Message from Jack Pashin, Division Chair

It's hard to believe that the GSA Annual Meeting in Portland is already behind us and that we are already into the holidays. The Annual Meeting was an exciting event for the GSA Coal Geology Division, and a new set of division officers was installed at the meeting. I am honored to succeed Ron Affolter as Chair and am excited to serve the membership along with such a dynamic group of officers. Sharon Swanson is our new 1st Vice Chair, and she will be coordinating events for the 2010 GSA Annual Meeting, which will be in Denver. Sue Rimmer is 2nd Vice Chair, Sarah Mardon Shearer is Secretary-Treasurer, and Cortland Eble remains Member-at-Large. Ron Affolter completes his rotation through the division leadership by serving as Past Chair.

Talks and posters at the annual meeting showcased the great breadth of research being performed by the membership of the GSA Coal Geology Division and featured scientific advancements from the molecular to the global scale. Attendance at this year’s meeting was exceptional, and interest in Division activities was high. Jingle Ruppert, Allan Kolker, and Sean Brennan led a session entitled, "Clean Coal: Can It Be a Reality," which emphasized societal issues ranging from mine management to carbon management and was very well-received. Romeo Flores and Maria Mastalerz led a session called "Frontiers in Coal Science: From Basic Research to Applied Technology," which featured posters and oral presentations spanning the full range of coal geology.

This year's business meeting followed the oral sessions and highlighted the presentation of scholarships and awards. This year the division was able to award Antoinette Lierman Medlin scholarships to three deserving students. Margaret McPherson and Lois Yoksoulian, who are studying under Sue Rimmer at the University of Kentucky and Southern Illinois University, received scholarships to support their research on Antarctic coal contact-metamorphosed coal, respectively. Mohammad Wahid Rahman, who is working with Liliana Lefticariu at Southern Illinois University, received a scholarship to support his research on the occurrence and geochemistry of trace elements in coal of the Illinois basin.

Marc Bustin of the University of British Columbia received the Gilbert H. Cady Award, which is the Coal Geology Division's highest honor. Indeed, this award is among the most prestigious awards recognizing exceptional contributions to coal geology. Marc has had a truly remarkable career in which he has made fundamental contributions in disciplines ranging from sedimentology to gas adsorption studies. Maria Mastalerz, who performed post-doctoral research under Marc and received the Cady award in 2008, was this year's citationist.

The deadline for the proposal of sessions for the 2010 GSA Annual Meeting is January 12th and is thus approaching rapidly. Accordingly, if you are interested in proposing a session for this year's meeting, please feel free to contact Sharon Swanson as soon as possible. I am looking forward to a busy and productive year as Chair of the Coal Geology Division, and if you have any ideas or suggestions to improve the division and its programs, please feel free to contact me or any of the other officers.

Thank you,
Jack Pashin
The Annual Coal Geology Division business meeting was held on Tuesday, October 20. Members had the opportunity to talk with each other while enjoying refreshments prior to commencement of the business meeting. The Cady Award recipient was honored with a silver tray, and three students were presented with research funding and a plaque. The current balance of the Coal Geology Division’s funds is $6,228.00. During the past few years, membership has grown and the Division has continued to honor scientists working in the field of coal geology with the Cady Award and providing monies to students conducting coal-related research.

The Coal Geology Division (CGD) sponsored three technical sessions; two sessions were paper presentations and one was a poster session. The sessions were the largest sessions that the CGD has held in the past few years. Paper topics in the morning session included soil carbon uptake on reclaimed mining sites, gas emissions from coal fires, and carbon storage. During the afternoon paper session researchers presented information pertaining to coal production, role of moisture in adsorption and desorption of gas in coal, and contact metamorphosed coal. Website links to abstracts for the CGD sessions from the 2009 Annual Meeting are as follows:

Sightseeing in Portland, Oregon

Several GSA Annual Meeting Attendees and Guests further explored Oregon and the Portland area by sightseeing and participating in geologic field trips organized by GSA. Jim and Judy Hower explored Multnomah Falls pictured on the top left of this page, the Portland Art Museum shown on the bottom left, and enjoyed viewing the fall leaves on the Portland State University Campus (above).

The Howers viewed Multnomah Falls during their visit to the Columbia River Gorge while participating in the Quaternary Geology and Geomorphology of the Columbia River Gorge field trip. Multnomah Falls, originating on Larch Mountain, are the second-tallest year-round waterfall in the United States. In addition to the Columbia River Gorge, GSA Field trip participants also explored other geologic features including Lake Missoula, the Klamath Mountains, ash flow tuffs visible at Smith Rock and Steins Pillar, and the Newberry Volcano.
Gilbert H. Cady Award Recipient R. Marc Bustin
The 2009 Cady Award Recipient R. Marc Bustin is currently Professor of Geology at the University of British Columbia where he has worked for the past 30 years. His myriad contributions to the field of coal geology has paved the way for geologists in the field as well as students and postdoctoral fellows, more than 40 of which he has personally mentored. His contributions include studies of the Fraser River Delta peat deposits; evaluation of the role of stress and strain in the maturation of organic matter, including the formation of graphite; advancements of micro-techniques such as microprobe and micro-FTIR for studying coal; and his dedication to the study of coalbed methane and gas sorption. Marc has shared his insights and understanding of coal geology via his participation in scientific events and workshops, serving as Associate Editor of the International Journal of Coal Geology, and by being an active member in organizations such as GSA, ICCP, and CSCOP. During his career, he has received several awards recognizing his work, including the ICCP Thiessen Award.

The 2009 Medlin Award Recipients:

Margaret B. McPherson, University of Kentucky – Medlin Scholarship Award
*Geochemistry and petrography of thermally metamorphosed Antarctic coal: Implications for δ^{13}C depleted methane release*

Lois Yoksoulian, University of Kentucky – Medlin Laboratory and Field Award
*Effect of Contact Metamorphism on Coal Geochemistry and Petrology: Implications for the release of ^{12}C-Enriched Methane*

Mohammad Rahman, Southern Illinois University – Medlin Scholarship Supplementary Award
*Distribution and Mode of Occurrence of Trace Elements in Coal from the Illinois Basin*
AML Enhancement Rule Projects

Land improvements and coal reprocessing among the many benefits
By: Corey Ann Howard
KY Division of Abandoned Mine Lands

Kentucky Division of Abandoned Mine Lands (AML) enhancement rule projects are a special type of reclamation project focused on reclaiming abandoned mine lands that, otherwise, have little likelihood of being reclaimed. These projects allow AML contractors to remove coal refuse and slurry from abandoned mine sites and to sell reprocessed coal in order to offset costs of projects. Usually, coal refuse is dry excavated and mixed with water into slurry, or dredged out wet, and hauled to coal processing facilities for recovery. Abandoned mine sites are then restored to their approximate original appearance by grading available topsoil and then planting grasses and ground covers. After projects are completed, hardwood tree seedlings are planted in the springtime on the reclaimed sites.

AML enhancement rule projects are distinguished as winning environmental projects on many fronts: potential fire hazards and sources of water pollution are removed; offending physical problems, often eye-sores to local communities throughout the Commonwealth, are eliminated; project areas are made suitable for outdoor activities and/or productive use; trees are planted on sites providing numerous land, air, and water quality improvements and recycled coal refuse provides a source of valuable energy that does not require mining in-situ coal. Further, since reclamation costs are borne by contractors reprocessing refuse, government money is saved and may be redirected towards reclamation of additional AML problems.

Kentucky’s AML program has built an impressive coalition of partners dedicated to abandoned mine land reclamation and restoration. Through the collaborative effort of private land owners, industry representatives, watershed groups, and federal, state, and local agencies approximately 360 acres of abandoned coal mine sites in Kentucky have been reclaimed as enhancement rule projects in Hopkins, Muhlenberg, Letcher and Pike Counties, totaling $5.6 million in state government financial savings. Project sites have been transformed into pasture, open space, wildlife habitat, recreational areas and even a military training ground!

In March 2009, AML announced the commencement of one of its larger enhancement rule projects, the River Queen Slurry AML Enhancement Rule Reclamation Project at the Wendell H. Ford Regional Training Center, a military installation in Muhlenberg County. According to Kentucky National Guard Command Sergeant Major Gregory D. Armstrong, AML and the Kentucky Department of Military Affairs have worked together to help identify, cleanup and reclaim coal refuse on the military reservation since the early 1980s. “The Wendell Ford Training Center will now be capable of supporting two army battalions simultaneously with state of the art facilities utilizing over 11,500 acres of post-mined land,” Armstrong said. “Projects such as these are another example of DNR’s commitment in solving environmental and energy problems plaguing our Commonwealth by creatively partnering with agencies who share our goals,” added Department for Natural Resources Commissioner Carl Campbell.

The Octavia Church Refuse Project, completed in 2006, is another example of
AML’s enhancement rule work. This project consisted of reclaiming a coal refuse pile area that, due to its steep nature and constant erosion, threatened motorists on Pinson Fork Road, near Octavia Church in Pike County. The refuse pile also contributed to the acidic water quality of a nearby stream. Merchantable refuse was excavated from the project area outside of the stream bank and adjacent refuse piles above, and was delivered to an off-site processing facility. Upon removal of refuse, the site was graded and revegetated to an approximate pre-mining condition. The project was successful. A total of 5.8 acres were reclaimed and substantial AML funding was spared. “AML worked diligently to eliminate the burdens of an old coal refuse pile negatively impacting the small community of McAndrews in eastern Kentucky. This project is one of several that demonstrate the positive results of AML’s enhancement rule projects,” said AML Director Steve Hohmann.

AML works throughout the coalfields of Kentucky to abate hazards to public health, safety and the environment from mining that occurred prior to 1982. More information about AML is available online at http://www.aml.ky.gov/.
The Coal Geology Division of the GSA seeks nominations for the 2010 Gilbert H. Cady Award, made for outstanding contributions in the field of coal geology. The award will be made for contributions considered to advance the field of coal geology within and outside North America and will be presented at the Coal Geology Division Business Meeting at the GSA Annual Meeting in 2010.

Nominations will be evaluated by the Gilbert H. Cady Award Panel and should include the name, office or title, and affiliation of the nominee; date and place of birth; education, degree(s) and honors and awards; major events in his or her professional career; accomplishments that warrant nomination. Send three copies of the nomination by February 28, 2010, to the Cady Award chair, Ron Affolter, U.S. Geological Survey, P.O. Box 25046, MS 939, Denver, CO 80225. If you wish to contact Ron regarding your nomination, his email address is affolter@usgs.gov. The awardee will be notified in early May.

The Coal Geology Division Antoinette Lierman Medlin Scholarship provides monetary support and recognition to deserving students in coal science. Monies from the scholarship are used towards successful completion of student's research projects. Each year, one award is presented for the completion of laboratory/analytical research and a second award is presented for the completion of fieldwork. Full-time graduate students are strongly encouraged to submit applications for these scholarships. The deadline for submission is February 15, 2010. For complete information about the A.L. Medlin Award, refer to GSA Today, January 2010 issue. Please contact Sharon M. Swanson, Scholarship Committee Chair, at smswanson@usgs.gov if you have any questions.

Sarah Shearer would like to thank the following people for contributing photos/information/editing for the newsletter: Jim and Judy Hower, Corey Ann Howard, Sharon Swanson, Ron Affolter, Maria Mastalerz, Jack Pashin, and Scott Shearer.