



# AGS NEWSLETTER

ARIZONA GEOLOGICAL SOCIETY, INC., TUCSON, ARIZONA

JUNE 2008

## JUNE DINNER MEETING

Mark Myers, Director, U.S. Geological Survey, Reston, Virginia

**Facing Tomorrow's Challenges—in Minerals**

June 3, 2008

ABSTRACT—The world faces formidable challenges – a rapidly expanding population, climate change, accelerated demand for natural resources – in striving to achieve sustainable growth with acceptable environmental consequences. With these challenges in mind, the U.S. Geological Survey (USGS) has developed a broad science policy composed of six integrated multi-scale strategic directions that cross traditional academic boundaries of science disciplines. At USGS, we believe that the starting point to understanding the complexity of earth systems is the concept of ecosystems. Understanding ecosystems and predicting ecosystem change require robust scientific assessments and modeling of ecosystem conditions as climate and human-induced land changes occur. At the same time, reliable, accessible, and adequate supplies of mineral resources are essential to sustain the American economy and standard of living. The Nation faces increasing demand for mineral resources, a growing dependence on resources imported from other countries, and a need to minimize environmental effects associated with use and development of resources.

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### Phoenix Mars Lander Landing Successful

#### *Mission Control Handed Over to U of A*

The University of Arizona's Phoenix Mars Lander touched down on the Red Planet Sunday, May 25, at approximately 4:38 p.m. Pacific Daylight Time—right on schedule. A crowd of more than 100 in the U of A Flandrau Planetarium cheered and applauded as NASA made the announcement. NASA TV provided live coverage of the Jet Propulsion Laboratory in Pasadena, Calif. After landing, control for the mission was handed over to the UA, the first public university to lead a NASA mission.

The lander launched on August 4, 2007 for its 422-million mile journey, relying on electricity from solar panels during the cruise stage. The spacecraft landed in the northern polar region of Mars, and will spend three months exploring Martian soil and buried ice in the northern plains.

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### Dinner Meeting Information — Inn Suites, 475 North Granada, Tucson

To reserve your place for dinner, call 520-663-5295 before 5 pm, Friday, May 30, 2008.

**AGS CAN NO LONGER GUARANTEE A DINNER SEATING FOR THOSE WHO SHOW UP WITHOUT A RESERVATION.**

Cost: Members \$24, Guests \$26, Students \$10.

Cash Bar @ 6 pm

Dinner @ 7 pm

Talk @ 8 pm

For dinner selection, indicate if a low-salt or vegetarian meal is required. Please cancel if you are unable to attend.

## AGS Announcements

The AGS membership passed the revised society Bylaws at the May dinner meeting. In the process of being posted on the AGS web site, the new By-laws will be available soon.

The AGS Board of Directors voted at the last meeting of the Executive Committee to become a co-sponsor of the Geological Society of Nevada's 2009 conference.

## CALENDAR OF EVENTS

**07-01-2008 Steve Enders, Newmont**

TOPIC: Bridging the gaps in exploration and mining opportunities for research and development across the life cycle of an ore deposit

**08-05-2008 Dick Heermance, U.S.G.S.**

TOPIC: Terrace formation and climate change in southern California

**09-02-2008 Alyson Thibodeau, Univ. of Arizona**

TOPIC: The strange case of the earliest extraction of silver by European colonists in the new world

**10-07-2008 Mark Barton, Univ. of Arizona**

TOPIC: Iron oxide copper gold deposits: A Cordilleran perspective

**11-11-2008 Gordon Haxel, U.S.G.S.**

TOPIC: Utilization of the chemical elements

**12-02-2008 Jonathan T. Overpeck, Univ. of Arizona**

TOPIC: Global climate change and why it matters to Southwesterners

**01-06-2009 Richard Reynolds, U.S.G.S.**

TOPIC: Dust in western North America

## CAP Award for Water Research

**First Place: \$1000, Second Place: \$500**

The CAP (Central Arizona Project) award is available to graduate and undergraduate students at any college or university in the state of Arizona. Research submitted for this award should focus specifically on water issues that affect Central and Southern Arizona and the Colorado River. Papers can focus on legal, economic, environmental, political, or water management, as well as any other issue that might be of interest to CAP or Arizona water users. For more information, call Vicky Campo at (623) 869-2176 or visit <http://www.cap-az.com/static/index.cfm?contentID=54>. **Deadline is June 1.**

## New Arizona fossil discoveries

The *Eastern Arizona Courier* reported that a skull of a 2.5 million year old rhynchotherium, relative of the extinct mastodon with four tusks, is being excavated on BLM lands near Safford. The species died out during the Pleistocene Epoch at the beginning of the most recent Ice Age.

The fossil was discovered by Larry Thrasher, a geologist for the Bureau of Land Management in Safford, who also found bones from a fossil duck and three-toed horse.

Dr. Robert McCord, the chief curator and curator of paleontology for the Arizona Museum of Natural History, is in control of the skull's restoration. Including the skull, Dr. McCord estimated the number of fossils found equated to approximately 40 percent of the entire animal.

In Gilbert, city officials announced the discovery of an upper-foreleg bone of a large camel known as camelops [below right: camelops hesternus]. Dr. McCord is quoted in the *Arizona Republic* as saying "camelops measured 7 feet tall at the shoulder and roamed the earth between the late Pliocene period and the Pleistocene, until about 10,000 years ago. The exact age of the specimen found in Gilbert is hard to determine since the species thrived for almost 2 million years." It is the third discovery of a fossil camel family member in Maricopa County and the first record of camelops. The fossil find was made by crews building the South Water Treatment Plant.



## New Mexico Geological Society Future Field Conferences

### Fall 2008: Gila Wilderness

Greg Mack (NMSU) and Jim Witcher (NMSU)

### Fall 2009: Chupadera Mesa

Virgil Lueth (New Mexico Bureau of Geology) and Spencer Lucas (New Mexico Museum of Natural History)

### Fall 2010: Four Corners Region

Kate Zeigler (UNM) and James Fassett (USGS, ret.)

**Please make your dinner meeting  
reservation BEFORE Friday, May 30.  
Call 520-663-5295 today!**

# AGS 2008 Spring Field Trip

## Catalina Core Complex Geology Along the Catalina Highway



*Jon Spencer, Arizona Geological Survey, Field Trip Leader*



*Attentive attendees*



*Dick Ahern:  
Is convinced?  
Is not convinced?  
Is thinking about it?*

*At the Outcrop (with picture)*



*At the Outcrops (with the real thing)*



**ARIZONA GEOLOGICAL SURVEY**

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NON-PROFIT ORG.  
TUCSON, ARIZONA



SEE [www.arizonageologicalsoc.org](http://www.arizonageologicalsoc.org)  
FOR INFORMATION  
ABOUT THE  
ARIZONA GEOLOGICAL SOCIETY  
AND UPCOMING EVENTS

For information on the AGS,  
visit our web site.

AGS books and maps are sold at the monthly  
dinner meeting and by the  
Arizona Geological Survey.



*As always, please keep us up to date as you move, change jobs, or change your e-mail address.*

**2008 AGS MEMBERSHIP APPLICATION OR RENEWAL FORM**

Please mail check with membership form to: Arizona Geological Society, P.O. Box 40952, Tucson, AZ 85717. Dues (circle one): 1 year: \$15; 2 years: \$30; 3 years: \$40. Full-time students receive free membership (E-mail only). However, a membership application form must be returned to AGS annually to remain on the membership list.

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

Position: \_\_\_\_\_

Company: \_\_\_\_\_

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

Street City State Zip Code

Work Phone: \_\_\_\_\_ Home Phone: \_\_\_\_\_

Fax Number: \_\_\_\_\_ Cellular Phone: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Please send the newsletter by E-mail only  by regular mail only  by E-mail AND regular mail

If registered geologist or engineer, indicate registration number and state: \_\_\_\_\_

Enclosed is a \_\_\_\_\_ tax-deductible contribution to the J. Harold Courtright Scholarship Fund.