meetings, even if you are not a member of those organizations). Other benefits are less tangible but no less significant. Membership is the most fundamental way for each of us to ensure the health and vitality of the science we love. Our membership ensures the continuation of two outstanding journals in which knowledge of sedimentary geology is shared. It also ensures the sharing of knowledge through networking at field trips and short courses.

I encourage those of you who are able to consider becoming a sustaining member of SEPM. Sustaining membership costs $300 per year and entitles the member to receive both journals - either on-line or in print. Sustaining members help advance the discipline of sedimentary geology by subsidizing SEPM's activities. Appropriate recognition of this generosity is made in *The Sedimentary Record*. The number of sustaining members jumped to 59 this year, which is a record number. Please consider this membership option.

Finally, SEPM is an international society, committed to being a leader in the global sedimentary geology community. Currently, 30% of our total membership comes from outside the U.S., a slight drop from the past several years. Because Sedimentary Geology truly is a global science, we must increase our efforts to engage the international community and to increase their participation. The June 2007 Sedimentary Record briefly described one way the Society hopes to increase international participation. Starting with 2008 memberships, SEPM is offering a reduced membership fees to scientists and students from lesser developed countries (LDC). These fees - $25 for professionals and $15 for students - are consistent with the membership fees now offered by other societies such as GSA, AAPG and others. In addition, SEPM has begun an Ambassador Program, which will initially focus on India and China. Four SEPM Member Ambassadors have begun to work with us to promote SEPM in the sedimentary geology community in their region. The first Ambassadors are: Daidu Fan in Shanghai, Xiumian Hu in Nanjing, Santanu Banerjee in Mumbai, and Pradip Bose in Calcutta. We believe that sedimentary geologists in China and India will benefit from becoming more integrated into the global network of sedimentary geologists. We also believe that this program will help SEPM provide better service in areas outside North America.

As this column goes to press, the Annual Geological Society of America meeting is but a month away. It is also time to start thinking about the Annual AAPG/SEPM meeting to be held in San Antonio in April. I hope to see many of you in San Antonio, and I hope that many of you avail yourselves of your membership benefits by registering for the meeting, participating in short courses and field trips, and purchasing SEPM publications at the booth.

Mary Kraus, President

SEPM Sustaining Members

Each year some members chose to support the Society beyond the regular membership fees to show their continued desire to push the science of sedimentary geology forward.

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2008 SEPM Research Conferences

Outcrops Revitalized: Tools, Techniques and Applications
June 22 - 26
Kilkee, County Clare, western Ireland

Clinoform Sedimentary Deposits: The Processes Producing Them and The Stratigraphy Defining Them
August 15 -18
Rock Springs, Wyoming

Abstracts are being accepted now.
http://www.sepm.org/activities/researchconferences/rconferencehome.htm

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