



Arizona Geological Society Newsletter

AUGUST 2015

Dr. William R. Dickinson Passed Away on July 21, 2015



Bill Dickinson and his wife Jackie in the field in 2007. Jackie passed away in May 2015.

The geosciences community lost a giant on July 21, 2015. Dr. William (Bill) Dickinson, Professor Emeritus at the University of Arizona, passed away, apparently in his sleep, while in his hotel room in Nuku'alofa, Tonga. Bill was working with archaeologist David Burley and his graduate student on the geology of some archaeological sites in Tonga.

Bill Dickinson's contributions to the geosciences are legendary. He was a true pioneer in the field of plate tectonics and its implications for geology in the western United States. As a longtime member of the Arizona Geological Society, he co-organized the 1981 AGS symposium on "Relations of Tectonics to Ore Deposits in the Southern Cordillera" the proceedings of which were published as AGS Digest 14. He also co-edited AGS Digest 18, "Mesozoic Rocks of Southern Arizona and Adjacent Areas." AGS Digest 22, "Ores and Orogenesis: Circum-Pacific Tectonics, Geologic Evolution, and Ore Deposits" was dedicated in his honor in 2008.

We offer our sincere condolences to Bill's family, friends and colleagues. Bill was a great teacher, who touched and influenced many. He will be missed, but his contributions to geology will endure. May he rest in peace.

August 4, 2015 DINNER MEETING

Who: Dan Lynch will speak about “Volcanoes in the Back Yard”

Where: Sheraton Tucson Hotel and Suites, 5151 East Grant Road, (at the intersection of Grant and Rosemont on the North side of Grant in the *PIMA BALLROOM* (enter at northwest corner of the building) and go upstairs to the meeting room.

When: Cash Bar at 6 p.m.—Dinner at 7 p.m.—Talk at 8 p.m.

Cost: Members \$27, Guests \$30, Students Members free with on-line reservation (\$10 without).

RESERVATIONS ARE REQUIRED: Reserve on the AGS website (www.arizonageologicalsoc.org) by **11 a.m. Friday, July 31st**. Please indicate regular (Chicken Alfredo), vegetarian, or Cobb salad meal preference. Please cancel by Friday, July 31st at 11 a.m. if you are unable to attend - no shows and late cancellations will be invoiced.

The August dinner meeting is sponsored by Timberline Drilling, Inc.



The AGS is grateful for Timberline Drilling’s Sponsorship, which helps us to offset dinner meeting costs

Volcanoes in the Back Yard

Dan Lynch, Retired Geologist

The Pinacate Volcanic Field, a premier example of both composite and monogenetic volcanism, is only four hours drive from Tucson. From spectacular steam explosion calderas to a partially melted “bomb” cone (cinders too), to “Placeres de Minerales y Oro,” it has something for everybody. This overview of our near-by geologic wonder is intended to pique your curiosities. Contrary to what you might have heard, Chapo Guzmán does not live in a rotating palace at the top of Volcan Santa Clara.

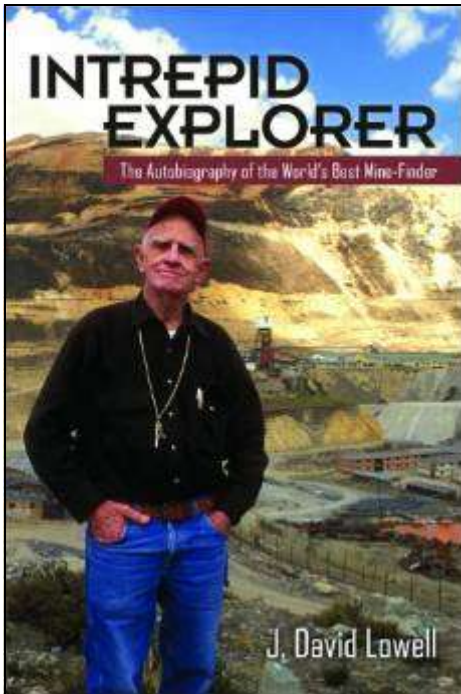
About the August Dinner Speaker

Dan Lynch has been poking around what he calls the Gila Pinacate Borderlands (the desert south and west of Ajo) for nearly half a century. He did his dissertation work on Pinacate geology and geochronology under Paul Damon at the U of A. Now retired and beholden only to his wife; he can’t seem to get away from the place.

Continued on Page 3

About Our Speaker—Continued from Page 2**Dan Lynch at the Pinacate Volcanic Field****Trachyte and Basalts at Volcan Santa Clara
in the Pinacate Volcanic Field.**

Intrepid Explorer: The Autobiography of the World's Best Mine Finder



David Lowell has agreed to attend the September 1, 2015 meeting to sell/sign books. A representative from the University of Arizona Press (the publisher) will be there with books to purchase.

A native Arizonan, whose family roots date from territorial days, J. David Lowell was raised on a ranch near Nogales, Arizona to become one of the world's most successful exploration geologists. He received a B.S. degree in Mining Engineering from the University of Arizona in 1949 and a M.S. degree in Geology from Stanford in 1957.

He has personally discovered more copper than anyone in history, contributing to the discoveries of the Kalamazoo, Vekol Hills and Casa Grande West deposits in Arizona, the J A. Deposit in British Columbia, the Dizon and Far Southeast deposits in the Philippines, and the La Escondida, Zaldivar-Escondida Norte and Leonore deposits in Chile. He is also personally responsible for the discovery of the San Cristobal Au-Ag mine in Chile and the 8-million ounce Pierina gold deposit in Peru.

Dave Lowell has published more than 50 articles, including one of which he co-authored with John Guilbert in 1970 that defines the

Lowell-Guilbert porphyry copper model. This work remains a standard reference for exploration geologists, today.

I encourage everyone to come out and meet David Lowell and purchase a copy of his book. It's a fun read if you have not read it already.

Welcome to 48 New Members of the Arizona Geological Society

Richard Allis Utah Geological Survey	James Faulds Nevada Bur of Mines & Geol	John Metesh MT Bur of Mines & Geology	De Anne Stevens AK Geol & Geophy Survey
Richard Andrews Oklahoma Geological Survey	Marjorie Gale Vermont Agency of Nat Res	Karl Muessig New Jersey Geol & Water Sur	Kenneth Taylor North Carolina Geol Survey
Jonathan Arthur Florida Geological Survey	Joe Gillman Missouri Geological Survey	Dave Norman Washington State DNR Geol.	Nick Tew Geol Survey of Alabama
Scott Ausbrooks	Jeff Hoffman	Richard Ortt	Todd Thompson
Dick Berg	Derric Iles	John Parrish	Harvey Thorleifson
Karen Berry	Robert Joeckel	Thomas Patton	J. Michael Timmons
Gale Blackmer Pennsylvania Geol Survey	Chacko John Louisiana Geological Survey	Jerry Prewett Missouri Geological Survey	Scott Tinker Texas Bur Econ Geology
Michael Bograd Miss. Office of Geology	Suzette Kimball US Geological Survey	L Greer Price New Mexico Bur of Geology	Gerald Weisenfluh Kentucky Geological Survey
Phil Bradley North Carolina Geol Survey	Bob Libra Iowa Geological Survey	Michael "Ed" Ratchford Idaho Geological Survey	Bekki White Arkansas Geological Survey
Steve Brown	Stephen Mabee	James Robertson	David Wunsch
Rex Buchanan Kansas Geological Survey	Robert Marvinney Maine Geological Survey	David Spears VA Dept Mines, Min & Ener	John Yellich Michigan Geological Survey
Rich Chormann	Steven Masterman	John Steinmetz	Michael Young



Attendees of the 107th Association of American State Geologists Annual Conference

2015 AGS Member Directory Coming in September

Directory compilation is in progress so submit your company ads and photos to Directory Coordinator, Cori Hoag, choag@srk.com through Aug. 15th. [See our website for advertising size/cost details](#) – payment accepted by check in advance, or secure credit card online.

Members – please ensure we have your up-to-date contact info including a correct mailing address. The directory will be sent by bulk mail and will not be forwarded. Thanks to all our Advertising Sponsors for their on-going support of the Arizona Geological Society!

Recent AGS Field Trip Guidebooks have been Posted on Web Site

New Arizona Geological Society, 1981, [South Mountain -Vulture-Harquahala-Little Harquahala Mountains](#): Arizona Geological Society Symposium, Tucson, 1981, Relations of tectonics to ore deposits in the southern Cordillera, Arizona Geological Society and University of Arizona mine tour and field trip data for field trip no. 7, March 21, 1981, variously paged. (5.4 MB)

New Keith, S.B., and Wilt, J.C., eds., 1983, [Decretion: Laramide Cordilleran tectonics in the Tucson region](#): Arizona Geological Society Spring Field Trip, Tucson, Ariz., April 16-17, 1983, Guidebook, 150 p. (note: potentially long download time, 69.4 MB)

New Harris, R.C., 1999, [Field guide to earth fissures and other land subsidence features in Picacho Basin](#): Arizona Geological Society Fall Field Trip, Guidebook, in conjunction with the Arizona Hydrological Society, Leader - Raymond Harris, 54 p. (note: potentially long download time, 49.9 MB)

Geology in the News – with emphasis on Southwestern U.S.

The Arizona Geological Society Newsletter is piloting a “Geology in the News” column to showcase recent, important geology, mineral resource and mining articles on the southwestern U.S. to our readers.

Jonathan DuHamel - [Sunset Crater - Arizona's Youngest Volcano](#), Arizona Daily Independent, July 19, 2015.

Kathryn Schulz - [The Really Big One, An Earth will Destroy a Sizable Portion of the Coastal Northwest. The Question is When](#): The New Yorker, July 20, 2015.

Tim Hayes, Denis Cox, Nadine Piatak and Robert Seal, II - [Sediment-Hosted Stratabound Copper Deposit Model](#): U. S. Geological Survey, Scientific Investigations Report 2010-5070-M.

Visual Capitalist - [Infographic: The Looming Copper Supply Crunch](#): Mining.com, June 23, 2015..

Melissa Sevigny - [Geology Complicates Search for Groundwater in Williams](#): NNAU Public Radio, July 2, 2015

Julia Carrie Wong - [USGS Scientist Warns that Hayward Fault Could Produce a Major Earthquake “Any Day Now”](#): SF Weekly News, July 21, 2015.

Bonnie Stevens - [Brain Food: Following the Sand in the Colorado River in Grand Canyon](#): KNAU and Arizona News.



2015 ANNUAL SYMPOSIUM
September 16-19, 2015 • Phoenix

Where Did the Water Go?

2015 Arizona Hydrological Society Annual Symposium

- When: September 16-19, 2015;
- Where: Desert Willow Conference Center, Phoenix, Arizona; and
- Symposium webpage link: <http://ahssymposium.org/2015/>

Anyone having any questions about this event please contact: Keith Scoular at (480) 894-5477 or e-mail - kscoular@acstempe.com.

Speakers for Up-coming Arizona Geological Society Dinner Meetings

Date	Speaker	Title of Presentation
9/1/2015	Carl Bowser	The Genesis of the Kramer Borax Deposit, Rogers Lake, Mojave Desert, California: A 50 Year Retrospective
10/6/2015	Caleb King	Eocene Ore Deposits of the Greater Battle Mountain Area, Nevada
11/3/2015	Karen Kelley	The Giant Concealed Pebble Cu-Au-Mo Porphyry Deposit, Southwest Alaska: Evolution and Exploration Implications

Looking for a Gift for Your Favorite Geologist or Yourself?

In-print AGS publications are available for sale at the Arizona Experience Store, located at 416 West Congress Street, Tucson. Copies of current AGS Field Trip Guidebooks and Digests also will be for sale at a reduced price at the August dinner meeting. A list of in-print publications can be found on the [AGS website](#).

Arizona Geological Society Membership Stats (7/23/2015)

Total Membership	Professional Members	Student Members	Organizational Members
555	424	124	7

Arizona Geological Survey News Brief



Arizona Mining Review (AMR) e-Video Magazine – 7/29/2015

The July episode of the [Arizona Mining Review](#) (AMR) will be now online at Youtube:

- Arizona mining update with Nyal Niemuth (AZGS)
- Aggregate resources in Phoenix & environs with Steve Trussell (Ex. Director, Arizona Rock Products Association) and Phil Pearthree (AZGS Environmental Geology)
- National Mining Association spokesperson – The staggering economic impact of permitting delays on mine profits



New Publications – Online at the AZGS Document Repository

Briggs, D.F., [Production of Copper by Solution Mining Techniques](#). Arizona Geological Survey Contributed Report (CR) -15-A.

Gootee, B.F. and Gruber, D.G., 2015, [Quartz vein investigation, McDowell Sonoran Preserve, Scottsdale, Maricopa County, Arizona](#). Arizona Geological Survey Open File Report, OFR-15-03, 69 p.

Holm, R.F., 2015, [Geologic map of the Page Springs 7.5-Minute Quadrangle, Yavapai County, Arizona](#). Arizona Geological Survey Contributed Map CM-15-A, 1:24,000 map scale, 16 p, four map sheets.

Youberg A., 2015, [Geodatabase of Post-Wildfire Study Basins](#): Assessing the predictive strengths of post-wildfire debris-flow models in Arizona, and defining rainfall intensity-duration thresholds for initiation of post-fire debris flow. Arizona Geological Survey Digital Information, DI-44, 10 p., Geodatabase, and Excel workbook.

The Arizona Geological Survey expresses its condolences to our colleague, Jon Spencer and the family, friends and colleagues of William (Bill) Dickinson on his recent passing.

ANNOUNCEMENTS

Welcome New AGS Members

Muhammad Adnan	Srisharan Shreedharan
Keenan Murray	Clare Sotelo
Renga Samy	

Arizona Geological Society is grateful to Freeport-McMoRan, Inc for their generous support of our student members!



Freeport-McMoRan is sponsoring student dinners for the 2015 AGS monthly meetings.

2015 AGS MEMBERSHIP APPLICATION OR RENEWAL FORM

Please mail check with membership form to: Arizona Geological Society, PO Box 40952, Tucson, AZ 85717

Dues (check box) 1 year: \$20; 2 years, \$35; 3 years: \$50; full-time student (membership is free)

NEW MEMBER or RENEWAL? (circle one) Date of submittal _____

Name: _____ Position: _____

Company: _____

Mailing Address: _____

Street: _____ City: _____ State: _____ Zip Code: _____

Work Phone: _____ Home Phone: _____

Fax Number: _____ Cellular Phone: _____

E-mail: _____ Check this box if you do not have an email address

All newsletters will be sent by email. If you do not have an email address, we will mail a hard copy to you, but we cannot guarantee timeliness.

If registered geologist/engineer, indicate registration number and State: _____

Enclosed is a _____ tax-deductible contribution to the J. Harold Courtright or the Arizona Geological Society Scholarship Funds.