



# Atlanta Geological Society Newsletter

Next meeting of the Atlanta Geological Society is  
May 27, 2008

Fernbank Museum of Natural History (Clifton Road)  
Social begins at 6:30 pm – Meeting begins at 7:00 pm

## President's Perspective...

JUNE 2008

The turnout for Don Thieme's talk last month on the stratigraphy, palynology, and plant microfossils from the Late Pleistocene Coffee Bluff deposits in middle Georgia was very good. Our thanks to Don for an informative presentation and discussion.

As a reminder, our June 24<sup>th</sup> meeting will be entirely social and there will be no speaker. All Members in good standing and their families are encouraged to attend. As an update, the IMAX movie provided by Chris Bean of the Fernbank Museum has been changed to **Alaska** following a Membership vote at the May meeting. Also, please either contact David Sanders of the Hospitality Committee (770/990-1446 or [david.sanders@earthtech.com](mailto:david.sanders@earthtech.com)) to pledge whatever interesting door prizes you'd like to contribute or just bring in what you have and we'll be sure to call out your name and/or company name when the

recipient claims his/her door prize.

I hope to see all of you there and for those who won't be able to attend, have a good summer and I'll see you at the Tuesday, August 26<sup>th</sup> meeting.

**Summer Homework:** I'd like those Members interested in presenting a poster or slideshow at the Society's November meeting to finalize their topics and then contact me sometime over the summer to discuss (678/594-9893, ext. 202 or [nils.thompson@lbgatlanta.com](mailto:nils.thompson@lbgatlanta.com)).

We look forward to seeing you and yours at the Social.

Nils Thompson, President  
[nils.thompson@lbgatlanta.com](mailto:nils.thompson@lbgatlanta.com)  
Phone (678) 594-9893, Ext. 202

The AGS Professional Registration Workshop normally held on the last Saturday of every month, will not be held for the month of June because of holiday and seasonal conflicts. However, we will need more of those experts out there to step forward and share their knowledge. Please contact Ken Simonton at the Georgia EPD. His email address is [Ken.Simonton@dnr.state.ga.us](mailto:Ken.Simonton@dnr.state.ga.us).

## The Annual June Social

The Atlanta Geological Society June Social is scheduled for **Tuesday, June 24** at the Fernbank Museum of Natural History. Members in good standing and their families are encouraged to attend, share a meal with your colleagues, perhaps win a door prize, and enjoy an IMAX movie provided by Fernbank. Because this is a social event, there will be no speaker for this meeting. Food will be served starting about **6:30 PM**. Dress is casual.

Be sure your Membership dues are current (\$25 for Professional Membership and \$ 5 for Student Membership) so that you may attend the June Social.

A catered BBQ dinner will be provided to members and their families at no additional cost.

Please bring whatever interesting door prizes you can donate from your employer or your own stock of geological goodies. All members and their guests are invited to enter the free drawing for door prizes.

Also, please thank our sponsors for this event and consider using their services:

Eagle Instruments	<a href="http://www.eagleinstruments.com/">http://www.eagleinstruments.com/</a>
EcoVac Services	<a href="http://www.ecovacservices.com">http://www.ecovacservices.com</a>
Environmental Exploration	<a href="http://www.environmentalexploration.net/">http://www.environmentalexploration.net/</a>
GoodEarth Environmental	<a href="http://www.goodearthenviro.com/">http://www.goodearthenviro.com/</a>
Leggette, Brashears & Graham	<a href="http://www.lbgweb.com">http://www.lbgweb.com</a>
Regenesis	<a href="http://www.regenesis.com/">http://www.regenesis.com/</a>
United Consulting	<a href="http://www.unitedconsulting.com/">http://www.unitedconsulting.com/</a>
Piedmont Environmental Drilling	



### AGS Career Development – Professional Geologist Registration

The AGS sponsors a monthly two-hour workshop to help prepare candidates for the Professional Geologist Licensure Examination. The workshops are held in the Human Resources classroom at the Fernbank Science Center, 156 Heaton Park Dr. Atlanta, GA from 10:00 am until 12:00 pm the last Saturday of every month. Everyone is welcome to the workshops; AGS membership, while preferred, is not a prerequisite.

We do not "teach the test" our aim is to review fundamental concepts of the earth sciences and acquaint candidates with industry specific information not easily obtainable from the literature. Please inform anyone who might be interested in becoming a professional geologist of our workshop. Please consider joining us even if you are not a P.G. candidate. The workshops are interesting and informative.

The AGS Professional Registration Workshop normally held on the last Saturday of every month, will not be held for the month of June because of holiday and seasonal conflicts. However, we will need more of those experts out there to step forward and share their knowledge. If you are interested in lecturing or attending and would like more information, Ken Simonton can be contacted at [kws876@yahoo.com](mailto:kws876@yahoo.com).

Ken Simonton, P.G., Professional Registration Committee.

### THE 10(?) COMMANDMENTS FOR HYDROGEOLOGISTS

1. Thou shall not assume isotropy, homogeneity, or uniform gradient without field evidence.
2. Thou shall not assume wells or streams to penetrate fully or flow systems to be two dimensional.
3. Thou shall not use regional data to make site-specific judgments.
4. Thou shall not use color graphics to enhance lousy science.
5. Thou shall not employ geostatistics to obfuscate poor interpretations or weak conclusions.
6. Thou shall not rely on stochastic methods to disguise insufficient field data.
7. Thou shall not place geochemical interpretations above hydraulic interpretations.
8. Thou shall never regard geophysics as the truth.
9. Thou shall never use a contouring program to make a water-table map.
10. Thou shall never use more than three significant digits.

Garcia, D.H. 1998. *The Ten Hydrogeologic Commandments*, Directorate of Hydrogeology, Department of Water Affairs and Forestry, Republic of South Africa Newsletter 2:1, January 1998.

An 11<sup>th</sup> commandment could be

11. Thou shall never allow a groundwater model to "tell" you anything.

Please write in to the *AGS Newsletter* Editor with your suggestions for additional commandments. I'll keep the list updated and posted on the webpage.

### **The Professional Registration Committee Needs YOU...**

If you are an AGS member and would like to contribute to the Professional Registration Committee by leading a lecture on one of the subjects listed below, then please contact me either by e-mail or at the monthly AGS meetings. The lecture should be for one hour followed by a Q&A session. We need different speakers for each workshop. Your volunteering to teach on one of these subjects is essential to the success of the Professional Registration Committee – we need more widespread participation by the AGS membership. Speakers can be compensated for expenses and will receive certificates to acknowledge their participation. The following content domains are covered in the Georgia Professional Geologist exams:

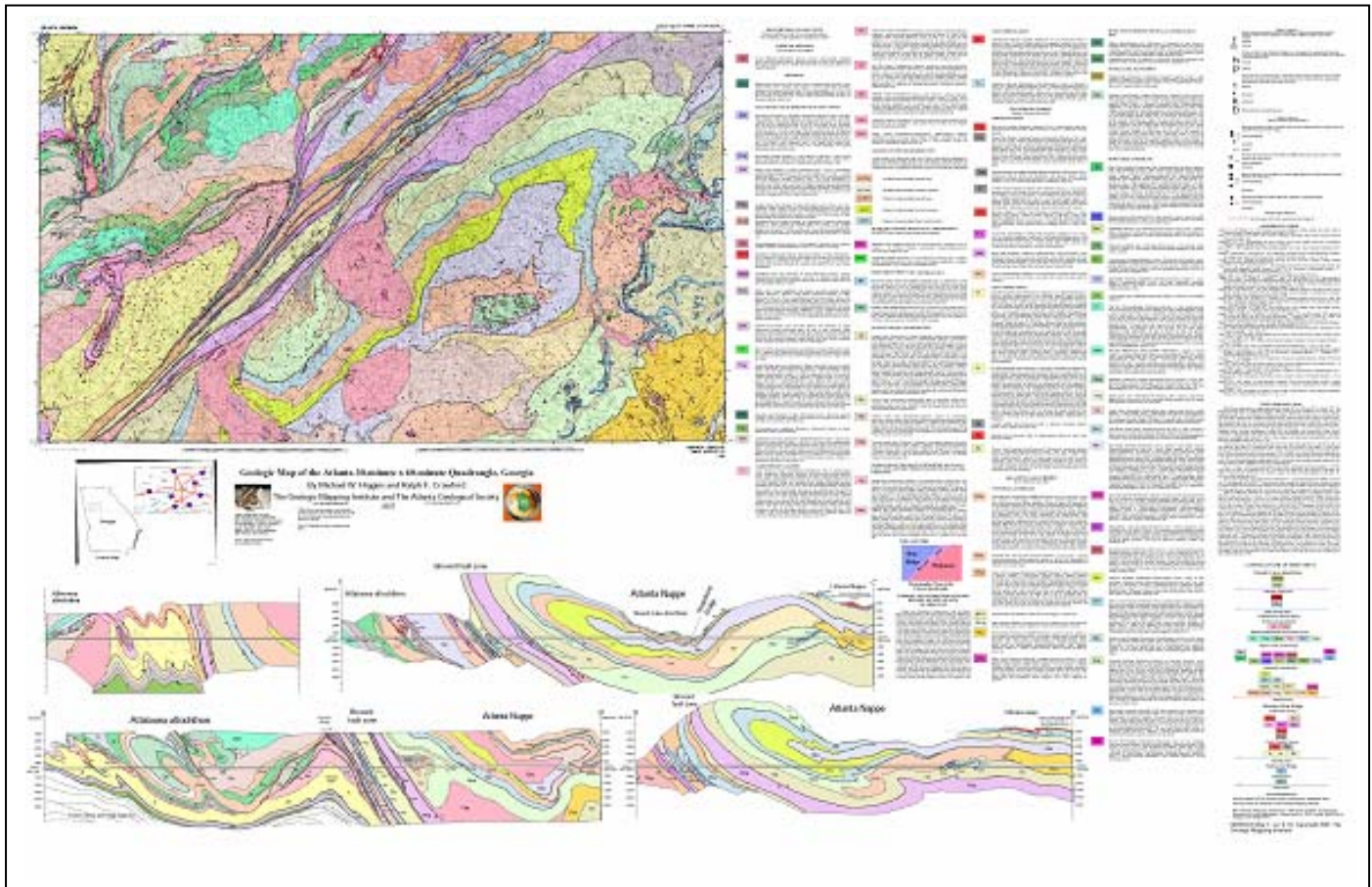
- |   |   |
|---|---|
| A. General Geology  | B. Mineralogy, Petrology, & Petrography   |
| C. Sedimentology, Stratigraphy, & Paleontology              | D. Economic Geology & Energy Resources    |
| E. Structure, Tectonics, & Seismology                       | F. Hydrology & Environmental Geochemistry |
| G. Engineering Geology                                      |   |
| H. Quaternary Geology, Geomorphology, & Surficial Processes |   |

Ken Simonton, P.G., Chair  
Professional Registration Committee

#### [Geologic Image for May... 1 of 2](#)



This trilobite is *Gravalymeme celebra*, Silurian, Wenlockian, from Nelson Co. KY and Jefferson Co. KY. Thanks go to Carl Frode for forwarding this from his friend Todd Hendricks who works for Kentucky DEP.



## GEOLOGIC MAP OF THE ATLANTA 1-DEGREE X 30-MINUTE QUADRANGLE, GEORGIA

By Higgins, M.W. and Crawford, R.F. (2006)

The Geologic Mapping Institute

(\$25.00 – Contact Allison Keefer [(404) 675-8642] for more details)

The Atlanta quadrangle, roughly centered on the City of Atlanta, spans from the Valley and Ridge province in its northwestern corner across the Blue Ridge and into the inner Piedmont. The Brevard zone crosses the quadrangle diagonally. The Blue Ridge in western Georgia and Alabama consists of a pile of nappes made up of folded thrust sheets. In the Villa Rica nappe Chilhowee Group rocks are both above and below the core of Great Smoky Group rocks. Southwest of the Brevard zone is the Atlanta nappe, which preserves a klippe of the Lake Russell allochthon, Carolina superterrane, at Soapstone Ridge. Carolina superterrane rocks (Paulding Complex) are also found northwest of the Brevard. Mylonites along the S.E. edge of the Brevard zone dip under the Atlanta nappe. These mylonites also dip under the N.E. end of the nappe, where they belong to the Dacula shear zone. East of the Atlanta nappe the Lithonia Gneiss consists of a granitoid phase and the Mount Arabia Migmatite. The migmatite occurs mostly around the edges of the granitoid phase and was probably formed when the Ordovician granitoid phase intruded Stonewall biotite gneiss, which occurs around the edges of the Lithonia and locally as roof pendants on/in the granitoid phase. Atop the Lithonia, the Stonewall Gneiss and units of the Allatoona allochthon are the aluminous schist and Chattahoochee Palisades Quartzite of the Sandy Springs Group that have been thrust upon the underlying rocks. The Lithonia and its country rock, the Stonewall Gneiss constitutes a mantled gneiss dome assemblage. Sandy Springs Group rocks emerge from beneath the Brevard and form an outcrop belt along its N.W. side. Northwest of the Sandy Springs outcrop belt the Allatoona allochthon occupies the upper synformal limb of the Talladega nappe and is arched over the Dog River window to expose western Blue Ridge rocks of the Great Smoky and Chilhowee Groups. Northwest of the Allatoona allochthon Great Smoky Group and Chilhowee Group rocks emerge from beneath the allochthon and are part of the Talladega belt. Ordovician granitoids have intruded the Great Smoky rocks, providing evidence that the Emuckfaw/Lay Dam/Bill Arp rocks are older than Ordovician.

## Fernbank Museum of Natural History

### Upcoming Public Programs and Events

(All programs require reservations, including free programs)

#### Fernbank Museum of Natural History

767 Clifton Rd, NE, Atlanta, GA (404)-929-6400

For details on exhibits, films, and events, please visit our website at

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

#### On Exhibit:

- *Ends of the Earth: from Polar Bears to Penguins* Opens June 7<sup>th</sup>
- *Penguins of the Antarctic: A Photographic Expedition* Opens June 7<sup>th</sup>

#### Upcoming Public Programs:

- **Fernbank Forest Walk.** Saturday, June 28, 10 a.m. Registration required.
- **Reptile Day.** Saturday, July 26, 10 a.m. – 3 p.m. Included with Museum membership or admission.

#### Now Showing in IMAX: (Check our website for special screenings)

- *Dolphins* (through June 6<sup>th</sup>)
- *Antarctica* (opens June 7<sup>th</sup>)
- *Grand Canyon Adventure: River at Risk*

**Martinis and IMAX:** Friday evenings, 5:30 p.m. – 10 p.m.

The speakers for the upcoming meeting feature these exciting topics

August 26 - Julian Grey, Tellus Museum - Fossils of Georgia

September 30 - GGS Field Trip presentation by West Georgia University

October 28 - Jacq Marie Jack, USEPA - History and Environmental regulation of the oil industry

November 18 - poster session (See Nils' note earlier)



Gravicalymene celebra Silurian, Wenlockian Nelson Co. KY and Jefferson Co. KY

from  
Todd Hendricks  
Kentucky DEP

**Martinis & IMAX®** is presented at the Fernbank Museum of Natural History every Friday evening, January through November; from 5:30 p.m. to 10 p.m. Enjoy no cover charge when you visit us between 5:30 p.m. to 6:30 p.m. This event includes a wine bar, where featured wines can be purchased by the glass and by the bottle. Dinner is also served in the Dining Room, where smaller parties can order chef-prepared dishes-from gourmet pizzas to prime entrées-and dine together in a more intimate and sophisticated setting. Desserts and coffee are available as well.

As always, a full cash bar is offered in the Great Hall where patrons can enjoy a lively atmosphere and musical performances by some of Atlanta's best jazz artists. Bands perform live from 6:30 p.m. to 10 p.m. IMAX® film tickets are \$10. For those who wish to enjoy the atmosphere of Martinis & IMAX® without attending a film presentation, there is a \$5 cover charge after 6:30 p.m. The cover charge is waived for members and patrons who purchase an IMAX® ticket. To purchase tickets in advance, call 404.929.6400.

**AGS Treasurer Report – June 2008****DUES ANNOUNCEMENT FROM THE TREASURER**

January 1, 2008, marked not only the first day of the New Year, but also the time that you, as a member of the Atlanta Geological Society, need(ed) to submit your annual dues. The Society voted several years ago to follow a calendar year. The new AGS officers begin in January and your membership dues are also due. Please pay your dues in a timely manner. Too many individuals allowed their membership to lapse last year. This represents a significant loss of revenue and prevents the Society from meeting philanthropic commitments. If you cannot attend the March meeting then please consider mailing your dues to the AGS Treasurer along with the completed last page of this newsletter. Also, please make sure that we have your most current e-mail address.

Based on our records we have numerous “members” that last paid dues in 2004, 2005 or 2006. Those members that last paid in 2005, were dropped from the mailing list in October 2007. Those members that last paid dues in 2006 were dropped from the mailing list effective April 29, 2008.

Please contact Ken Bechely if you are unsure of your membership status. If you know of a member that no longer is receiving the newsletter notification, have them contact the Treasurer.

Ken Bechely, Treasurer  
[ken.bechely@earthtech.com](mailto:ken.bechely@earthtech.com)  
Phone (770) 990-1415

**Editor's Prerogative**

As the editor for the newsletter, I'm going to use this space for a few of my personal comments. I've come across a few geology-oriented blogs recently. Follow the link and there will be a whole list of different perspectives about geology. The blogs have interesting titles such as In Terra Veritas and Highly Allochthonous.

[http://scienceblogs.com/highlyallochthonous/2008/06/the\\_geoblogosphere.php](http://scienceblogs.com/highlyallochthonous/2008/06/the_geoblogosphere.php)

As summer and its heat start to settle in on Georgia, I believe we would all appreciate a way to make our air conditioner work better. I took a soft brush and soapy water and gently and carefully washed the dirt and spider webs from the coils on my outside condenser. From a course in thermodynamics from long ago, I remember something about better heat transfer and, my goodness, the air coming out of my air conditioner is colder!

If you would like to see an amusing clip of geology humor, follow the link:

<http://s65.photobucket.com/albums/h223/fishmato/?action=view&current=AmericanDad.flv>

See you on Tuesday!

Ben Bentkowski, (404) 562-8507

[Bentkowski.Ben@epa.gov](mailto:Bentkowski.Ben@epa.gov)

## AGS Officers

**President:** Nils Thompson  
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**Vice-President:** Allison Keefer  
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**Treasurer:** Ken Bechely  
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 Phone (770) 990-1415

### AGS 2008 Meeting Dates

Listed below are the planned meeting dates for 2008. Please mark your calendar and make plans to attend.

June 24<sup>th</sup> - Social (Members and Guests Only)

July - no meeting

August 26<sup>th</sup> - Open

September 30<sup>th</sup> - Open

October 28<sup>th</sup> - Open

November 18<sup>th</sup> - Open

December - no meeting

The topics for some of these dates are listed elsewhere in the newsletter

Continue to check the newsletter and website for details regarding upcoming speakers/topics.

## AGS Committees

**AGS Publications:** Allison Keefer  
 Phone (404) 657-8642  
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**Continuing Education:** Nils Thompson  
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**Fernbank Liaison:** Chris Bean  
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**Georgia PG Registration:** Ken Simonton  
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**Grants & Scholarships:** Bill Waggener  
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[wgwaggenerii@bellsouth.net](mailto:wgwaggenerii@bellsouth.net)

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**Newsletter Editor:** Ben Bentkowski  
 Phone (404) 562-8507  
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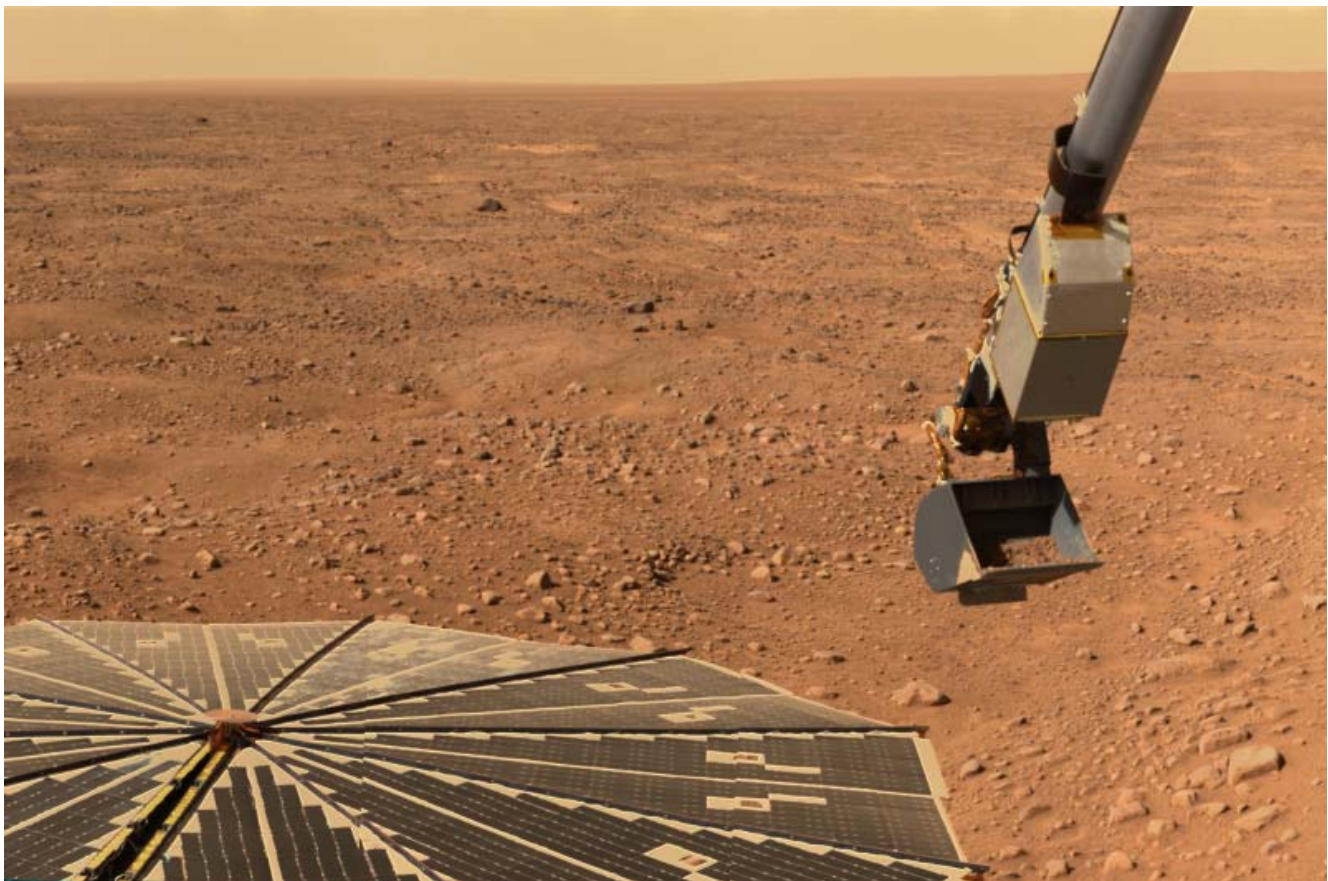
**Website Design:** Currently Open



## GEOLOGY NEWS

It's hard to top the monumental earthquake in China from last month's geology news. I know it's a bit of a pun to say you would have to go pretty far to top that story. So, I bring to you a soft landing on Mars! The first successful landing there since the little explorers landed there several years ago and began their longer than expected trek. This time the craft is known as Phoenix. Now I know that some of you think this looks like the soil after a developer has cleared the land in Cobb or Gwinnett County but from the Phoenix/NASA website:

Images from Phoenix's Optical Microscope show nearly 1,000 separate soil particles, down to sizes smaller than one-tenth the diameter of a human hair. At least four distinct minerals are seen. The sample includes some larger, black, glassy particles as well as smaller reddish ones. "We may be looking at a history of the soil," said Pike. "It appears that original particles of volcanic glass have weathered down to smaller particles with higher concentration of iron." The fine particles in the soil sample closely resemble particles of airborne dust examined earlier by the microscope.



For more information please see the following websites:

<http://www.nasa.gov/phoenix>  
<http://phoenix.lpl.arizona.edu/>

## Join the Atlanta Geological Society

### Membership Application/Information Update Form

Annual membership dues for the Atlanta Geological Society are \$25 for professional membership, **\$5 for students (new reduced rate)**, and \$100 for corporate sponsorship (which includes up to 4 professional memberships). For further details, contact the AGS Treasurer:

**Ken Bechely**

Phone: 770-990-1415

Email: [ken.bechely@earthtech.com](mailto:ken.bechely@earthtech.com)

Make checks payable to the "Atlanta Geological Society" and remit with the completed form to:

### Atlanta Geological Society

Ken Bechely, Treasurer

1455 Old Alabama Rd., Ste. 170

Roswell, GA 30076

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Mailing Address: \_\_\_\_\_

\_\_\_\_\_

Phone: (Work) \_\_\_\_\_ (Home) \_\_\_\_\_ (Cell) \_\_\_\_\_

Fax: \_\_\_\_\_

Email 1: \_\_\_\_\_

Email 2: \_\_\_\_\_

### Ready to Serve the Society?

Remember that although we have officers and various standing committees, it is ultimately the membership that keeps the Atlanta Geological Society active and growing. We have a world of experience within our membership. Please consider volunteering. Your Atlanta Geological Society needs you.