

GEORGIA GEOLOGY

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PRESIDENT'S COLUMN

My Fellow Geologists:

I am pleased to have a forum here for expressing some thoughts about the Georgia Geological Society, a society in which I am very proud to participate. Why I am so proud, you ask (and thank you for asking)? I am proud of the GGS because it puts its money where its mouth is with regard to the importance of field-based studies by having a weekend field trip as the main focus of its annual meeting. In a time when most professional meetings are held in convention centers or hotels in the centers of big cities, with nary an outcrop in sight, I look forward to a meeting where most of it is held outside. I am also proud for a reason beyond our control: Georgia has some of the best geology of any state in the U.S., even if a lot of it is covered by kudzu, the rock has been altered to saprolite, or (in many cases) both. However, with such challenges come opportunities, and those of us who do field work in Georgia find ourselves well prepared for doing geology almost anywhere else. In other words, we should refrain from laughing so loudly when geologists from western states complain about how they lacked enough "exposure" to make definite statements in a given study, but we can't help

ourselves. We're just too proud of what we have here and what we've done with it.

For those who have been doing field work in Georgia longer than I've been alive, forgive me for reviewing why Georgia's geology is so special. If I had to justify my appreciation, it would come down to five reasons: Cumberland Plateau, Blue Ridge-Piedmont, Valley and Ridge, Coastal Plain, and the Georgia coast. Although only a sliver in the northwestern corner of Georgia, the Cumberland Plateau has magnificent exposures of Carboniferous rocks and one of the most frequently visited class field trip sites, Cloudland Canyon State Park. The Blue Ridge-Piedmont province has some of the most complex structural geology in the world and an amazing diversity of mineral resources. The Valley and Ridge is yielding fossil akin to those of the Burgess Shale and trilobite trace fossils suggesting behaviors that were previously unknown in these popular critters. (Was the latter a personal plug? Shamelessly, yes it was. As Mel Brooks once said, "It's good to be the king.") The Coastal Plain, which comprises more than half of the state in area, has some of the best kaolin deposits in the world and contains plant, invertebrate, and vertebrate fossils from the Cretaceous through the Pleistocene. Last but not least are the crown jewels of sedimentary environments in Georgia, the salt marshes, riverine estuaries, and barrier islands of the Georgia coast. Did you know that one-third of all salt marshes in the eastern U.S. are in Georgia? The sedimentology of Sapelo Island alone is world-renown: I rarely have to explain its significance to anyone outside of the U.S. who knows anything about estuaries, thanks to the seminal work done there by Georgia geologists.

More and more, I find myself deciding on whether to attend a professional meeting on the basis of its associated field trips. In fact, I regrettably missed last year's GGS meeting because I had already committed to going on a pre-meeting field trip and the Society of Vertebrate Paleontology meeting in Bozeman, Montana. This was the first

GGS trip I had missed since I moved to Atlanta in 1990, and I was disappointed to have missed out on all of the camaraderie, discussions, and beer. (Ironically it was the same meeting where I was announced as GGS president for this year – how will you ever forgive me?) In that spirit, and in light of how we always have great geology to experience no matter where we go in Georgia (even if we sometimes have cross state lines to augment it!), I urge all of you to attend and participate in this year's GGS field trip. For those who teach, by all means you should cajole, plead, beg, and bribe a maximum number of your students to also attend. They represent the potential future of geology in Georgia, a future that will hold more surprises no matter how much field work we have done in the past.

Thanks to all of you for being a part of the Georgia Geological Society, and I look forward to seeing you all on the trip this fall!

EXPOSURES

GEORGIA TECH

Our founder, Chuck Weaver has left the Atlanta area. He and Jan are dividing their time between St. Simons Island and Highlands, N.C. We wish them well.

In July we lost our Chair, Glen Cass, to cancer. That was a great loss, for in his short tenure as Chair he had accomplished a lot. In part because of his initiatives to make our School more attractive to graduate students, the rate of acceptance of our offers to graduate students was substantially larger for this year than it had been in the past. The search for a new Chair is approaching the final stages. We can hope to have someone in that position as we move into the new Environmental Science and Technology Building sometime next fall. We have also been considering candidates for faculty positions in various areas including geophysics and geochemistry, but I suspect that no final decisions about such positions will be made until the new Chair is named.

Aditya Kar, of Fort Valley State University, spent the fall semester here as a participant in the College of Sciences' Faculty Development Program. I was fortunate to have him as an associate during a time of great personal difficulty for me. Aditya took on responsibility for a major part of my isotope geochemistry class and helped me with an undergraduate course as well. I look forward to having him as an associate in research during the coming years.

We've just learned that Bob Lowell has won an award from the local chapter of Sigma Xi for his paper with Leonid Germanovich on "Temperature-dependent permeability and bifurcations in hydrothermal flow," published in the *Journal of Geophysical Research*. The award recognizes it as one of the two best papers by Georgia Tech faculty during the past year. Jim Gaherty won one of the two "Young Faculty Awards" given by the Sigma Xi chapter for his paper in *Science* entitled "Seismic evidence for hotspot-induced buoyant flow beneath the Reykjanes Ridge." One of our undergraduates, Patrick Fulton, won one of three Sigma Xi undergraduate-research awards for his work on

Georgia Coastal Ecosystems under an NSF-sponsored project directed by Carolyn Ruppel.

I don't usually write much in this newsletter about what's going on in the atmospheric sciences side of our School, but a few recently announced achievements must be mentioned. Doug Davis has won this year's Sustained Research Award from the local Sigma Xi Chapter. He is the first from our School to win that award since Chuck Weaver won it a long time ago. Doug has also been named a fellow of the American Geophysical Union. Bob Dickinson has been named to the National Academy of Engineering, and so becomes the first Georgia Tech faculty member belonging to both the National Academy of Science and the National Academy of Engineering.

Marion Wampler

GEORGIA SOUTHERN

During his third year as chair of the Department, **Dallas Rhodes'** major accomplishment was guiding the geology and geography programs through a University-wide review process. All 130 academic programs prepared formal reviews mandated by Georgia Southern's Strategic Plan. The reviews were the basis for evaluation by the Deans, the Strategic Planning Taskforce, and the Provost before reaching the President for a final decision. With possible outcomes ranging from "Enhance" to "Eliminate" both the geology and geography programs will be maintained at at least their current levels with real possibilities of future enhancement. This is a strong vote of confidence in the Department from the University's administration.

During 2000-2001 Dallas taught geomorphology for the first time at Georgia Southern and continued working with the environmental geology course during the spring semester. He also returned to Wyoming, as he has since 1988, to run the hydrology segment of the University of Missouri's summer field camp.

Dallas also has his first Georgia Southern student completing a senior thesis under his direction. Eric Wink, from Dalton, joined Dallas, and several geologists from Arizona State in working on the Cholame segment of the San Andreas fault. Eric is

logging a trench that crosses a small sag pond. His site is near a site which has been extensively trenched by Arizona State last summer. Eric and Dallas also mapped a previously undocumented channel that has been offset by the San Andreas. "Pig Pen" Wink (as he came to be known) and Dallas ended their two weeks in the field by flying over the area in a small plane. With the back door removed, the view and the photography were incredible.

Daniel Good is in his thirty-third year at Georgia Southern's Department of Geology and Geography. He has stayed busy by serving on university, college, and departmental committees all the way from the university student evaluation of instruction committee to the college post-tenure review committee to the departmental search committees. He was very active in working with Georgia Southern faculty and students in supporting their applications to various scholarship programs through Rotary International, and serves as Rotary International Students Coordinator for the Rotary Club of Downtown Statesboro, of which he is a member. His research on place names led to a publication in the Georgia Historical Quarterly called "Tomato, Snap, and Fly: Postal Records and Place-Names in Local Settlement Histories." He traveled once again to the Dominican Republic on a medical mission, and also collected data for research on Haitian sugar cane workers in the Dominican Republic. After returning he traveled to British Columbia to attend the annual meeting of the National Council for Geographic Education, as well as conduct field work on sustainable agriculture in the Fraser River valley, and research on historic mining and tourist industries. Good has received several honors this year including the 2001 Excellence in Teaching Award from Georgia Southern's Allen E. Paulson College of Science and Technology, the 2001 Outstanding Teacher Recognition by the Association of American Geographers, and induction into the Golden Key National Honor Society.

Denise Battles has recently returned to campus after completing a year as a Fellow of the American Council on Education (ACE). The ACE Fellows Program is a year-long leadership development program that allows participants to engage in focused study of higher-education administration. Individuals who are selected into the program spend a year working with senior administrators at a host institution. Auburn University served as

Denise's host campus, where she worked in the President's Office under the mentorship of AU's former President William Muse. While off campus, Denise continued to be professionally active, involved in the final year of the NSF grant "Environmental Literacy for All Students" and developing for the Bell Honors program the new course "Art & Geology." This class was taught for the first time in fall 2001 with co-instructor Jane R. Hudak, Professor of Art. In AY 2002, Denise will continue to "wear two hats," serving as both a faculty member and the College's Associate Dean for Research and Budget.

During the last year, **Pranoti Asher** was mostly involved in teaching introductory geology courses (laboratory and lecture) and is teaching Petrology in the spring 2002 semester. In addition to teaching, she kept extremely busy with her research and service activities. Along with **Jim Reichard** and **Kelly Vance**, she submitted a NSF proposal to acquire analytical instrumentation. Her paper entitled "Teaching an Introductory Physical Geology Course to a Student with Visual Impairment" was published in the Journal of Geoscience Education. A paper (with Canadian colleague Edward Cloutis) on the compositional and spectral properties of zeolites recently accepted for publication by the Journal of Geophysics Research-Planets. She continues to stay involved with the Association for Women Geoscientists as their publicist.

In the Spring 2003 semester Pranoti is planning to teach a course on the "Geology of Hawaii" This course will be accompanied by a week-long or ten-day (funds permitting) field trip in mid-May to the big island of Hawaii. Interested alumni who would like to join the Georgia Southern gang's trip to the Aloha state should contact her at pasher@gasou.edu. Trip details (including expenses and airfare) will be determined shortly. Adjunct Research Associate **Michael Kelley** will lead the trip with Pranoti.

Susan Langley focused on teaching during her first year as a faculty member, helping to develop and then teaching a new course in Real-World Applications of geographic information systems (GIS), in addition to her other courses in GIS, Cartography, and Human Geography. She also focused on her students, helping place students in internships, jobs, and on

funded research projects. She is continuing to broaden her interest in GIS applications (beyond that of community ecology and longleaf pine ecosystems) and was on a USDA/NASA proposal review panel to fund grants in precision agriculture in Washington, D.C. in June.

During the last year, **Chuck Trupe** taught structural geology, field methods, and introductory geology courses. Along with **Dallas Rhodes** and **Kelly Vance**, he took a group of geology students to Death Valley during Spring Break. In May, Chuck spent a week in Ecuador doing reconnaissance geology as part of **Mark Welford's** Global Partnerships grant. Chuck continues to conduct field research on structure and metamorphism of the Blue Ridge in western North Carolina, and is currently supervising senior thesis research in that area. He presented a talk at GSA in Boston, as well as co-presenting a poster with senior thesis student **Cori Cowan**.

Fred Rich developed some new interests in the past year, or at least had to assume some new responsibilities. With **Gale Bishop's** retirement, someone else had to take the administrative lead in the St. Catherine's Island Sea Turtle Conservation Program. Gale, and Nancy Marsh (Portal High School) are still the lead teachers and researchers, but Fred is in charge of administering the grants. We were recently told that we would be funded for the next two years, with a budget close to \$100,000. This continues to be one of the most successful programs funded in Georgia by the Eisenhower Higher Education Program.

Fred was selected to receive one of Georgia Southern University's awards for Excellence in Research/Scholarly Activity. A summer stipend, and one of the University's distinctive bronze medallions are the tangible awards, but the recognition and pride that accompany them are probably the most valuable. A presentation entitled "Dust Motes, Big Boats, and Fossil Ferns - Somehow, It's All Geology" was Fred's contribution to the award program lecture series. This focused on his research interests in palynology (dust motes), structural geology of the Coastal Plain (big boats and the Savannah Harbor deepening controversy), and paleoecology (fossil ferns, a manuscript dealing was recently published in *PALAIOS*).

Jim Reichard continues to help teach environmental geology, which now has the largest enrollment of any course in the department. With respect to environmental labs, Jim and **Kelly Vance** have been steadily improving the department's successful custom lab manual. Jim also teaches a course in his specialty, hydrogeology, and is offering an advanced course on this topic for the first time in the spring of 2002. This new course will expose students to various field techniques as well as geochemical and modeling aspects of hydrogeology. In the area of research, he continues to pursue his research interests in pedagogy and applied hydrology. Jim and a graduate student, Chandra Brown, recently completed a 12-month investigation on the Canoochee River near Claxton, Georgia where a plume of nitrate-rich groundwater has severely impacted the water quality of the river. Jim and Chandra have presented this work at regional and national conferences and will soon submit a paper for journal publication. Finally, Jim hopes to obtain funds for a new research project to investigate the significance of groundwater discharge to the habitat of endangered Atlantic and short-nosed sturgeon in the intertidal zone of the Altamaha River.

Mark Welford has been very busy with his teaching and research. He recently presented a poster at a Congress in Cuzco, Peru on Conservation of Biodiversity in the Andes and the Amazon Basin held between September 24-28. The poster was titled "Rare, restricted-range birds, early successional habitats and ecotourism facilities in the Ecuadorian Andes". He presented a paper titled "Landslides, earthquakes, and tropical montane trees: a possible connection" at the 97th Annual General Meeting of the Association of American Geographers held between February 27-March 3 in New York City this year. In addition to these, he also had published this year a short note in the journal *Cotinga* titled "Behavior and use of human trail by Giant Antpitta (*Grallaria gigantea*)". This summer he led a group to Ecuador to explore research opportunities in the Andes.

Last summer **Jim Darrell** moved offices from Anderson to Herty. He's now in Dr's. Petkewich and Couch's old office. For the old alums, the office has been renovated and sound proofed from the lab and lecture room on either side of the office. Although he

threw away a lot of stuff, it seems like he still has too much stuff. At the present, he's trying to unpack boxes. It's slow go.

last summer International Paper reactivated their environmental course for teachers. It was placed in the College of Education. Marti Shriver, with whom Jim team-teaches the Middle Grades Science Methods course with asked him to team with her on the IP course. Although a lot of front end preparation time was spent on this course, it turned out to be a rewarding summer. He learned a lot of things particularly from the corporate side of the street.

Kelly Vance spent the summer of 2001 "holding the fort" in the introductory courses but eventually escaped to the southwest to scout another field course for the Summer Short Session of 2002. This course will work its way through the Jemez Mountains of northern New Mexico into the San Juans and Gunnison region of Colorado exploring regional geology, mineral resources and environmental geology. Kelly is enjoying teaching Mineralogy this semester and working with an enthusiastic group of students in a rejuvenated Geo Club. Exploits from the past year include investigations of Mesozoic diabase dikes with **Pranoti Asher** and working with **Chuck Trupe** on a Field Methods mapping project that resulted in the entire class presenting a poster session at the Southeast GSA meeting in North Carolina. Kelly also participated in an excellent Spring Break field trip to Death Valley that was led by **Dallas Rhodes** with assistance from **Chuck Trupe**. Kelly continues to serve as alumni coordinator (contact him at rkvance@gasou.edu) for the Department and encourages all alumni to provide updates on mailing and e-mail addresses.

Jim Henry and **Clark Alexander** provided the following news from Skidaway:

Construction began this week to renovate a portion of the Applied Coastal Research Laboratory (ACRL) to create three additional offices and a general laboratory. The ACRL presently has two offices, a geochemical lab, conference/library room, map layout/drafting room, audiovisual room, kitchen and lavatory. The new additions will provide the necessary facilities for campus faculty and students to carry out research and educational

activities that were previously unavailable on the Skidaway Island campus. The work is the final phase of the renovation project project that began a little over a year ago with the construction of a steel and sheetmetal building behind the ACRL to house the numerous sediment cores and samples and geophysical data that were collected during the past 40 years from the Georgia coastal region and the continental shelf from Cape Hatteras, North Carolina to Jacksonville, Florida. The archived material was stored in the space now being renovated. The previous work also included a new roof, front and back porticos and installation of a fiber-optic communication system. Funding in the amount of \$100,000.00 was provided by the College of Science and Technology.

Gale Bishop gracefully exited early retirement on February 1, 2001 to assume the duties as Director, Museum of Geology at South Dakota School of Mines and Technology. Bishop had earlier donated his fossil decapod collection to the Museum of Geology and has now joined those other fossils in returning to South Dakota.

The Museum of Geology exhibits 3200 specimens in a classic Exhibit Hall and curates approximately 297,000 additional specimens in an adjacent building. Strengths of the collection include Cretaceous marine reptiles, dinosaurs, an Oligocene White River collection, some invertebrates and a world-class mineral collection (including a collection of Minerals of the Black Hills).

The Museum supports several Summer Field Excursions and acts a fossil repository for several Federal agencies. Active projects include the Big Pig Dig in Badlands National Park, the Titanotheres Graveyards Dig in the South Unit of Badlands National Park, a project on Marine Reptiles of the Missouri River Valley, the St. Catherines Sea Turtle Conservation Program, and Pleistocene Fossils of Fossil Lake Oregon.

The Paleontology Program has about 30 undergraduates in a paleo-track in its B.S. in Geology, 13 Master's degree students in Paleontology, and two Ph.D. students in Geology...making it one of the biggest programs in the world (and one of the best, too!)

Visit the Museum of Geology live at <http://dinocam.sdsmt.edu/view/view.shtml>.

Faculty Changes

Dr. Samuel Couch, Assistant Professor of Geography, accepted a position as Professor of Humanities and Social Sciences at Young Harris College set in the north Georgia mountains. He resigned from his position at Georgia Southern effective August 1, 2001.

Dr. Anthony Foyle (Applied Coastal Research Laboratory) left Georgia Southern University to accept a tenure-track position at Penn State, the Behrend College, beginning August 2001.

Dr. Jonathan Geisler joined the Department as Assistant Professor of Geology and Curator of Paleontology at the Georgia Southern Museum in Fall 2001. He received his Ph.D. from Columbia University and came to Statesboro from a post-doctoral position at the American Museum of Natural History in New York. He is currently teaching a course entitled Dinosaurs and introductory geology labs.

Mr. John Jacobs joined the Department as a Temporary Instructor of Geography in Fall 2001. He is currently a doctoral student in geography at Kansas State University.

Dr. Nancy Leathers joined the Department as Assistant Professor of Geography in Fall 2001. She will be involved in teaching GIS, remote sensing, cartography, and other geography courses. Dr. Leathers completed her Ph.D. in geography at Kansas State University.

Going Strong

We look forward to another full and productive year. You can keep up with what's happening by visiting our Web site at <http://www2.gasou.edu/geog/G&G.html> and checking the Bulletin Board.

**GEORGIA ACADEMY OF SCIENCE
PROGRAM**

Georgia College and State University

Milledgeville, Georgia

March 22 – 23, 2002

FRIDAY, MARCH 22, 2002

104 Herty Hall

Section III: Earth and Atmospheric Sciences

Gian S. Ghuman, Presiding

1:15 CHEMICAL VARIATION IN THE CHEMICAL COMPOSITION OF COASTAL WATERS, Gian S. Ghuman, Kailash Chandra, Kenneth S. Sajwan and S. Paramasvian

1:30 USING HISTORICAL MAPS TO QUANTIFY SHORELINE CHANGE, Anna J. Austin, Emily A. Polonus, Susan K. Langley and Clark R. Alexander

1:45 LIVING WITH KARST: A PRELIMINARY STUDY OF THE KARSTIC

FEATURES OF BERRY COLLEGE, Chris Faulkner and Deborah Freile

2: 15 **Break**

Bill Wall, Presiding

2:00 THE INFLUENCE OF WATER, CLAY, TEMPERATURE AND CARBONATE MINERALS ON SOIL ELECTRICAL CONDUCTIVITY READINGS TAKEN WITH AN EM-38 IN CENTRAL IOWA, Eric C. Brevik and Thomas E. Fenton

2:30 FOSSIL *NEVIUSIA* (ROSACEAE) FROM THE MIDDLE EOCENE OF PRINCETON, BC. CANADA, S. M. Moore, M. L. DeVore, K. B. Pigg, and W. C. Wehr.

2:45 AN OVERVIEW OF THE LATE EOCENE HARDIE MINE LOCAL FAUNA OF CENTRAL GEORGIA, Dennis Parmley

3:00 WHY DRILL THE ARCTIC NATIONAL WILDLIFE REFUGE? WHAT WILL THEY FIND? Eddie B. Robertson

3:15 THE VALIDITY OF PALEOBATHYMETRIC INTERPRETATIONS BASED ON RHODOLITH MORPHOLOGY, Deborah Freile and Kelly Fuks

3:30 FOSSIL FRUITS RESEMBLING CREPE MYRTLE (*LAGERSTROEMIA*) FROM THE MIDDLE MIOCENE YAKIMA CANYON OF WASHINGTON, M. L. DeVore, S. M. Moore and K. B. Pigg

3:45 PERMINERALIZED ACORNS FROM THE MIOCENE OF WASHINGTON: INSECT AND FUNGAL ASSOCIATIONS, A. M. Westbrook, M. L. DeVore, E. H. Barman and K. B. Pigg

4:00 NEW PLEISTOCENE VERTEBRATE LOCALITY FROM BRUNSWICK, GEORGIA, Alfred J. Mead and Benny L. Spell

4:15 Tour of Paleontology Collections and Facilities

POSTERS

ELEMENTAL DISTRIBUTION IN SEDIMENTS AND OYSTERS NEAR FORT PULASKI NATIONAL MONUMENT, Dori Lynn-Coburn,

Chrissy Sellers, James Smith, S. Paramasivam, J. P. Richardson and Kenneth S. Sajwan
 ELEMENTAL LEACHABILITY FROM AN INCINERATED SEWAGE SLUDGE AMENDED SOIL, Jeffery Delise, S. Paramasivam, Kenneth S. Sajwan and Joseph P. Richardson
 THE PALYNOSTRATIGRAPHY OF THE CAMELS BUTTE MEMBER OF THE GOLDEN VALLEY FORMATION AT CAMELS BUTTE, DUNN COUNTY, NORTH DAKOTA, Eddie Robertson

SATURDAY, MARCH 23, 2002

104 Herty Hall

Section III: Earth and Atmospheric Sciences

Deborah Freile, Presiding

7:45 USING LANDSAT IMAGERY FOR GEOLOGIC MAPPING IN REMOTE DESERT REGIONS, SAHARAN WEST AFRICA, M. B. McInnish, R. Dodge, J. Bartley and L. Kah.
 8:00 REMOTE SENSING AND GIS-ASSISTED ANALYSES OF LAND USE PATTERNS AND THEIR AFFECTS ON STREAMS IN WEST GEORGIA, Crystal G. Wilson, Curtis L. Hollabaugh, Johnny A. Waters and Julie Bartley
 8:15 CARBON ISOTOPE CHEMOSTRATIGRAPHY OF THE UPPER AVZYAN FORMATION, SOUTHERN URAL MOUNTAINS, RUSSIA, Julie L. McWilliams and J. K. Bartley and L. C. Kah
 8:30 SEDIMENTOLOGY OF A CAROLINA BAY SAND RIM, BIG BAY, SOUTH CAROLINA, Andrew H. Ivester, Kimberly M. Burns and Jacqueline I. Reed
 8:45 BEACH RIDGES AT THE NORTHERN END OF JEKYLL ISLAND, GEORGIA, Bryan S. Schultz and Timothy M. Chowns.
 9:00 SEASONAL VARIATIONS OF TOTAL PHOSPHORUS IN STREAMS AND TRIBUTARIES OF HEARD AND CARROLL COUNTIES, GEORGIA, Teddy D. Martin and Curtis L. Hollabaugh
 9:15 BASELINE WATER QUALITY PARAMETERS FOR POTENTIAL RESERVOIRS IN CARROLL AND HARALSON COUNTIES, GEORGIA, Bryan S. Schultz, Curtis L. Hollabaugh, Johnny A. Waters and Randall L. Kath
 9:30 RESULTS OF THE WEST GEORGIA WATERSHED ASSESSMENT: VARIATIONS OF WATER QUALITY PARAMETERS WITH

SEASONALITY, LAND USAGE AND RAIN FALL, Curtis L. Hollabaugh, Julie K. Bartley, Randal L. Kath and Johnny A. Waters
 9:45 AMMONIA IN THE STREAMS OF WEST GEORGIA: VARIATION WITH LAND USAGE, POINT SOURCE RELEASE, AND SEASON, James R. Griffin and Curtis Hollabaugh

10:00 SECTION BUSINESS MEETING

10:30 ASSESSING THE ASSESSMENT: HOW TO INVESTIGATE A WATERSHED BASED ON THE WEST GEORGIA WATERSHED ASSESSMENT OF CARROLL AND HEARD COUNTIES, GEORGIA, Randa R. Harris, Curtis L. Hollabaugh, Julie K. Bartley, Johnny A. Walters and Randal L. Kath
 10:45 INSIGNIFICANT ICE-MASS LOSS IN SELECTED GLACIERS OF THE BEAR TOOTH PLATEAU OF SOUTH-CENTER MONTANA FROM 1996-2001: GLOBAL COOLING? Edward E. Chatelain
 11:00 NATURAL AND HUMAN DISTURBANCE IN COLOMBIA OVER THE PAST 51,000 YEARS, Jeffrey P. Blick
 11:15 CHEMICAL ANALYSES INDICATE CORRELATIONS OF ROCK UNITS WITHIN THE UCHEE BELT, Tom Hanley.

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