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The 847th Meeting of The Mineralogical Society
of Southern California

Oddballs, Oddbulbs, and Oddcups: Cambrian Echinoderms of Eastern California

by
Dr. Bryan Wilbur

Friday, September 12, 2008, at 7:30 p.m.

Geology Department, E-Building, Room 220

Pasadena City College

1570 E. Colorado Blvd., Pasadena

Featuring:

- Fossils of California**
- Potluck and mineral sale at Fallbrook Museum**
- Gem and Mineral exhibit at Ventura County Fair**
- Spell check on mineral names**
- Agate show at Menasha, Wisconsin part II**

September Meeting Talk about California Fossils

By Janet Gordon



Dr. Bryan Wilbur—a paleontologist who knows where he stands. Photo from PCC Geology web page.

The Friday, September 12, 2008, meeting will feature a talk by Dr. Bryan Wilbur titled "*Oddballs, Oddbulbs, and Oddcups: Cambrian Echinoderms of Eastern California.*" Come and hear about these ancestors of sea stars, urchins, and sand dollars that had to make serious adjustments to their lives as a diversity of sea creatures arrived in their territory in the Early Cambrian.

Dr. Wilbur joined the Pasadena City College faculty in 2006 after completing a Ph.D. at the University of Texas, Austin, in 2005. Bryan

has published a number of papers on Cambrian echinoderms, and we will all enjoy this chance to get acquainted with one of the newer members of the PCC Geology Department.

*Cambrian *Helicoplacus gilberti*, an echinoderm from the Poleta Formation of eastern California.
Photo from www-personal.umich.edu/~7Ewstoddar/helicoplacus.html*



We will meet as usual at 7:30 p.m. in E-Building (Geology Department) room 220.

Field trip to Palos Verde: Field trip committee chair, James Imai reported that participation was low. Nothing significant to report.

Potluck and Mineral Sales at Fallbrook Museum

Text and photo by Shou-Lin Lee

Last year there were quite a few MSSC members attending the potluck at Fallbrook Museum. This year since the host, Fallbrook Gem and Mineral Society also invited two additional societies, I expected a bigger crowd. I was surprised to see that there were less people than last year. Maybe the high gas price was to blame. However, there was plenty of food to go around and many attendees also came with the intention to sell, so the sale part was good too.

When I mentioned that I went to the agate show in Winsconsin, Carl Shugart from San Diego Gem and Mineral Society asked if I knew about Berber agates from Morocco.

No, I didn't. And come to think about it, I don't recall that anyone mentioned or displayed Berber agates at the agate show either. Mr. Shugart gladly showed me his collection of Berber agate from Morocco, that was also for sale, and a cabochon that he cut from the material (see picture to the left). Although there were many small cracks in the stone, the



cabochon reminded me of a desert landscape with red stone pillars rising into the sky and stormy clouds gathered. Of course, I needed to add some Berber agates to my collection.

Across from Mr. Shugart, someone had yellow and blue color beryl, heliodor and aquamarine respectively, from Ninh Thuan Province, Vietnam, that were faceting quality. The aquamarines, although small, were quite deep in color. Unfortunately, I forgot to ask whether they were heat treated. At the other end of the room another guy brought whole tubs full of unidentified oval shape rocks that he collected from a riverbed in San Diego County. On the first sight the rocks appeared similar, but on close examination, other than most of the rocks were oval shape, none of the two shared the same color scheme or patterns. He brought the rocks in hope someone can shed some light as to where the rock originated or what they were. The rocks generated quite a bit of conversation.

Before we left, we had to check out the museum. The museum displays were changed significantly since last year. There were more large specimens on display. Several cases were devoted to local mines and mineral specimens such as tourmaline.

The Fallbrook Gem and Mineral Society will have their annual “Fall Festival of Gems” on Sunday October 5.

Gem and Mineral Exhibit at Ventura County Fair

Text and Photo by Shou-Lin Lee

Since the Ventura County Fair website listed many categories of gem and mineral competitions, I thought I should check out their displays. One thing that attracted me to the Ventura County Fairground location was that there was a train stop right across the street from the fair ground entrance. So on a cloudy Friday, I boarded the Amtrak “Pacific Surfliner” at Los Angeles Union Station early in the morning. Between Los Angeles and Ventura, the train made about 10

stops, arriving at the fair grounds only five minutes later than when it said it would arrive.

Several school buses brought in busloads of students. Fortunately it was not too crowded. The gem and mineral displays were in the same room as genealogy, coins and stamps, collectibles, and model trains. The whole room was packed with several rows of display cases. The cramped space made taking pictures a challenge. Only one vendor sold rocks and minerals, and a booth demonstrated how to clean fossils.



At the end of the room there was a model train set complete with scenery. Compared to the San Diego County Fair, Ventura County Fair had much more gem and mineral entries. Many of the mineral displays were of self collected specimens. Some of these specimen were very large. A polished petrified wood, estimated about two feet across (see picture above) was a very impressive display. Other than the display cases, there were also many single piece entries that were packed tightly into several glass cases with shelves.

Several local mineral societies/club also entered display cases to promote their societies/club. Woodland Hill Rock Chippers, Del-Air Rockhounds Club, and Oxnard Gem and Mineral Society all had display cases showcasing their club activities and/or members collections. Oxnard Gem and Mineral Society also used their display to advertise their upcoming show in November.

Like all other fairs this fair also had food, carnival rides, an art show, craft show, plant show and farm animal show. I was able to check them all out before hopping on to the return train back to Los Angeles and got home still in daylight.

There are at least two mineral clubs that hold their annual shows at the Ventura Fairground. Next time if you think about going to any of these shows, but don't want to drive, why not take the Amtrak "Pacific Surfliner." It goes from San Diego to Paso Robles, and it runs seven days a week. The scenery is nice and it is hassle free.

Spelling Mineral Names

By Janet Gordon

Do you have trouble spelling those pesky mineral names? Did you make a mistake on your new mineral label? Then here is how you can add IMA approved mineral names to your spell checker. You will never worry if you have spelled alumoklyuchevskite correctly again. Simply follow the steps below.

- 1) Download Custom Dictionary File
 - a) Go to the IMA Minerals Webpage:
<http://rruff.info/ima/> using your internet browser.
 - b) Check the box IMA Approved Minerals Only if you only want these. Uncheck it if you want all mineral names included in the database.

- c) Click the Export Data button. A popup window will appear (your browser must be set to allow pop ups).
 - d) Click the Download Microsoft Word Dictionary button in the popup window. MS Wordpad should open with a list of the mineral names present.
 - e) Save the file to your desktop (or other folder) and name it minerals.dic. NOTE: If you are going to install the dictionary into Word 2007 you must save the file in Unicode encoding. To do this, open the file in MS Wordpad, choose save as and change the encoding type.
- 2) Add Custom Dictionary to Word For Word 98/2000/2003:
- a) Open Word
 - b) On the Tools menu, click Options, and then click the Spelling & Grammar tab.
 - c) Click Custom Dictionaries.
 - d) If the custom dictionary you want isn't in the Custom Dictionaries box, click Add.
 - e) Locate the folder containing the custom dictionary you want, and double-click the dictionary file.
 - f) If you want to make this dictionary the default dictionary, click the dictionary name, and then click Change Default.
 - g) Activate the custom dictionary:
 - For Word 2007**
 - i) Open Word
 - ii) Click the Office button and select Word Options
 - iii) Select the Proofing options
 - iv) Click Custom Dictionaries
 - v) Click add
 - vi) Locate the folder containing the custom dictionary you want, and double-click the dictionary file.

For other word processing programs: Go to the help menu and lookup instructions for adding a custom dictionary.

Agate Show at Menasha, Wisconsin: Part II

The Lectures

By Shou-Lin Lee

There were 13 twenty-five minutes lectures on the first day, and seven more on the second and third days. The lectures covered a wide range of topics such as: terms used by agateers to describe the patterns of agates, inclusions in agates, definition of thunder egg, theories on formation of banding in agates, colors and patterns of poppy jaspers as identifying features of their localities, agates from various parts of Germany, and the mining operations of agate. Following are summaries of the lectures that I attended.

Brad Cross's "Mexican Agates: Majestic Treasures" gave a crash course on various agate localities found in Northern Chihuahua, Mexico and the characteristics of agates from each locality.

Klaus Schafer's "Recent Agate-Findings in Germany" was a slide show of agates from various localities in Germany. Mr. Schafer also recommended a website: achat-almanache.de to interested agate-collectors who wished to know more about worldwide agate-finding. The website had more than 5000 agate photos grouped into more than 470 localities worldwide. It was in both English and German.

Michael Carlson's "The Beauty of Banded Agates," although shared the same title as the book he authored, was by no means a shortened version of his book. Many of the pictures in his lecture were not included in his book.

Rainer Hoffmann-Rothe's "Reflections on the Formation of Agates" reiterated Michael Landmesser's seven postulates that were considered fundamental principles in the formation of agates by Mr. Landmesser.

Brian Costigan's "The Low-Down on Lakers" at first got me confused. I thought to myself why was he talking about basket ball in an agate show? Turned out that "laker" was short for the Lake Superior agate. I should have known.

Leon Kabat's "Thundereggs of the United States" first clarified that thunderegg was not geode. He went on to describe the difference between the two and how to identify thundereggs in the field.

John Stockwell's "Two Hosts or One? Welded Tuffs or Domes and Flows: The Host Rocks of Thundereggs?" presented two theories of how agates formed.

Eugene Mueller's "Mining Agate and Jasper" talked about his experience of mining agates and jasper both in the US and Mexico. His lecture covered not only the terrain and the deposit of each area, but also touched on mining laws in each area.

Donald Kelman's "An Outback Odyssey to Agate Creek, Australia" included pictures of the car they drove in, the poisonous snakes in the area, and the primitive condition of the collecting site. All in all, an entertaining story.

Scott Walter's "The Lake Superior Agate" was a brief summary of his book with the same title and agate pictures that were not in the book.

Burnie Franke's "Sweetwater Moss Agates of Wyoming" showed pictures of the collecting site and the agates from this location. Mr. Franke also mentioned that because the area also had uranium mines, the Sweetwater agates fluoresced yellowish green under ultra-violet light.

Roger Pabian's "Developing Effective Research Methods for the Study of Agates and Other Microcrystalline Forms of Silicon Dioxide" called for changes in research procedure in the study of agates.

Doug Moore's "Agates Close-up" presented many close-up pictures of agates to show the internal formation of agates. However, the close-up pictures were not taken with a microscope. Rather they were digital macro photographs.

Roger Clark's "Fairburn Agates: History and Mystery" gave an introduction on the geological formation of the Black Hills in South Dakota and how it related to the formation of agates.

Tom Harmon's "How to get the most from Montana agate" first showed the characteristic appearances of Montana agates. Mr. Harmon then explained that due to the formation of the "moss" (dendrite), care must be taken when choosing a direction to saw the rough as it would affect the final appearance of the agate.

Kevin Ponzio's "California Poppy Jasper" first explained how poppy jasper was formed by siliceous tests of radiolarians. Mr. Ponzio then showed pictures of poppy jaspers from various localities and the characteristics color and patterns from each locality.

Peter Rodewald's "Lake Superior copper agates" introduced various kinds of agates with native copper inclusions, such as agates with copper flakes scattered along the banding line and agates partially replaced by copper. According to Mr. Rodewald, agates with copper inclusions were unique to Lakers due to the abundance of native copper in the same area. I thought about copper mines in Arizona. Has anyone found native copper inclusions in agates and/or chalcedony from Arizona?

Mr. Rodewald also gave a slide presentation on iris agates entitled "Iris agate all-stars." Iris agates are not agates from one particular locality. An agate is called iris agate if it exhibits a rainbow effect under transmitted light. Rodewald explained that because the direction of light affects the visibility of the rainbow, in order to maximize the presence of the rainbow, he sometime used several light sources behind the stone when taking pictures.

As most of the lecturers were also avid collectors of agates, all of the lectures were accompanied by slide shows of agates. Oohs and aahs were often heard as the lectures went on. Interestingly enough, the most asked question was not about agates but "what kind of camera did you use and what kind of photographic setting you used to take those pictures?"

According to the organizer, the first day's presentation plus the keynote speaker on the third day will be available in a

set of 5 DVDs. 5% of the proceeds will benefit the Weis Earth Science Museum at the University of Wisconsin.

The Displays

The ten page Event Program listed the themes of 77 display cases that included some popular, some unusual and some rare agates and jaspers. The locations included: Lake Superior, Minnesota, Wisconsin, Michigan, California, Colorado, Idaho, Iowa, Kentucky, Missouri, Oregon, New Mexico, South Dakota, Wyoming, Tennessee, Montana, Union Road, St. Louis Missouri of USA, Laguna, Coyamito, Aqua Nueva of Mexico, Condor agate of Argentina, Brazil, India, Indonesia, Germany and Queensland, Australia. The varieties of agates included: vein, nodule, pseudomorph, sagenite, moss, polyhedroids and copper replaced agates.



The first three are pseudomorph agates from Coyamito, Mexico and the fourth one is polyhedroid agate from Brazil. All are from Eugene Mueller's collection.

Most of the display cases were packed full with agates from a single locale, a very helpful way of getting a feel for the characteristics of the agates from that location. Due to the proximity to the collecting sites, it was no surprise that Lake Superior Agates had a large presence in the display. As I walked past case after case of Lake Superior Agates, it gradually dawned on me why it had such a following and was affectionately referred to as “Lakers” by many agateers. Unlike some mineral specimens that had interesting crystal structure and sparkly crystal phase to look at when found,

most of agate specimen required lapidary work such as sawing and polishing to reveal their hidden beauty. Lakers, on the other hand, were found as tumbled nodules with most of their inner beauty revealed after nature did all of the tumbling and polishing. To cut or not to cut were questions that Laker fans often debate.



*Above; Lake Superior agates Brian Costigan's collection.
Below: Cut and polished Lakers Bill Steffes' collection.*

Several rare treats were Peter Rodewald's collection of copper included Lakers and the copper replacement agates from Wolverine #2 Copper Mine, Michigan, and Smithsonian case that entitled: "Indonesian Picture Agates" featured several suites of agate cabochons with English alphabets, numeric symbol, and symbols such as heart, yin-yan, cross etc.

The sign said that the patterns were natural. Since agates can be colored easily, I have my doubt. (Continued to next issue: part III, The Sales)

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2008 Calendar of Events

August 29 - Sept. 1, Fort Bragg, Mendocino Coast Gem & Mineral

Society Town Hall, Main & Lateral Hours: Sat. & Sun 10-6;

September 13-14, Downey, Delvers Gem & Mineral Society

Woman Club of Downey 9813 Paramount Blvd Hours: Sat.

10 - 6; Sun. 10 - 4

September 20-21, Paso Robles Santa Lucia Rockhounds Pioneer

Park Museum 2010 Riverside Drive Hours: 10-5 both days

September 20-21, Redwood City Sequoia Gem & Mineral Society

Community Activities Building 1400 Roosevelt Ave.

Hours: 10-5 both days

September 25-28, San Bernardino Orange Belt Mineral Society,

Inc. Western Region Little League Ball Park 6707 Little

League Dr. Hours: 9 a.m.

September 27-28, Monterey, Carmel Valley Gem & Mineral

Society Monterey Fairgrounds 2004 Fairgrounds Rd. Hours:

Sat. 10 - 6; Sun. 10 - 5

September 27-28, Stockton, Stockton Lapidary and Mineral
Club Scottish Rite Masonic Center 33 West Alpine
Ave. Hours: Sat. 10 - 5; Sun. 10 - 4