



# Cedar Valley Gems

Cedar Valley Rocks & Minerals Society

CEDAR VALLEY GEMS

OCTOBER 2017

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Ray Anderson, Editor: [rockdoc.anderson@gmail.com](mailto:rockdoc.anderson@gmail.com)

**Next CVRMS Meeting**  
**Tues. OCT 10**

**Hiawatha Community Center**  
**101 Emmons St., Hiawatha - 7:00 pm**



presented by

**Dr. Jane Gilloti**

Professor of Geology

U of IA Dept. Earth and Environmental Sciences  
and

**Iowa Geology Students**

Earth and Environmental Studies students from the University of Iowa and Professor Jane Gilloti will discuss fieldwork and research projects that were sponsored in part by scholarship donations from the CVRMS.

## Missing Necklace



This necklace disappeared from a lot of vintage jewelry on the table near the clerk's desk at last month's Rock Auction. The purchaser asks for its return, no questions asked. Contact Marv Houg if you can help, [m\\_houg@yahoo.com](mailto:m_houg@yahoo.com)



Last month the CVRMS held its annual Rock Auction at the Amana RV Park & Event Center, and **What a Rock Auction!** A total of 99 bidders paid over \$39,000 for 1,300 lots of rocks, fossils, minerals, and equipment over the weekend of Sept 16-17. This included \$3,729 from items donated by Clarence Burns, with proceeds going to scholarships for geology students at University of Iowa



and Cornell College as the "Clarence Burns Scholarship," and \$95 from the sale of the Moroccan fossil, which will be donated to the University of Iowa in the name of the donor. Dealers are already committing lots for the next year's Rock Auction to be held on September 15-16, 2018. Many thanks to all club members and others who worked hard for the success of this year's auction.

## CVRMS Sept 19 Meeting

### Hiawatha Community Center

The meeting was called to order at 7:15 p.m. by Marv Houg president. There were no new members or guests to introduce.

The minutes of the last board meeting were reviewed as published and no questions or concerns were voiced.

The treasurer's report was presented by Dale Stout. Current checking account balance is \$18,376.45. This does not reflect the auction proceeds.

Door prize was won by Dale.

### Program

The program was presented by Brent Studer, Adjunct Professor of Astronomy at Kirkwood, and we learned about the moon, including the far side. Look up KREEP.

### Auction Report

A preliminary auction report was presented by Sharon and all. Total sales amounted to \$39,053.00. Marv thanked everyone for the help and how the set up went easier on Friday. There was a total of 1300 lots sold. The highest bid was for a piece of equipment at \$1200. There were various suggestions made to make next year's auction even better. Parking should be limited to the ends of the building. Sign on the main road should be larger, more prominent. Tom says they are in the trailer. There were a number of new bidders this year. There were some concerns that articles were missing from bidders piles. More investigation to follow. Thanks to Sharon for the food concession. Also, positive comments about the descriptions provided with the items.

### Crinoids

Where are we on getting those crinoids recognized? Ray says he will kick the program into gear next month.

### Field Trip

Bill Desmarais reported that 42 people signed up for the bus trip to the Fryxell and Lizzadro museum on October 21. 10 seats still available.

### Meeting Place

A motion was made by Tom to book this location for another year at \$300.2nd by AJ. All in favor. Motion passed. We will meet at this location, Hiawatha Community Center, for next year. The next meeting, however, will be held on the 2nd Tuesday of October, 10/10. November will be on 3rd Monday, 11/20, and the Christmas party will be held on 2nd Tuesday, 12/12. After that we will meet on the third Tuesday as usual.

### New Business

Marv reported that Bill Desmarais presented programs on a last minute basis to Mid Prairie Home School Center. An appreciative thank-you note sent by Lori Trevino was read by Marv. Another request from Mary Remington regarding fluorescent display on October 20 was briefly discussed. The board will discuss further. Ray volunteered for the program.

### Miscellaneous

Suggestion presented that we have some nifty business cards printed to help spread the word about our club. The board will discuss further. Tom displayed his shirt that he received at the Ventura Federation show. Suggested that we could design, maybe have a contest, for our upcoming Federation show in 2019. Board will discuss further.

Marv reminded the club that this weekend is the Geode fest. Tentative plans for field trip to Waterloo South to look for brown fluorite and other stuff. More info to come.

Marv will check on Monticello and the Dingleberry Quarry for access etc. Motion to adjourn, A.J.—2nd, Lisa Blunt. Meeting adjourned at 9:35 p.m.

Respectfully submitted,  
Dell James, Secretary

## CVRMS Board Minutes Sept 26

### Called at 7:20 at the Home of Marv Houg

**Present:** President Marv Houg, Dale Stout, Ray Anderson, Jay Vavra, Sharon Sonnleitner, Joy Cummings

**Auction:** Dale reported a preliminary total sale of \$39,070. The total of \$3,729 from Clarence Burns's donated items will be donated to the University of Iowa and Cornell College (split 2/3, 1/3) as the Clarence Burns Scholarship. The \$95 from the sale of the Moroccan fossil will be donated to the University of Iowa in the name requested by the donor.

Larry Krohn, Sandy Brandl and Marv have requested lots for 2018. Stan Koziara and another man asked Marv about possibly bringing items next year. Marv will check with other regulars. Since the experiment with recording the auction on computer this year was a success, we will repeat it next year. Ray suggested we print the date of the next year's auction and show on the printout of lots purchased we give to the buyers. Sharon will get 600 more Show/Auction cards printed. The 2018 auction will be September 15-16.

**Holiday Party:** The party will be December 12 (the 2nd Tuesday) at the Hiawatha Community Center. The club will buy turkey, which we assume Dell James will prepare. There will be games with prizes. We will ask Julie Whitlatch to help with the games.

**Meeting Location:** Dale will reserve the Hiawatha Community Center for the 2018-19 year.

**Nominating Committee:** All officers are up for election this year at the Annual Meeting, which is the November meeting. Marv appointed Dale, Jay and Ray as the Nominating Committee. The slate of candidates will be published in the November newsletter.

**Show:** The theme of the 2018 show will be Crinoids. For exhibits: Ray will ask the state museum for a Bean crinoid plate; others with crinoids include Doug DeRosear, Karl Stuekerjuergen, Marv, Beloit College, Fryxell Museum, Iowa State University and the University of Iowa. We will try to get crinoids from Legrand, Gilmore City, Burlington, and Dubuque locations and Mississippian, Devonian, Silurian, Pennsylvanian and Ordovician periods. Ray will create posters on locations in Iowa and the life cycle of crinoids. Ray will ask Tiffany Adrain about borrowing the modern crinoid she has.

Possible people to ask for programs are Sherm Lundy, Brian Witzke, Tiffany, Brian Gossman, Forest Gahn and Ray.

Since we no longer have bones for the bone dig, we will consider replacing the bones with geodes, agates, coral, and few bones, and petrified wood.

Marv will get the contact information for Jeremy Dyer so he can be sent a dealer contract for space with TJ Ramsey.

**Misc:** Marv will look into setting up a field trip to Conklin, Klein, Keota or Dingleberry Quarry in late October. Ray will contact the Iowa City Library about the fluorescent program they want on October 20.

Dale moved to adjourn. Second by Joy. Adjourned at 9:50.

Respectfully submitted,

Sharon Sonnleitner, Acting Secretary



Mount Tambora is an active stratovolcano on the island of Sumbawa in Indonesia. Its eruption in 1815 killed around 10,000 people instantly, while the debris from the blast, formidable tsunami waves and then famine and starvation took the death toll up to some 100,000 people. The exact number of fatalities varies with some sources saying as many as 120,000 people were killed while others put the figure at around 70,000.

Mount Tambora began to erupt just before sunset on 5 April 1815 and continued for five further days, blasting even more ferociously on 10 April. The eruptions were heard 1,242 miles away. Molten rock shot more than 24 miles into the sky and a thick veil of ash spread over 400,000 square miles. In total, around 140 billion tons of rock, ash and debris was flung into the sky. The entire region was plunged into darkness. Debris hit the sea surrounding the island with such force and in such huge volumes that deadly tsunami waves up to 13 feet high were set in motion.

The impact of Mount Tambora's blast wasn't localized to Indonesia or even Asia. The consequences of such an explosion affected the entire world. Islands of pumice ejected from the volcano were spotted floating in surrounding seas by sailors for years after the blast. The period following the eruption is widely known as the "year without a summer," with much of the northern hemisphere enduring a bleak, year-round winter. The cold climate (caused by volcanic debris in the stratosphere blocking sunlight) caused chaos. Reports of clothes freezing on washing lines in the middle of summer were the least of the troubles. The biting temperatures resulted in poor crop growth and therefore food shortages in many countries and in some cases, such as Ireland, out-and-out famine.

Another extraordinary consequence of Mount Tambora's explosion and the gloomy weather that followed was the production of some of the most terrifying books in the history of literature. A group of writers, including Mary Shelley, were kept inside their villa on Lake Geneva for much of their holiday thanks to rainy, cold days. To pass the time they competed to produce the most frightening story, and this is how *Frankenstein* was dreamed up. Mount Tambora was once similar in stature to Mont Blanc (15,780 feet) but the 1815 eruption blew its top off. Today it stands at about 8,930 feet and has a 3,608 foot-deep crater.



[http://www.dailymail.co.uk/travel/travel\\_news/article-4899684/The-horrifying-history-world-s-deadliest-volcano.html](http://www.dailymail.co.uk/travel/travel_news/article-4899684/The-horrifying-history-world-s-deadliest-volcano.html)



## Spotlight Gemstones: Tourmaline / Opal

### November's Birth Stones



If you were born in November you may choose from 2 birthstones, tourmaline or opal.

**TOURMALINE** is a crystalline boron silicate mineral compounded with elements such as aluminium, iron, magnesium, sodium, lithium, or potassium. It is a six-member ring cyclosilicate having a trigonal crystal system, occurring as long, slender to thick prismatic and columnar crystals that are usually triangular in cross-section, often with curved striated faces. The style of termination at the ends of crystals is sometimes asymmetrical, called *hemimorphism*. Tourmaline is distinguished by its three-sided prisms; no other common mineral has three sides. Prisms faces often have heavy vertical striations that produce a rounded triangular effect. Tourmaline is classified as a semi-precious stone and the gemstone comes in a wide variety of colors. Varieties include **schorl** (Brownish black to Black), **dravite** (dark yellow to brownish black), **rubellite** (red or pinkish-red), **indicolite** (light blue to bluish green), **verdelite** or Brazilian emerald (green), and **achroite** (colorless). In all, 32 tourmaline group endmembers are recognized. **Bicolor** or **tricolor** tourmaline crystals are also found.

**OPAL** is a hydrated amorphous form of silica ( $SiO_2 \cdot nH_2O$ ). Its water content may range from 3 to 21% by weight, but is usually between 6 and 10%. Because of its amorphous character, it is classed as a mineraloid, unlike crystalline forms of silica, which are classed as minerals. It is deposited at a relatively low temperature and may occur in the fissures of almost any kind of rock, being most commonly found with limonite, sandstone, rhyolite, marl, and basalt. The internal structure of precious opal makes it diffract light. Depending on the conditions in which it formed, it can take on many colors. Precious opal ranges from clear through white, gray, red, orange, yellow, green, blue, magenta, rose, pink, slate, olive, brown, and black. Of these hues, the black opals are the most rare, whereas white and greens are the most common. It varies in optical density from opaque to semitransparent. Fossils are sometimes replaced or coated by opal.

# What in the World?



What in the World is this fiery hole??  
Locals call it the "Door to Hell."



Colors of Garnet Gemstones

## September Photo



September's **What in the World?** shows railroad tracks near Christchurch, New Zealand, that were deformed by a magnitude 7.1 earthquake that hit on September 4, 2010. Experts think that the steel was deformed by compression (from top and bottom of photo) but held straight by the sheer strength of the rest of the track and the friction of the sleepers against the gravel.

# Rock Calendar 2017

## CVRMS Events of Interest

**Oct. 8 - Sunday at the Quarry**  
BMC Aggregates Morgan Quarry  
4816 Donald Street, Waterloo  
*11:00 am—4:00 pm*  
*see Page 9 for details*

**Oct. 10 - CVRMS Monthly Meeting**  
**Hiawatha Community Center**  
program - U of IA Geology Students  
Review of CVRMS-sponsored Projects  
*see Page 1 for details*

**Oct.21 - CVRMS Fall bus trip**  
**Fryxell Geology Museum** Rock Island  
& **Lizzadro Museum of Lapidary Art** Elmhurst, Ill  
*see Page 11 for details*

**Oct. 21-22 - Des Moines Lapidary Society Show**  
3000 E Grand Ave., Des Moines, Iowa



**Dec. 12 - CVRMS Holiday Party and Pot Luck**  
**Hiawatha Community Center**



## Ask a Geologist by Ray Anderson aka "Rock Doc", CVRMS Vice President

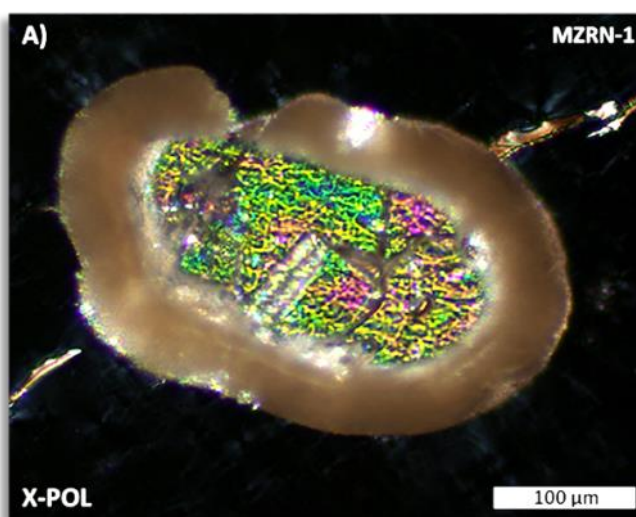
**Ask a Geologist** is a monthly column that gives CVRMS members an opportunity to learn more about a geologic topic. If you have a question that you would like addressed, please send it to [rockdoc.anderson@gmail.com](mailto:rockdoc.anderson@gmail.com), and every month I will answer one in this column. Please let me know if you would like me to identify you with the question. I will also try to respond to all email requests with answers to your questions, regardless of if it is chosen.

**Rona commented:** "I heard that basalts are the hottest lavas, and that they can be almost 2,000° F. Are they the hottest rocks on the Earth's surface??"

**Rock Doc replied:** "That number is about correct. I understand that the magma within the Hawaiian volcano of Kilauea has been measured as high as 2,120° F. But, I actually just read an article about a new record for the hottest rock at the Earth's surface, and it wasn't from a volcano, it was from a meteor impact. Scientists previously estimated that temperatures produced during a large meteor impact may exceed 3,000° F. Well, it seems that a scientist participating in a 2011 mock "mission to the moon" at the Mistastin Lake crater (17 miles diameter) in Labrador, Canada, picked up an unusual-looking glassy rock (see Fig 1). One day he was looking at the rock in his lab and some small inclusions caught his eye, so he prepared a thin-section of the rock and examined it under a microscope. What he saw was an unusual zircon crystal surrounded by a strange brown rim (see Fig 2). Since zircon has a melting point of 4,919° F it doesn't melt in the conditions found near the surface of the Earth. So the rim couldn't be melted zircon. On investigation he learned that while zircon ( $ZrSiO_4$ ) didn't melt, it decomposes into zirconia ( $ZrO_2$ ) and silica ( $SiO_2$ ) at about 3,100° F, and it alters to the cubic form of zirconia at about 4,300° F (for reference, the surface of the sun is about 10,000° F). An electron microscope examination of the inclusion confirmed that the brown rim was in fact cubic zirconia. **So, this rock sample experienced temperatures of at least 4,300° F, but less than the 4,919° F temperature that would have melted the zircon.** While minerals like zircon form at extremely high temperatures and pressures like those deep inside the Earth, **this is the first rock formed at the surface known to have been exposed to such a high temperature in a natural environment.** Learn more about this "hot rock" at <http://www.cbc.ca/news/technology/mistastin-hottest-rock-1.4292348>"



**Figure 1.** Photograph of the glassy rock found at the Mitastin Lake Crater in 2011.

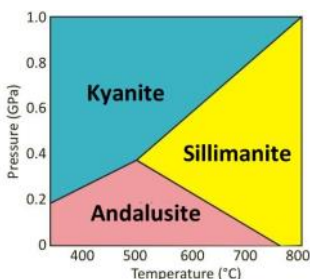


**Figure 2.** Photomicrograph of the glassy rock showing the zircon crystal inclusion with the brown cubic zirconium rim.

# Andalusite: My Favorite Gemstone



**Andalusite** (my favorite gemstone) is an aluminium nesosilicate mineral with the chemical formula  $Al_2SiO_5$ . Andalusite gemstones are found in very distinct combinations of colors, and a very pronounced level of pleochroism, which results in the exhibition of different colors when viewed from different angles. Andalusite colors depend on the orientation of the crystal, but it typically occurs in yellow, yellow-green, green, brownish-red, olive and reddish-brown. Most stones exhibit two colors that differ in intensity, and often times, colors blend together, which is especially seen in square and round-cut gemstones. Shapes with a long axis, including ovals, pears, marquise and emerald-cuts, tend to show one color near the center and a darker second color toward the ends of the crystal. Typically, when cutting pleochroic gems, cutters attempt to minimize pleochroism and maximize one desirable color. However, with andalusite, cutters do the exact opposite and try to orient the gem to result in a pleasing mix of colors, such as orangey-brown and yellowish-green or gold. For many years, andalusite has primarily been a collector's stone, but it has recently gained a lot of attention from many jewelry designers. The attraction and new-found appreciation for andalusite is greatly owed to its unmistakable and unique twist on play of color. Andalusite typically occurs translucent to opaque, with transparent gemstone-quality specimens being very rare. Opaque specimens are known as chiastolite. Dark inclusions in chiastolite produce cruciform-like shapes within the stones and these are often referred to as 'Cross Stones' (see photo at the top of this article). Andalusite is chemically the same as kyanite and sillimanite, being the lower pressure mid temperature polymorph. At higher temperatures and pressures, andalusite may convert to sillimanite. Thus, as with its other polymorphs, andalusite is an aluminosilicate index mineral, providing clues to depth and pressures involved in producing the host rock.

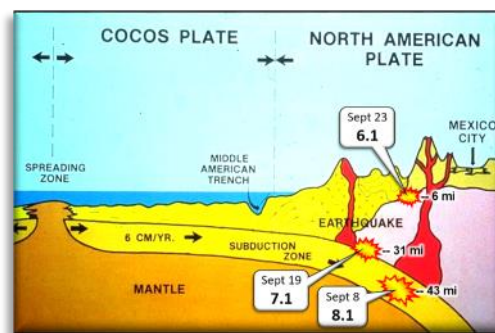


# Were Mexico's Recent Earthquakes Related?

Over two weeks last month Mexico experienced a lot of shaking. On Sept. 8, a magnitude-8.1 earthquake struck 54 miles southwest of Pijijiapan, which sits just above the Mexico-Guatemala border. Eleven days later, a magnitude-7.1 quake struck 3 miles east of Raboso, near Mexico City. Then on Sept. 21 another quake, magnitude 4.8, hit just outside Pijijiapan. While Mexico's position along major tectonic fault lines makes it a hotbed of seismic activity, the frequency of these powerful earthquakes begs the question: Are these quakes happening more often? Not likely, says a research geophysicist at the U.S. Geological Survey's National Earthquake Information Center. Mexico is very prone to earthquakes, so earthquakes of this size in Mexico are not unusual. Getting two in a row of this size so close together is unusual but not unexpected. In the grand, slow-moving world of tectonic



Tectonic plates in the Mexico City area. Yellow stars locate September earthquakes and magnitudes; arrows show plate movement directions and speeds (mm/yr).

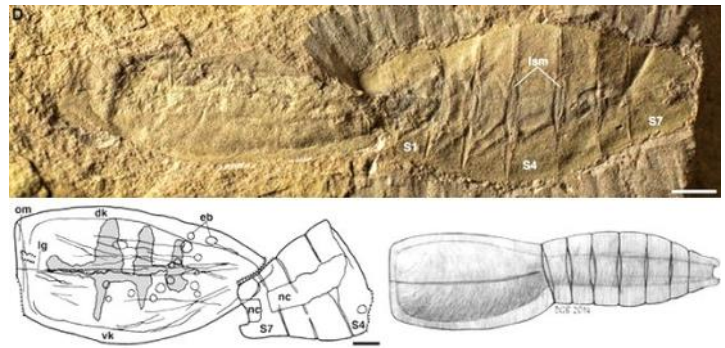
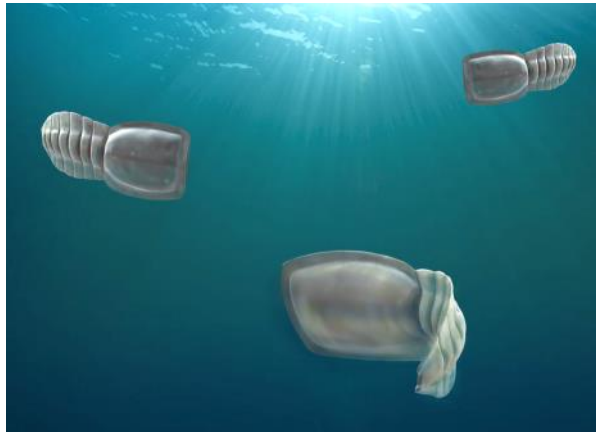


plates, Mexico is situated at an unfortunate location: it rests at the southern edge of the North American Plate, putting it right at the point where it meets the Pacific Plate, the Cocos Plate and the Caribbean Plate. The quakes occur because all of these plates are moving in different directions, and as they collide or rub against each other, this movement can unleash destructive forces. Previous scientific studies have shown that after it sinks below the North American Plate, the Cocos Plate flattens for a distance of around 200 km before plunging into the deep Earth. This downward dip in the Cocos plate is located where the epicenter of the 7.1 earthquake occurred, directly beneath the Valley of Mexico, in which Mexico City is located. This warping of the Cocos plate caused a large earthquake to occur close to Mexico city at a relatively shallow depth.

<https://www.livescience.com/60489-were-strong-mexico-earthquakes-related.html>

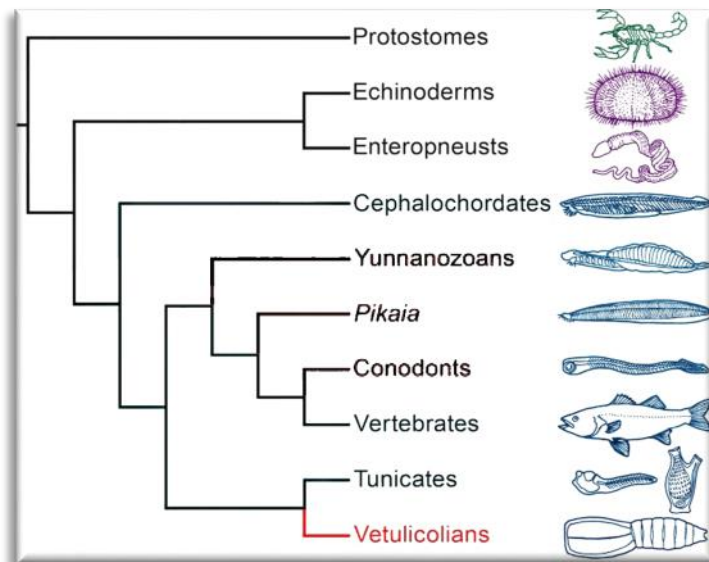
# Our Cambrian Cousins

Newfound fossils may solve a century-long mystery over the identity of a bizarre 500-million-year-old animal. Strange figure-8 shaped creatures from the Cambrian Period were actually very distant cousins of humans, according to a new study. These vetulicolians, as they are known, appear to have possessed a notochord, a hollow nerve structure, just like modern vertebrates including humans. The study shows that chordates (creatures with notochords) were diverse and successful from the beginning of animal evolution. Vetulicolians were truly bizarre. They lacked eyes, but had a wide mouth and a segmented tail. Like miniature



Fossil vetulicolian and illustration of the animal (above) and an artist's reconstruction of several animals swimming (left).

whale sharks, these early animals swam through the oceans, filter-feeding off plankton and other microscopic organisms. Fourteen species have been found in the fossil record since 1911, including specimens from Greenland, southern China, and western Canada. These paleontologists, from the University of Adelaide in Australia, discovered a new species of this group on Kangaroo Island, Australia, a hotspot for Cambrian-age fossils with soft parts like muscles and guts preserved in stone. They dubbed their find *Nesonektris aldridgei*. "*Nesonektris*" is the Greek word for "island swimmer," while "*aldridgei*" honors late University of Leicester geologist Dick Aldridge, who studied vetulicolians extensively. The most complete specimen of the new species measures about 4.9 inches long; most of the 150 or so fossils the researchers found were fragmented into tails and bodies, with tails usually measuring around 3.5 in. long. It was in these tails that the researchers noticed something very strange. Running



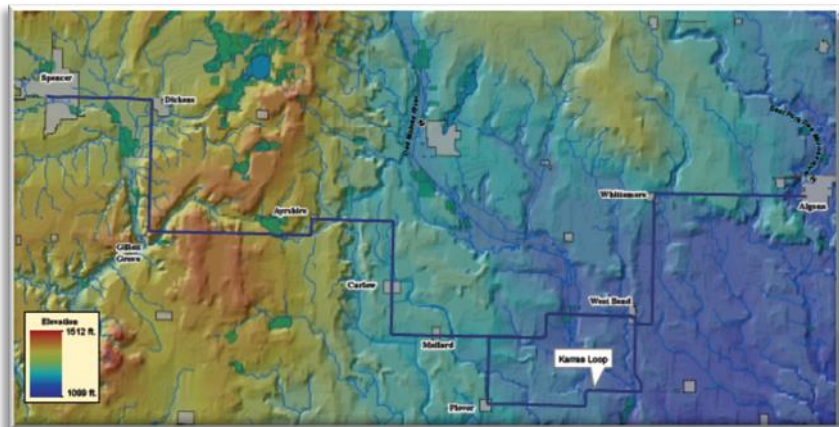
An evolutionary tree showing the position of vetulicolians compared with their closest relations

through the tails were long, rod-like structures. They might have been part of the gut, but they were unusually long and wide. More mysteriously, the rods appeared segmented into strange block-shaped structures, inconsistent with it being a gut (a hollow tube), but consistent with the way a cartilage (notochord) would break. Notochords are present in the embryos of all vertebrates, acting as a cartilaginous sort of skeletal support before the bones form. Some boneless invertebrates, including filter-feeding sea squirts, retain the notochord throughout life. All animals with notochords (vertebrates included) are called chordates. By comparing the Kangaroo Island fossils with animals such as sea stars, sea squirts, jellyfish-like salps, and vertebrates, the researchers determined that the vetulicolians were close relatives of tunicates (including sea squirts and salps). This puts vetulicolians in the same chordate category as vertebrates, including humans, although not direct ancestors, but "cousins." Paleontologists will re-evaluate other vetulicolian species for notochords, their ultimate goal to reconstruct the family tree of some of the first animals ever to evolve.

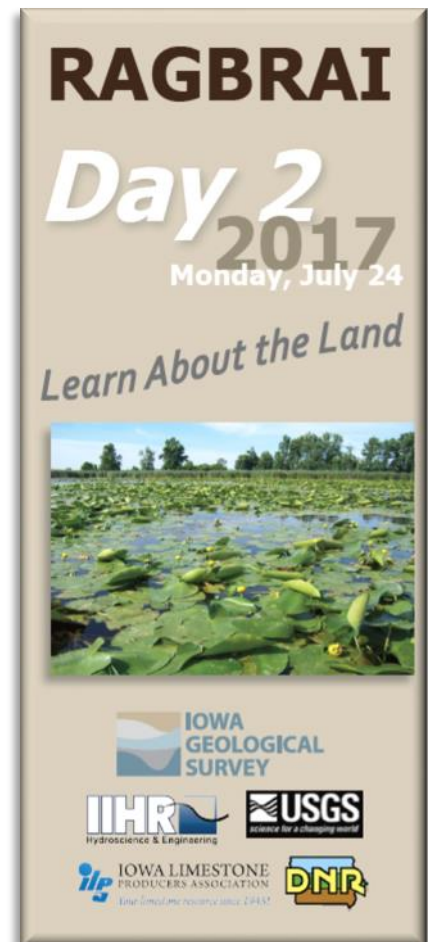
<https://www.livescience.com/48327-eyeless-cambrian-creatures-photos.html>

# What's New In Iowa Geology ??

## GEOLOGICAL SURVEY PRODUCES BROCHURES FOR RAGBRAI BICYCLE RIDE ACROSS IOWA



A.



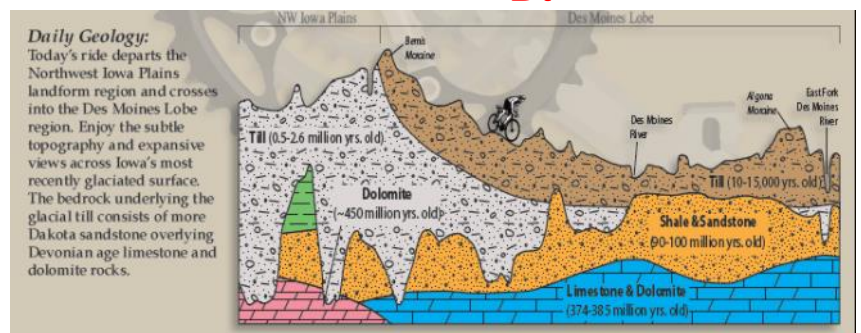
RAGBRAI (the Des Moines Register's Annual Great Bicycle Ride Across Iowa) is an annual seven-day bicycle ride across the state of Iowa. 2017 marked the 45th year of the oldest, largest, and longest bicycle touring event in the world. Continuing the tradition, the Iowa Geological Survey, with support from the Iowa Limestone Producers Association, has created a series of informational brochures to help the RAGBRAI participants learn about Iowa's geological, cultural, and natural characteristics as they ride across the state. Individual brochures are produced for each day of the event, and include **A.** a map displaying color-coded elevation along the day's route, **B.** a cross-section showing changes of elevation of the route and the geology below, and **C.** descriptions of geologic highlights along the way. You can download copies of this year's and several past years' brochures at <http://www.iuhr.uiowa.edu/igs/tag/ragbrai/>.

B.

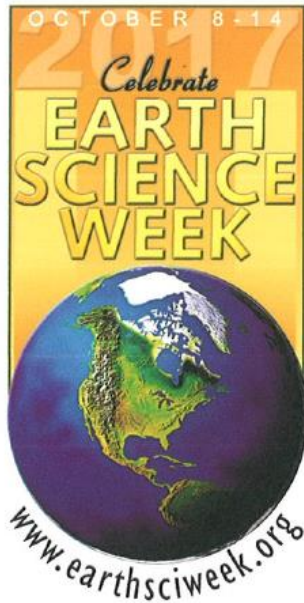
**C.**

### The Grotto of the Redemption

One of the most iconic geologic attractions in Iowa is the Grotto of the Redemption in West Bend. Listed on the National Register of Historic Places, the Grotto is actually a composite of nine separate grottos covering an area greater than a city block. Most of the grotto was constructed by Father Paul Dobberstein, a German-American Catholic Priest who collected rocks, minerals, crystals, ores, semiprecious stones, shells, and fossils that came from many localities around the United States and elsewhere. Beginning in 1912, he spent 42 years collecting geologic materials and cementing them into a maze of structures. The materials that comprise the grotto include spectacular and rare specimens and have been valued in excess of \$4 million. The Grotto of the Redemption is a must-see for lovers of Americana.







## *Sunday at the Quarry*

*October 8, 2017*

*11:00 - 4:00*

*BMC Aggregates - Morgan Quarry*

*4618 E. Donald St.*

*Waterloo, IA 50703*

## *Everyone Lives In A Watershed*

Kick off Earth Science week by joining us for Sunday at the Quarry. Take a Trip Into The Pit to learn the geology of the area. Make your own Lime and Rock Art. Collect Rocks, Minerals and Fossils that you can take home. Enjoy programs and presentations on Watersheds, Protecting our Water, Hydrogeology, Flooding Issues, Water and Soil Conservation, Discoveries from Iowa's Ancient Seas, and many more.

We are excited to be able to bring you Programs, Presentations and Hands-On Learning provided by:

- \*Black Hawk County Soil and Water Conservation Watershed Program
- \*Black Hawk Gem and Mineral Club
- \*Dry Run Creek Watershed Improvement Project
- \*Iowa Flood Center
- \*Iowa Geological Survey
- \*Iowa Learning Farms Conservation Station
- \*Middle Cedar River Watershed Management Authority
- \*Miller Creek Water Quality Improvement Project
- \*State Hygienic Lab
- \*University of Northern Iowa Earth and Environmental Science
- \*University of Iowa Mobile Museum
- \*US Geological Survey
- \*City of Waterloo

This is a FUN, EDUCATIONAL and FREE event that is OPEN to the PUBLIC and will have something for all ages. We encourage all Scouts, School Groups, Youth Organizations, and anyone interested in Earth Science to attend.

Area Educators – We will again be offering (free of charge) American Geological Institute's "Earth Science Week Tool Kit". This kit is filled with posters, calendars, and activities for all grade levels. If you would like one please call our Corporate Office at 319-235-6583.

Sherman Lundy  
Geologist  
BMC Aggregates L.C.

Chad Heinzel  
Associate Professor  
UNI Earth and Environmental Science

## CVRMS FIELD TRIP TO FRYXELL GEOLOGY MUSEUM AND LIZZADRO MUSEUM OF LAPIDARY ARTS

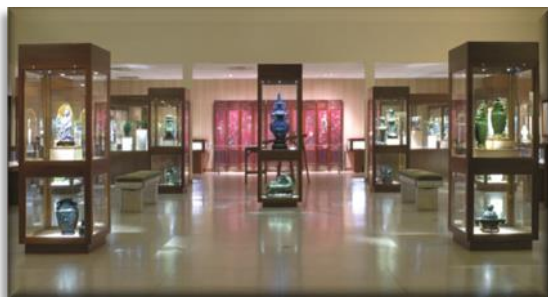
Following last year's superb field trip to the Field Museum of Natural History, CVRMS Director Bill Desmarais is organizing another field trip by bus, this year to the **Fryxell Geology Museum** in Rock Island and **Lizzadro Museum of Lapidary Art** in Elmhurst, Illinois, scheduled for **Saturday October 21st**. The charter bus will depart from Cedar Rapids and also pick up passengers in Iowa City enroute to Rock Island's Augustana College and the Fryxell Geology Museum, then to Elmhurst and the Lizzadro Museum of Lapidary Art. **The Fryxell Museum**, named after Dr. Fritiof Fryxell, was started in the late 1880s with a modest natural history



Fryxell museum visitors are greeted by a 22-foot-long skeleton of a *Cryolophosaurus*, a large carnivorous dinosaur.

collection. Today it is one of the largest and finest collections of rocks, minerals and fossils in the Midwest, with more than 1,500 rock, mineral, and fossil specimens, and a fluorescent mineral display. It includes a cast of a *Tyrannosaurus rex* skull and a complete 22-foot long skeleton of *Cryolophosaurus*, a large crested carnivorous dinosaur collected in 1991 in Antarctica by Professor Bill Hammer and his students. One display shows a rare amphibian fossil from the famous Mazon Creek area. This fine specimen shows nice preservation of the skull, body and limb material. Also on display is a quarter-ton piece of the Canyon Diablo meteorite, a planetarium show with images and information on the wonders of the night sky, and a newly acquired piece of the Chelyabinsk meteor that exploded over Russia on Feb. 15, 2013.

The **Lizzadro Museum of Lapidary Art** in Elmhurst (a western suburb of Chicago) is dedicated to the art of cutting and polishing stones. The museum was founded by Italian immigrant Joseph F. Lizzadro, Sr., an electrical engineer with a life-long interest in



The Lizzadro Museum of Lapidary Art

lapidary and a special fondness for jade. As his collection grew he desired to display it to the public, and was granted permission to build a museum within the city's Wilder Park. The museum's doors opened in November, 1962, and it include displays gemstone treasures, antiques to modern, with a blending of earth science exhibits. The building itself is designed to resemble a jewelry box in a park setting and features more than 200 exhibits including the **Castle Lizzadro**, which is carved out of gold. Housed within the museum are rare

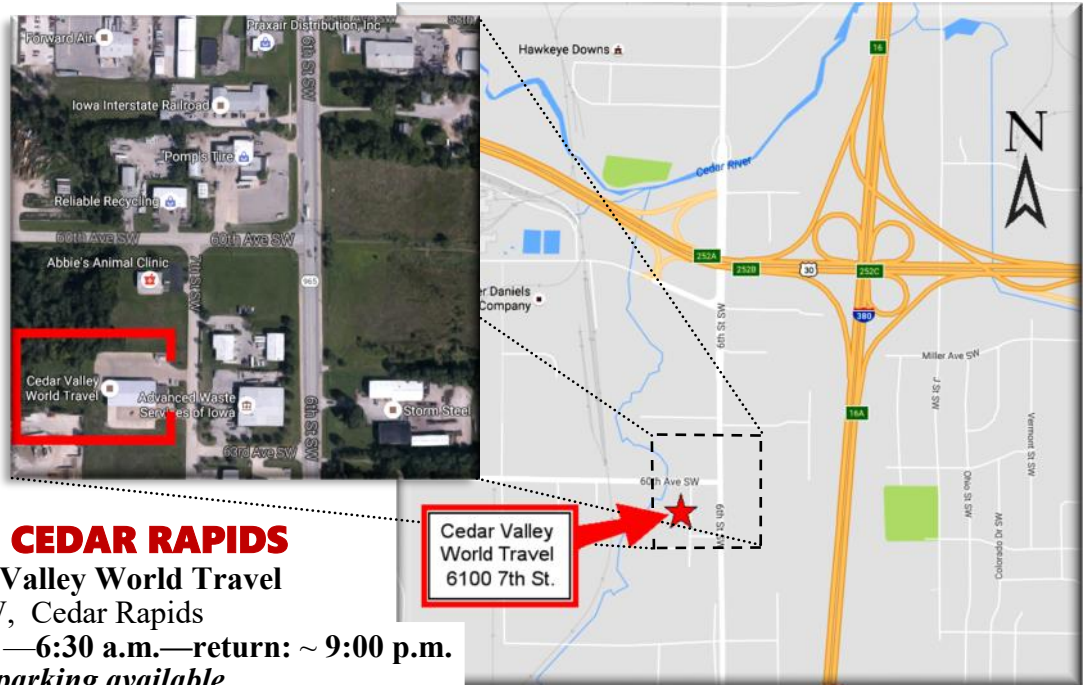
pieces such as a jade imperial altar set completed during the Ming Dynasty, (1368-1644) and a cinnabar screen encrusted with gemstones that was a gift to the Chinese emperor, Qianlong, in 1791. Both pieces were once housed in the imperial palace of China. The lower floor of the museum is an interactive earth science center containing unusual rocks, fossils and hands-on exhibits. The trip will be free to club members, with a small charge of \$25 to non-members if unclaimed seats remain. To register for the trip contact Bill Desmarais at 319-365-0612 or [desmarais\\_3@msn.com](mailto:desmarais_3@msn.com).

**A few seats are still available, so don't delay and miss this great trip!**

**See next page for departure time and information**

# Where To Meet Fryxell Geology Museum and Lizzadro Museum of Lapidary Arts Field Trip

Field trip bus will leave from Cedar Valley World Travel in Cedar Rapids and will stop at the Clarion Hotel in Iowa City to pick up people there.  
*see schedules below:*



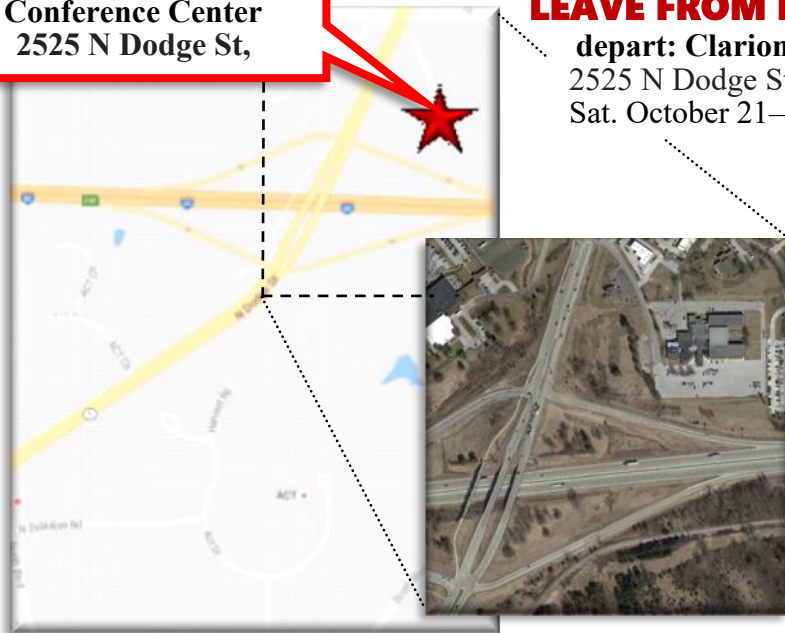
## LEAVE FROM CEDAR RAPIDS

depart: Cedar Valley World Travel  
6100 7th St SW, Cedar Rapids  
Sat. October 21—6:30 a.m.—return: ~ 9:00 p.m.  
*monitored parking available*

**Clarion Hotel Highlander  
Conference Center  
2525 N Dodge St,**

## LEAVE FROM IOWA CITY

depart: Clarion Hotel Highlander Conference Center  
2525 N Dodge St, Iowa City  
Sat. October 21—7:00 a.m. return: ~ 8:30 p.m.



**DON'T BE LATE**

*bring*

- > camera
- > snacks & drinks
- > **SMALL** coolers  
(must fit on or under seat)

## 2017 Officers, Directors, and Committee Chairs

President .....	Marv Houg ( <a href="mailto:m_houg@yahoo.com">m_houg@yahoo.com</a> ) .....	364-2868
Vice President. ...	Ray Anderson ( <a href="mailto:rockdoc.anderson@gmail.com">rockdoc.anderson@gmail.com</a> ) .....	337-2798
Treasurer .....	Dale Stout ( <a href="mailto:dhstout55@aol.com">dhstout55@aol.com</a> ) .....	365-7798
Secretary .....	Dell James ( <a href="mailto:cycladelics@msn.com">cycladelics@msn.com</a> ) .....	446-7591
Editor.....	Ray Anderson ( <a href="mailto:rockdoc.anderson@gmail.com">rockdoc.anderson@gmail.com</a> ) .....	337-2798
Liaison .....	Joy Cummings ( <a href="mailto:joybelle28@live.com">joybelle28@live.com</a> ) .....	981-2482
Imm. Past Pres. ..	Sharon Sonnleitner ( <a href="mailto:sonnb@aol.com">sonnb@aol.com</a> ) .....	396-4016
Director '17 .....	Jay Vavra ( <a href="mailto:vavraj@gmail.com">vavraj@gmail.com</a> ) .....	447-9288
Director '18 .....	Bill Desmarais ( <a href="mailto:desmarais_3@msn.com">desmarais_3@msn.com</a> ) .....	365-0612
Director '19 .....	Rick Austin ( <a href="mailto:rcaustin9@gmail.com">rcaustin9@gmail.com</a> ) .....	361-5410
Sunshine.....	Dolores Slade ( <a href="mailto:doloresdslade@aol.com">doloresdslade@aol.com</a> ) .....	351-5559
Hospitality .....	Jeff Kahl .....	455-2201
Webmaster.....	Sharon Sonnleitner ( <a href="mailto:sonnb@aol.com">sonnb@aol.com</a> ) .....	396-4016

Club meetings are held the 3rd Tuesday of each month from September through November and from January through May at 7:00 p.m., temporarily at a location to be announced. The December meeting is a Christmas dinner held near the usual meeting night. June, July, and August meetings are potlucks held at 6:30 p.m. at area parks on the 3rd Tuesday of each month.

### CEDAR VALLEY ROCKS & MINERAL SOCIETY

CVRMS was organized for the purpose of studying the sciences of mineralogy, geology, and paleontology and the arts of lapidary and gemology. We are members of the Midwest (MWF) and American (AFMS) Federations. Membership is open to anyone who professes an interest in rocks and minerals.

**Annual dues are \$15.00 per family per calendar year. Dues can be sent to:**

**Dale Stout  
2237 Meadowbrook Dr. SE  
Cedar Rapids, IA 52403**

CVRMS website:  
[cedarvalleyrockclub.org](http://cedarvalleyrockclub.org)



Ray Anderson, Editor  
2155 Prairie du Chien Rd. NE  
Iowa City, Iowa 52240-9620