



Daisy Mountain Rockchips

The purpose of Daisy Mountain Rock & Mineral Club is to promote and further an interest in geology, mineralogy, and lapidary arts, through education, field experiences, public service, and friendship.

VOLUME 3, ISSUE 5

MAY 2018

Sedimentary Structures: Ripple Marks

By Susan Celestian

Sedimentary structures -- features formed by sedimentary processes -- can variously be helpful in determining characteristics of depositional environments, wind/water flow characteristics, and even the positions of the continents upon the globe.

One type of sedimentary structure is ripple marks. They are crested forms created by moving wind and water. There are two basic forms: *symmetrical* and *asymmetrical*.

Symmetrical ripple marks are wave-formed. The water sloshes to and fro, piling sand grains up in ripples with vertical crests, that slope off symmetrically to the adjacent troughs. See Figure 1.

Asymmetrical ripple marks are current-formed. Flowing water or wind piles up sand into ripples with crests tilted in the direction of the flow. See Figure 1.

In both ripples, small crossbeds form as the wave forms migrate. These may be exposed by erosion. See Figures 1 and 2.

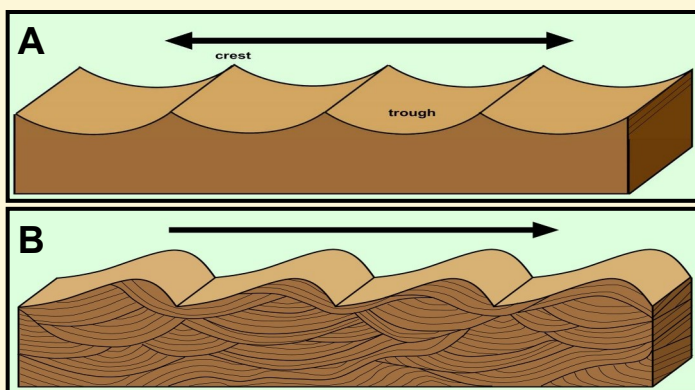


FIGURE 1 Ripple Marks 'A' above depicts symmetrical ripple marks, formed in oscillating water; while "B" depicts asymmetrical ripple marks, formed by a directional current. Note the crossbeds depicted in the cross-section 'A'. *Diagrams by Susan Celestian*

Ripple Marks continued on page 3.....

Bill Smardo Extends Thanks to Club Members

I feel I have been remiss in not acknowledging club members who have helped immensely in the Rock and Mineral Egg carton part of the Kids Corner.

To that end I would like to begin by thanking Claudia Marek without whose efforts the egg cartons would not have evolved in the way it has. Claudia has donated her teaching abilities in Earth science, her energy, and her truck to the Rock and Mineral Show the last three years. She started Friday morning, with other club members, by loading and transporting tables to the show site and then transported display items, games and prizes, along with helping set up the whole area Friday evening. Then returning Saturday morning, she began ushering child after child the length of 3 tables, identifying by name and something interesting about each of these 58 rocks and minerals.

Food and drink were "catch as catch can." After a full day Saturday, she returned to the same task all day Sunday. At the end of the day Sunday she helped take down our entire Kids Corner, load and transport it to my garage. She then returned to the show site and helped take down tables and load them onto her truck, for Monday morning transportation of the tables to the Veterans Center. Her passion for teaching and energy output is unsurpassed.

Each year, every event in the Daisy Mountain Gem and Mineral Show reflects new fun and imaginative

Thanks continued on page 11.....

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Board of Trustees Meeting Minutes — May 1, 2018

The meeting was called to order by President Ed Winbourne at 5:15 p.m. Those in attendance were: Claudia Merek, Clark Little, Cynthia Buckner, Tammy Early, Joe Gecho, Bob Salter, Victoria Peterson, Stan and Sue Celestian, Howard Roose (via phone), and, Bob Evans. A quorum was established.

Motion to approve April meeting minutes by Victoria, seconded by Bob Salter, and unanimously carried.

Financial Report: Cynthia gave the Financial report and noted that Boulder Creek High School charged an additional \$400 for the Show rental due to increased costs for electricity. She also noted that U-Haul storage costs will be raised effective May 21. The Financial Report was approved and filed for audit.

Bob Evans reported we are running out of room in the storage unit and will need a larger one. He has found a large container that would house all of the items in storage with room to spare and said that the container could be placed on land in New River. The cost of the container would be approximately \$2800 to \$3000 and the costs would be recouped in approximately three years with not having to pay storage costs.

Motion by Howard, seconded by Clark and unanimously carried to authorize Bob Evans to explore the costs involved in purchasing a large container, delivery, and costs for rental/lease of property in New River to house the container and report to the Board via either email or telephone for final decision.

Old Business:

Proposed By-Law Change: The revised By-Laws were accepted and will be sent to the membership either via insertion in the Newsletter or individual emails for member review. At the September 4th meeting the By-Laws will be voted upon by those members present at the Membership meeting.

At this time President Winbourne excused himself from the meeting due to illness. Vice-President Stan Celestian assumed chair of the meeting.

Lapidary Equipment: Howard mentioned we need to draft an agreement with North Mountain Visitors Center relative to use of the lapidary saw,

Minutes continued on page 3.....

General Membership Meeting Minutes -- May 1, 2018

The meeting was called to order by Vice President Stan Celestian at 6:30 p.m. Approximately 43 people were in attendance. Stan introduced speaker Jodi Brewster, State Director of the Rocky Mountain Federation of Mineralogical Societies.

Ms. Brewster spoke about the Federation and how it can be helpful to the 17 clubs in Arizona. They have video's and c.d.'s with information on all types of rocks and minerals as well as website information, yearbooks, how to construct display cases and The Federation has two field trips per year. The Federation's convention this year will be July 20 to 22 in Rapid City, S.D. There will be contests for Clubs on their websites and newsletters. She mentioned the position of State Director has been vacant for some time, and she has now taken over the position and is doing "meet and greets" all over the State to meet members of the various clubs.

Financial Report: Cynthia Buckner, Treasurer, provided the financial report which will be filed for audit. She reported income of \$13, 686.84, expenses of \$10,528.22, Net income of \$3,158.62. Assets (checking, savings, petty cash) as of April 30 of \$29,749.22.

Field Trips: Ed will lead the upcoming field trip May 19 th to Christopher Creek in Payson.

By-Laws Change: Stan reported the By-Laws have been updated and will be presented to the Membership either via email or Newsletter, for members' review. Voting on approval of the By-Laws will be at the September Membership Meeting.

After the refreshment break, there was a sell, swap, trade of donated rocks, minerals, etc.

There being no further business, the meeting adjourned at 8:15 p.m.

Respectfully submitted,
Victoria Peterson, Secretary



Visit <http://rmfms.org/> for news about conventions, events, and associated clubs. If you are travelling, you might want to contact a club local to your destination. Maybe they have a field trip you could join, while in town.

...Minutes continued from page 2

certification of users, fees charged, and use of these fees by DMRMC for any supplies or repairs needed for saw. Howard agreed to draft such an agreement for review at June Board Meeting.

It was also noted that we need to complete an inventory of items in storage as well as stored in members' homes. This inventory should list the name of item and estimated worth.

New Business:

Boulder Creek High School Scholarship: Ed reported that we will again offer a \$1,000 scholarship for a High School Student selected by the three guidance counselors at Boulder Creek. They stated they have two candidates they are considering at this time.

Items to be carried forward to June Meeting:

- 1) By-Laws vote (Executive Board and Membership Meeting)
- 2) Lapidary equipment agreement
- 3) Storage container purchase and proper rental
- 4) Boulder Creek High School scholarship candidates

There being no further business, upon motion, second, and carried, the meeting was adjourned at 6:10 p.m.

Respectfully submitted,
Victoria Peterson, Secretary

Minutes continued on page 4....



With blossoms outstanding among the cacti, *Trichocereus* cacti have been going on their early summer blooming spree this month.
Photo by Susan Celestian

...Ripple Marks continued from page 1



FIGURE 2 Crossbeds in Ripple Marks This exposed vertical cross-section of sediments near Port Townsend, WA exhibits the small crossbeds formed by ripple marks. The coin-for-scale is a quarter. Photo used with permission of Dan McShane (<https://washingtonlandscape.blogspot.com/search?q=port+townsend>)

Ripple marks form in coarse to fine sands and silts. Coarser sediments are difficult to move. You will often find the coarser sands grains settling in the troughs.

In addition to imparting environmental information, ripple marks can be used to determine the original UP direction, in a bed of rocks. See Figure 3. Often rocks are tilted - even overturned - during mountain-building events, and is often quite useful to determine original UP, so to put pre-deformation events into proper chronological order. Of course, it can be useful to verify original UP in sedimentary rocks that have been undisturbed.

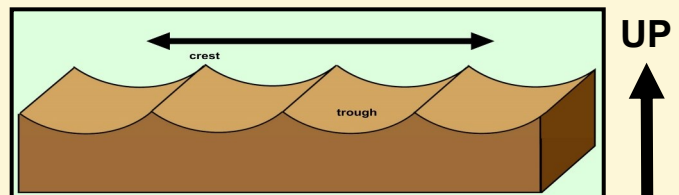


FIGURE 3 Determining Original UP in Sedimentary Rocks The ridges of ripple marks are sharper at the crests than the troughs. This geometry can be used to determine original UP in a sequence of sedimentary rocks (overturned or not).
Diagram by Susan Celestian

Ripple Marks continued on page 8....

...Minutes continued from page 3

Board of Trustees Special Meeting Minutes — May 15, 2018

The meeting was called to order by President Ed Winbourne at 7:00 P.M. Those present were: Ed W., Tammy Early, Sue and Stan Celestian, Cynthia Buckner, Bob Evans, Bob Salter, Tiffany Poetch, Claudia Merek, and Victoria Peterson.

A quorum was established.

Ed opened the meeting stating the purpose of the meeting was to give final approval of the By-Laws changes before submission to the General Membership.

There was discussion on the following items in the current by-laws. The following was agreed upon:

- Family memberships will be granted to families with children under the age of 18. Currently family memberships are applied to two persons living in the same residence; additional family is \$5 each. This new family membership will be the same fee no matter how many live in the residence.
- Removed the term "Executive Committee" from By-Laws There will be only Board of Trustees which includes Officers and Trustees.
- Term of office was changed to one year term of office for Trustees and officers effective January 1, 2019.

- Added "Yearly Budget for the Club will be established by the Board of Trustees and submitted to the membership for approval at the December General Membership Meeting. In November, the Board will work on the yearly budget listing line items for expenditures with voting on budget to occur at the December meeting.

Added "Expenditures – All expenditures of \$500 or more except for those expenditures noted in the Club yearly budget will be presented and approved by the membership at a General Membership Meeting in December.

Motion: to approve the current changes to the By-Laws stated above made by Bob Evans, seconded by Tiffany Poetch and unanimously carried.

Victoria is to provide updated By-Laws to Tiffany for dissemination to the General Membership via email this week so they have time to review them. Voting on approval of the amended By-Laws will be an agenda item for the June 5th General Membership Meeting.

There being no further business, on motion made, seconded and carried, the meeting was adjourned at 7:45 PM.

Respectfully submitted,
Victoria Peterson, Secretary

DMRMC Awards \$1000 Scholarship

Monday morning, May 21, 2018, club president Ed Winbourne, and treasurer Cynthia Buckner, presented the club scholarship to Boulder Creek High School senior, Jack Kollings. Jack was chosen by the Boulder Creek Science Department and the Guidance Office. He is the first Boulder Creek student to take all four school science majors. And in the Fall, Jack will attend ASU, to pursue a pre-med major. Congratulations Jack!!



On the left, Cynthia and Ed stand with scholarship awardee, Jack Kollings. Above, Jack stand with his parents, David and Jenna Kollings.

FIELD TRIPS

**SUNDAY, APRIL 22, 2018
CLUB PICNIC AT ANTHEM**

Chef Ed cooks gourmet burgers at the club picnic to celebrate another successful Gem & Mineral Show. The club provided the meat, and attendees supplied sides and desserts, potluck-style.

**SATURDAY/SUNDAY, MAY 1-2, 2018
TOPAZ MOUNTAIN, UTAH: Topaz**

On Sunday, May 2, 2018 Stan Celestian led a field trip in search of the elusive gem-quality topaz available at Topaz Mountain, near Delta, Utah. Attendees were Stan & Sue Celestian, Dave Haneline, and Robin Shannon. On

Saturday, Dave and Robin collected in the commercial fee-collecting area at the base of the mountain. Topaz Mountain Adventures charges extra for collecting permits that include a dynamite blast. Dave and Robin were lucky that they showed up just prior to a blast scheduled for someone else! Dave's



prize specimen is pictured here. A couple of peaches!

Photo by Dave Haneline, posted by Dave on the DMRMC Facebook page.

Field Trips continued on page 6.....

...Field Trips continued from page 5

TOPAZ MOUNTAIN continued:



The view of Topaz Mountain as we approached from Delta.
Photo by Susan Celestian



A strenuous hike up to the light-colored areas, gets you to the primary collecting. *Photo by Susan Celestian*



The arrow marks the spot. Look closely and you will see Stan's orange bucket.
Photo by Susan Celestian



Fumarole Butte, a shield volcano between Delta and Topaz Mountain. (Note the very low angled slopes of the volcano.) The "nipple" is a volcanic neck (remnant of the pipe feeding the volcano's vent). The basaltic andesite was extruded about 1 million years ago, during the Jaramillo normal event.

Photo by Susan Celestian

Photos by Susan Celestian



This is the weather that greeted us on Monday morning. Yes! That is snow :-)
Photos by Susan Celestian



Field Trips continued on page 7.....

...Field Trips continued from page 6

**SATURDAY, MAY 19, 2018
PAYSON AREA: Zebra Chert,
Peach Chert, Fossils**

Attendees also found some weathered horn corals.
Photo by Stan Celestian



The forest floor is littered with chert -- some of it peachy and some of it with a black-and-white, concentric zebra striping. *Photos by Susan Celestian*



Lance Gulseth browsing for colorful jasper. About 9 club members attended this field trip, but most scattered into the woods, never to be seen (by the author) again 😊.
Photo by Susan Celestian



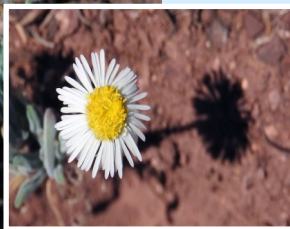
This is some of the haul taken home by the Celestians. Note 2 polished cabs.
Photo by Stan Celestian



Tidy Fleabane (*Erigeron Concinnus*) *Photo by Susan Celestian*



Lance's take-home pile.
Photo by Lance Gulseth, as posted on the club's Facebook page



Lupen (*Lupinus sp*) *Photo by Susan Celestian*



Spiny Star or Viviparous Foxtail cactus (*Escobaria vivipara*) I think *Photo by Susan Celestian*

Alpine Cancer-root or Alpine Squawroot (*Conopholis alpina*), a saprophytic plant.
Photo by Stan Celestian



Indian Paintbrush (*Castilleja sp*) *Photo by Susan Celestian*



...Ripple Marks continued from page 3

Environmental significance of symmetric ripple marks: Again, these structures form where there are no or weak currents -- where water sloshes or oscillates back and forth. This action is characteristic of shallow aquatic environments, and in deep relatively quiet water. (These are not particularly characteristic of wind deposited sediments, as usually the air is moving in one prevailing direction.) So, we know that the sediments were deposited in water, and that the water was quiet -- standing, sluggish, and/or shallow -- not impacted by strong directional currents. AND the strength of the sloshing (and perhaps of the air flow that generates said sloshing) can be inferred from the size of the ripples. See Figures 4-5.



FIGURE 4 - Symmetrical Ripple Marks This slab is from Coconino Co., Arizona's Lower Triassic-aged Moenkopi Formation in Coconino County,



Arizona -- a red, fine-grained sandstone deposited in a fluvial floodplain environment, where shallow, sluggish streams and ponds could be found.

Photo by Stan Celestian



FIGURE 5 Symmetrical Ripple Marks These slabs are out of the 1.4-1.47 billion-year-old Belt Supergroup. This section of the supergroup is about 1.375-1.4 billion years ago, and comprised of muddy siltstone and mudstones, probably deposited in fairly deep, quiet, low-oxygen water, within a rift basin, where the North American and Columbia/Nuna cratons separated. *Photos by Susan Celestian*

Environmental significance of asymmetric ripple marks: As described above, asymmetric ripple marks form by directional currents, of wind or water. The result is that the ripple crests are pushed aside, so that individual ripples have a gentle upstream slope, and a steep downstream slope. See Figure 6. From these structures one can establish the presence of flowing wind or water, and from the ripple size/form, and sediment size, determine the strength and direction of that medium. It can be quite helpful, to the reconstruction of the geologic past, to know in what directions paleo-currents flowed. See Figures 6-8.

Ripple Marks continued on page 9...

...Ripple Marks continued from page 8



FIGURE 6 Asymmetric Ripple Marks These photos are views of dune surfaces in White Sands National Monument. The ripple marks “lean” to the right. The arrow indicates the wind direction to the upper right.

Photos by Stan Celestian

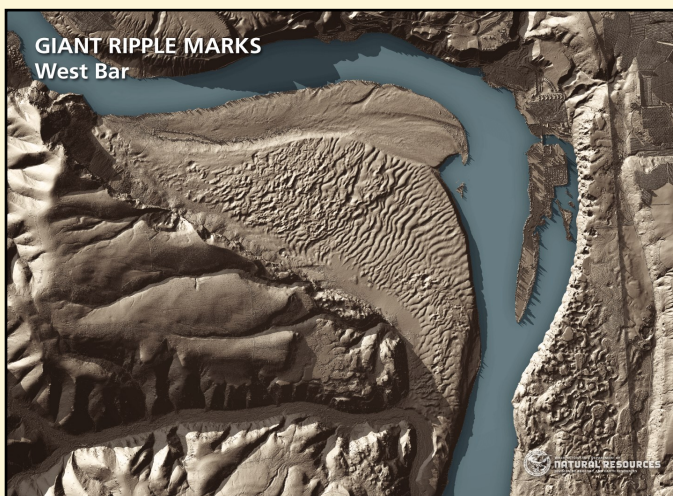


FIGURE 7 Giant Ripple Marks This is a LiDAR image of giant ripple marks on a bar within the Columbia River -- similar to those in Figure 8. Image courtesy of the Washington Department of Natural Resources <https://www.dnr.wa.gov/lidar> (re-use of this image may require additional permission from DNR Washington)

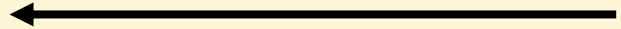


FIGURE 8 Asymmetric Ripple Marks This is a view of the Columbia River, near Crescent Bar, from a terrace near Wenatchee, Washington. Believe it or not, the hills in the middle of the photo are in fact ripple marks, in river gravels and sands. They resulted from catastrophic flooding, resulting from the failure of ice dams on the Clark Fork River, behind which Glacial Lake Missoula formed, in western Montana, during the last Ice Age. This lake held about half the volume of water in today’s Lake Michigan, but drained many times, with water rushing out at estimated rates of between 4 and 14 cubic miles/hour!! At the time of the flood that created these ripples, the river have been over 500 feet deep -- in fact, this overlook would have been under water. The arrow indicates the direction of water flow.

Photo by Susan Celestian

FEED YOUR CREATIVE SIDE AND ATTEND THE WIRE WRAPPING CLASS

4:30-6:30 pm
Prior to the meeting on
Tuesday, May 1, 2018

This month the class will work on weaves w/beads.

- Bring: cab or stone, about quarter-sized or larger; 20 gauge or higher round dead soft wire; Round nose pliers and wire cutter.

Free, but donations are appreciated. Questions? Contact Jennifer at Jennifer@eliteshuttersandblinds.com

Pu'u 'O'o Eruptions Ramp Up

By Susan Celestian

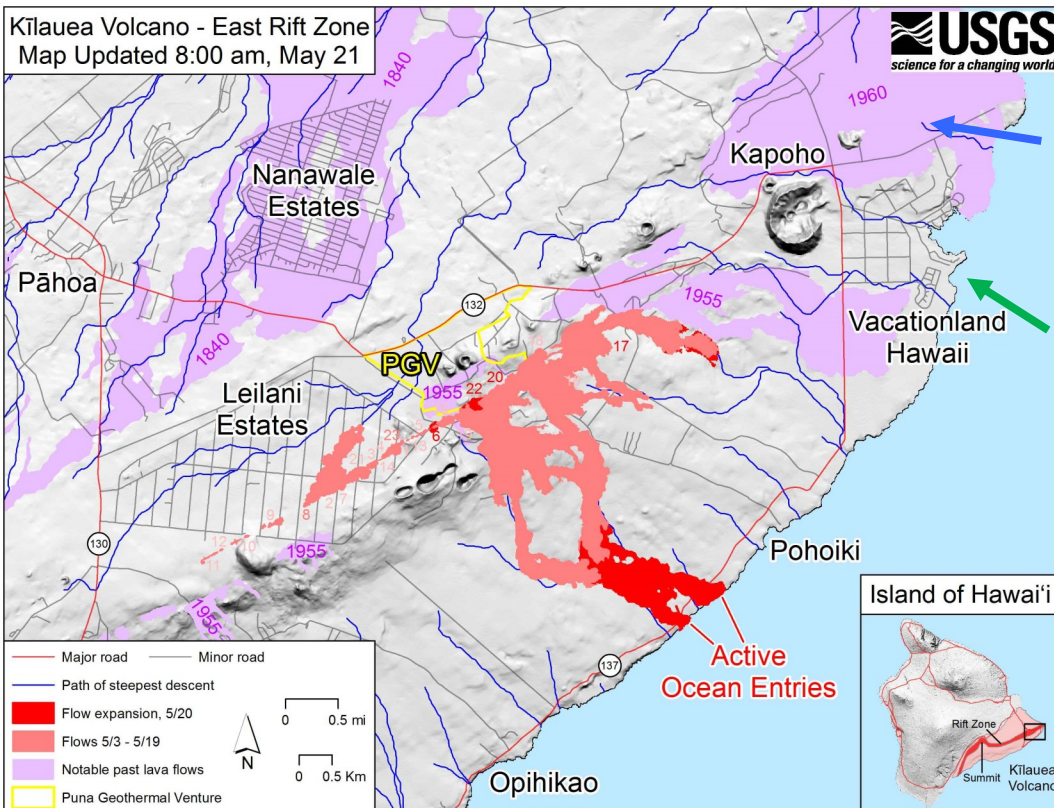
The Big Island of Hawaii is dominated by the two peaks of the massive volcanoes, Mauna Kea and Mauna Loa. Eruptions from these two volcanoes have built the island. Both are over 33,000 feet tall, rising about 13,800 feet above sea level. Kilauea is a parasitic cone (rising 4200 feet) occupying the southeastern side of the island, on the flanks of Mauna Loa; and Pu'u 'O'o is a volcanic crater, within the East Rift Zone. It is from Pu'u 'O'o from which the current eruption issues. In fact, this eruptive phase began in January of 1983, and the volcano has been erupting almost continuously for the last 35 years.

Just a note: Stan and I first visited Hawaii in July of 1983, and were very lucky to snag a helicopter ride over the flowing lava. Actually, we spent 2 nights in Volcano House prior to an eruption, and as we had to leave for Kona, we took a helicopter ride over the crater of Pu'u 'O'o. The night after our arrival in Kona, the volcano erupted along fissures. We called the helicopter company, and told them we were on our way back. Katia and Maurice Krafft (French volcanologists) had already reserved the copter, in the event of an eruption. Upon arrival at the helicopter office, we were faced with a crowd of people waiting for their turn at a flight. Either our phone call put us at the top of the list, or the staff took a liking to two poor (and I do mean poor) geology professors, but as soon as the Kraffts completed their aerial foray, we were ushered out to the waiting helicopter. Talk about excited!!! We were snapping pix as quickly as we could, when I noticed our 6-year-old daughter just sitting there with her camera in her lap. I hollered in her ear (it's very noisy in a helicopter), and she told me that she was "very disappointed" --- the eruption was not a column spouting from the crater. I told her to take pictures, and we'd talk about it later. She was so young, she probably has no vivid recall of the event, but despite her disappointment, it was AWESOME. Spatter cones, red hot lava flowing out of slit-like fissures, overseen by the glowing round hole of the crater. Last summer, we were witness to an almost continuous sputtering of 50-100' tall fountains of lava within the Halema'uma'u crater within Kilauea caldera. (See photos on page 10-11. Go to <https://www.youtube.com/watch?v=IRfZ2q4Jvmo> for video of lava flowing to the sea, and <https://www.youtube.com/watch?v=-vTw3gqjEU4> for a video of the plume within Halema'uma'u crater 2013.)

Now the majestic and destructive/constructive power of the volcano is demanding attention!

*Vog, Laze, and Lava -- aha! **

**Vog is a mix of volcanic gases, such as sulfuric dioxide, smog, and fog. Laze is a mix of hydrochloric acid and fine glass particles. Lava is molten rock flowing on the Earth's surface.*



This USGS map illustrates the volcanic history of the currently impacted area. The purple areas are past lava flows, and red marks the current flows.

At least 22 fissures have opened up in Leilani Estates. At least 40 buildings have burned. Noxious gases are adrift. The rain forest is being overrun and burned. Over 2200 earthquakes have been generated (largest M6.9). And on May 19, lava flows met the sea.

The blue arrow points to a massive flow from Jan-Feb 1960. The green arrow points to the author's favorite vacation area -- Kapoho Tidepools (Wai'opae Tidepools Marine Life Conservation District). We fear that it will either be overrun by lava, or the gases and heat will kill the coral and change the ecology.

UPCOMING FIELD TRIPS

WHEN: Saturday, May 19, 2018

WHERE: Payson area

WHAT: Zebra chert, peach agate, Pennsylvanian fossils (See photos on this page)

OTHER: Leader - Ed Winbourne

COALITION TRIP

WHEN: Saturday, May 26, 2018

WHERE: Payson area, Arizona

WHAT: Zebra chert, peach chert, fossils

CANCELLED

WHEN: June 2018 (TBA)

WHERE: Jerome

WHAT: Fossils, possible Gold mine tour (fee)

DATES SUBJECT TO CHANGE

NEEDED: QUALITY MINERAL (or OTHER) DONATIONS WITH LABELS -- for monthly raffle prizes, and for raffle and door prizes for the annual show. If you have specimens to donate, please see Robin Shannon. The Daisy Mountain Rock and Mineral Club is a 501(c)(3) non-profit organization, and will gratefully acknowledge your donation with a Tax Deduction Letter. Thank You!

NOTE FROM THE EDITORS

Have a geological interest? Been somewhere interesting? Have pictures from a club trip? Collected some great material? Send us pictures -- or write a short story (pictures would be great). We encourage topic suggestions also.

Deadline for the newsletter is the 22nd of the month.

Mail or Email submissions to:

Susan Celestian
6415 N 183rd Av
Waddell, AZ 85355
azrocklady@gmail.com

...Hawaii continued from page 10



Pu'u 'O'o vent in July 1986. Photo by Susan Celestian

Hawaii continued on page 12....

...Thanks continued from page 11

things to see and do---and because of this we have become the benefactors of larger attendance numbers. 5 years ago the egg carton part offered 12 rocks and 12 minerals—we now offer 2½ times that amount.

Interest in the entire show has increased significantly, along with the Kids Corner to the extent that at unpredictable times we are overcome with customers. This happened in a big way at this last show---people with children carrying egg cartons were everywhere! Our line was massive, stalled, and it appeared we were about to “crash and burn”, but miraculously---out of nowhere, 4 savvy members appeared. They were not asked---they simply witnessed a train wreck about to happen and jumped in line and took up the job of rock and mineral tutoring. Their entry was seamless, as if it were time for their shift---and the line began to move again! Without these observant dedicated unsolicited members' help---our day would have been an extremely disorganized mess!

So a HUGE Thank You to:

Nancy Gallagher, Brenda Zabrowski, Deanne Gosse, and Shirley Cote

Again and again my warmest THANKS to all who helped with the Kids Corner!!

...Hawaii continued from page 11....



Fissures, spatter cones, and lava flows issuing off the flanks of Pu'u 'O'o in 1986. Not unlike the currently ongoing eruptions.



Borrowing colors from the volcanoes upon which they live are the (A) Red-crested Cardinal (*Paroaria coronata*) and the (B) Yellow-beaked Cardinal (*Paroaria capitata*). Photos by Susan Celestian



Nighttime photos of fountains within Halema'uma'u Crater within Hawaii Volcanoes National Park, 2017. Photos by Susan Celestian

FOR SALE \$300

8" All-U-Need Lapidary Machine by Hi-Tech Diamond. Cost new is \$600 (<https://hitechdiamond.com/shop/all-u-need-lap-machine-rock-mineral-model/>). This unit is barely used, and includes all the original disks: 180# diamond disk/backing plate, 325# brown disk/backing plate, 600# red disk/backing plate, 1200# blue disk/backing plate, a white polishing pad/backing plate upon which 14,000# diamond paste has been used, and a copper-colored disk that is I think another kind of polishing disk. All have lots of life left in them (the copper one has never been used).

The unit works great for producing cabochon. If you are short on space, or don't want to dedicate a large space to grinding and polishing, this is the machine for you!

EFFECTIVE! COMPACT! AFFORDABLE!



If interested, contact Stan/Sue Celestian stancelestian@gmail.com or 602-361-0739.

Do you have something hobby-related to sell? Send me an ad, and I'll put it in the newsletter.

UPCOMING AZ MINERAL SHOWS

June 1-3 - Flagstaff, AZ Coconino Lapidary Club; Silver Saddle Outdoor Market, 9001 US 89 N (US 89N & Silver Saddle Rd); Fri-Sat 9-5, Sun 9-4; Admission: free.

July 7-8 - Pinetop, AZ White Mt. Gem and Mineral Club; Hon-Dah Casino & Resort, 777 Highway 260; Sat 9-6, Sun 9-4; Admission: \$2.

August 3-5 - Prescott Valley, AZ Prescott Gem and Mineral Club; Prescott Valley Event Center, 1301 Main St.; Fri-Sat 9-5, Sun 9-4; Admission: Adults \$5, Seniors/Students \$4, children under 12 free with paid adult.

October 12-14 - Buckeye, AZ West Valley Rock and Mineral Club (HelzaRockin' Gem and Mineral Show); Buckeye Arena, 802 N 1st St (Miller Rd); Fri-Sat 9-5, Sun 9-2; Admission: Adults \$3, children under 13 free, with adult.

October 13-14 - Sierra Vista, AZ Huachuca Mineral and Gem Club; Cochise College, 901 N Colombo Av; Sat 9-5, Sun 10-4; Admission: Free.

October 20-21 - Sedona, AZ Sedona Gem and Mineral Club; Sedona Red Rock High School, 995 Upper Red Rock Loop Rd; Sat 10-5, Sun 10-4; Admission: Adults \$3, children free.

November 2-4 - Black Canyon City, AZ High Desert Helpers; High Desert Park, 19001 E. Jacie Ln.; Fri 9-4, Sat 9-5, Sun 9-4; Admission: Free. (Interesting group: http://www.highdeserthelpers.org/?page_id=12)

If you are travelling, a good source of shows AND clubs is <http://www.the-vug.com/vug/vugshows.html> or <http://www.rockngem.com/ShowDatesFiles/ShowDatesDisplayAll.php?ShowState=AZ> For out-of-the-country shows: <http://www.mindat.org/shows.php?current=1> A good source for a list of Arizona Mineral Clubs and contact information is <http://whitemountain-azrockclub.org/Public AZ Clubs Links.html>

Facebook

Visit the club page periodically. See what is happening, and boost our visibility on the web. Go to: [The Daisy Mountain Rock and Mineral Club](#). It is set up so you can post photos of outings or related items.

WEBSITE

<http://www.dmrmc.com/>

Here you will find photos highlighting field trips, activities/classes, and our show, links to rockhounding regulations, newsletter archive, geologic articles, and links to geologic resources.

If you have comments, contact webmaster, Nancy Gallagher.

Officers, Chairpersons, & Trustees

- President:** Ed Winbourne.....ewinbourne@gmail.com
- Vice President:** Stan Celestian
- Secretary:** Victoria Peterson
g.victoriapeterson@yahoo.com
- Treasurer:** Cynthia Buckner
- Publicity:** Howard Roose
- Membership:** Tiffany Poetsch tnpoetsch@gmail.com
- Editors:** Susan & Stan Celestian.....
azrocklady@gmail.com
- Field Trip:** Stan Celestian stancelastian@gmail.com
- Show Chair:** Ed Winbourne
- Trustees** (terms expire in December of each year, if The revised bylaws approved):
 - Cynthia V
 - Susan C
 - Tammy E
 - Bob E
 - Jennifer G
 - Joe G
 - Clark L
 - Claudia M
 - Tiffany P
 - Jim R
 - Witt R
 - Howard R
 - Bob S

Meetings are held the **1st Tuesday of the month** at the **Anthem Civic Building**, 3701 W Anthem Way, Anthem, AZ 85086. Business meeting at 6:30 pm. We **do not meet in July or August.**

DMRMCLUB@GMAIL.COM

Membership Dues: \$20.00 Adults per Person
\$25.00 Family (2 people)
\$ 5.00 Additional children

Meeting Dates for 2018

Jan 2, Feb 6, Mar 6, Apr 3, May 1, June 5, Sept 4, Oct 2, Nov 6, Dec 4