



# **Rock Talk**



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### The Cover Photo

Believe it or not these are human kidney stones.



## From the Editor

Who would have guessed that we would be fighting a pandemic that is so aggressive and that so many of us would be ill-prepared for dealing with social distancing, isolation, food and critical supply shortages, and the uncertainty of what lies ahead. As a result, last month the Board of Directors of our club suspended all club activities until it is safe for them to resume.

All club members should have been informed about the cancellation of our April meeting and the suspension of all other club activities, including subsequent monthly club meetings. If you didn't get an email about the status of club activities, it could be because we don't have your correct, current email address. If you would like to be included in our club membership email list and all future club notices, send your email address to micacycle@gmail.com or n1ve@amsat.org

We intend to update our website with current information relative to club meetings and activities, so you might want to check the site from time to time. (www.withlacoocheerockhounds.com) At this time, since we are not having club meetings,

depending on the spread of COVID 19 and any future orders from federal and state authorities, there may be little need for the club newsletter. However, if I am able to put something together and if club members and officers send me relevant information for the *Rock Talk*, we will continue to try to publish the newsletter.

This issue of Rock Talk contains rock club related information and it also has timely suggestions for helping members and their families cope with the dreadful virus that has put most of our planet in turmoil.

Please strive to be safe; for your health, your family's health, the health of your friends, and for the health of our society. Best of luck.

Mike Stone, editor



**Hernando County, FL** 

### **President's Message**

**Judith Birx** 



I hope and pray that this newsletter finds you in good health. I also hope your loved ones around the country are also well.

I want to thank all the members and their families that are on the front lines of this horrendous situation..

We of course are canceling our meeting for the month of April. There is a possibility that we will need to cancel the meeting for May as well. The newsletter will be an easy way for everyone to stay in touch. There will be no jewelry classes as well. I know this all goes without saying but it is good to mention it. Our board and club support the government in the journey to conquer this virus.

I think it might be a great ideal if you send Mike Stone and Peggy Burns photos or letters from home so we can share with everyone! It's a good ideal we try to stay positive!

Mark Moore oversees teaching a class of preparedness to parts of our community. I think it will also be an interesting class to provide for our members once we get back to normal or in the fall when our snowbirds come back. Once again that is if we are finished with this nasty experience by then.

I'm still thinking of the welfare of our club and I will be thinking how we can make our gem show go off without a hitch. Please keep in mind we will have to really work hard to catch up when we get back to normal. We will need your help.

Thank You

### **Help for Club Members**

From Dave Letasi

I recently went to both Winn Dixie and Walmart. I talked with several managers and so far their corporate divisions are not restocking greater quantities, so items will still trickle in. It is critical that we do not get into a hording mentality; it just makes it difficult for everyone.

I didn't have any trouble getting supplies, but toilet paper is still a problem. The Family Dollar was getting stocked with TP in a local flyer. Toilet paper will be the challenge, if we are restricted to the amount that a person can order, it will be necessary to have our folks order their own on line. It's getting around a dollar a roll that I've seen so far. It's a little early to panic but we should all consider saving any old clothes, rags, and any paper products; and conserve on your paper towels around the house. Start saving your Sears and Roebucks catalogs folks (joke). Bleach is cheap and still available and can be used as disinfectant for surfaces (not vinyl surfaces in vehicles). Buying vinegar is a good idea as it can be used as a personal wipe. Sounds crude but there's nothing cute about poop. Use bar soap while around the house and save your anti bacterial soap for after going in public for hand washing.

I recommend to our members that they start ordering needed supplies on line. Many offer products with free shipping especially on Amazon and many eBay items can be shipped. I will also share websites to members that need certain supplies that are difficult to find. I will help any of our members who are challenged ordering on line. You may need to consider TP alternatives. Vinegar is a practical cleaning supply if other products become difficult to find.

Alcohol is on a national moratorium and is for sale now to only hospitals and medical facilities. It is not available to the general public. Alcohol in most liquor is rated too low to use as a hand sanitizer. Soap and water for hand cleaning are still being preferred by physicians. Walmart is now only open 9:00 am to 9:00 pm. 9:00 am to 10:00 am is for seniors only. Cleaning crews are disinfecting all night. Target is has the same policy. Many others are following suit. Canned goods can difficult to find and club members should make sure they have a minimum of 90-day supply of critical medications they require. Most pharmacies are gearing up for this. If you do not have a 90-day supply, contact your physician.

Members may contact me at <u>dleta-si@yahoo.com</u> for information or assistance. I too am at high risk when entering public facilities, so I ask members to request assistance if they have major health issues such as COPD and immunity issues, and do not have family assistance or other back up.

We will all get through this if we work together and network with each other. It's best to get your mind off these issues. Now is a good time to study your minerals and specimens and re-labeling will keep you busy. Influenza infections usually run their course by early summer.



### **Secretary's Report**



by Melodye Steverson



### Withlacoochee Rockhounds Monthly Meeting Minutes 3-1-2020

The meeting was called to order by club president Judith Birx at 7:00 pm.

- We all stood for the Pledge of Allegiance followed by a moment of silent prayer.
- There were no new members to recognize.
- There were two guests in attendance; Joe and Eileen.
- Mark Moore made a motion to accept the minutes of our February meeting as printed in the newsletter. It was seconded by Dave Letasi and passed by all members.
- Club treasurer Janet Wheeler gave the Treasurer's Report.
- Roberta Oldread made a motion to accept the Treasurer's Report as presented. The motion was seconded by Dave Davis and approved by all.

### **Old Business**

• Club president Judith Birx announced that the club's annual gem show with be held on December 4,5 and 6, with setup on the 3<sup>rd</sup>. It will be held in the usual place; Veteran's Park in Hudson. Volunteers are needed to serve on the planning committee. If interested contact Ralph Barber.

### **New Business**

• Dave Davis reminded members that the Vulcan Mine trip is this coming weekend.

(*The trip was canceled-editor.*)

- Judith Birx announced;
- The March Board of Directors meeting will be held 3/17 at 6:30. Board members will decide which applicants will be selected for the William Holland School scholarship at that time. (*The board meeting was canceled-editor.*)
- The monthly jewelry class will be on 4/7 from 9am to 12pm. (*The jewelry class was canceled-editor.*)
- The next monthly meeting will be on 4/15 (*The April meeting was canceled editor.*)
- She also told members that she and director Roberta Oldread made the trip to Live Oak for the 2<sup>nd</sup> Annual SFMS Rock Swap. They had an enjoyable time and met many members from the Gainesville Rock Club who suggested our club and theirs meet halfway sometime soon to have a picnic and rock swap. President Birx suggested that our club should plan to have a picnic on the Senior Center grounds before the end of the year as it would be good for the club.
- She also said Lynn Walters will give a program on how to clean the fossils we were given last month. Lynn will do this as soon as her work allows.
- Roberta Oldread announced that our club has been given permission to come to the 2<sup>nd</sup> Cemex Mine, The Center Hill Mine, the 3<sup>rd</sup> Friday of each month, from 8:30am to 12:30pm. They also agreed to put out extra piles for us to go through, several days in Spring. Contact Roberta for more information.
- There will be a Fossil Fest at the Tampa Fairgrounds March 14 and 15.
- Roger Wheeler announced that Rovie and Elaine Alford had received a wall plaque from the Weeki Wachee Swamp Festival for volunteering their time and service for

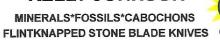
- 25 years. Club members responded with a round of applause.
- Next month's refreshments will be provided by, Bear, Judith and Melodye.
- Dave Letasi made a motion to adjourn the meeting, Lauren Bell seconded, passed by all.
- The meeting was adjourned at 7:29 pm. Minutes respectfully submitted by Secretary Melodye Steverson.

### **Board of Director's Meeting Minutes**

There was no Board of Directors meeting on March 17<sup>th</sup> because of the COVID 19 restrictions called for by the Governor of Florida. However, our President, Judith Birx, contacted directors by phone to poll each one and collect each vote on the William Holland School Scholarship award. Since there were only two applications this year, and both applicants were deemed worthy, the scholarships were rewarded to Judith Birx and Roberta Oldread. Congratulations Ladies!

Report respectfully submitted by Secretary Melodye Steverson.

### **KELLY JOHNSON**



buy / sell / trade

retail / wholesale

... Yes I buy collections, lapidary equipment, etc...

email: KellyMineralsFossils@aol.com facebook: Kelly minerals fossils 239-940-9773 SPRING HILL, FL









Finished projects







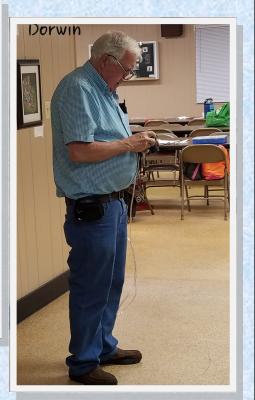












### **Million Souls Mine**

On Sunday March15<sup>th</sup>, three Withlacoochee Rockhounds club members Roberta Oldread, Jim Gugliotti, and Ted Robinson from Michigan, met at the Million Souls Mine, owned by Dan and Sally Yoder, to help clean out the weeds that grew over the mine. That way the ground would be more visible to the geology and archaeology team that was coming out to excavate several areas with a backhoe this week. Dr. Bob Austin, archaeologist, and Dr. Jon Bryan, geologist, studied the archaeology of the coral deep in the ground at the mine. This has been a very exciting study, starting in the beginning in July 2019 when several club members did the first coral head excavation. At that time there hadn't been a study on the coral in Pasco County. Stay tuned to hear what they learned and what they discovered at the site.

> Roberta Oldread Withlacoochee Rockhounds club



Roberta in the weeds



Ted and Dan in the overgrown weeds



Jim and Dan examining the first excavation site our club dug July 2019



Laying out the excavation site in 2019



Jim pulling weeds



**Exposed coral head** 



Dr. Robert Austin documenting various layers



Dr. Robert Austin

### Disaster Prep. Training Do You Want It?

I wish that I could be writing about rocks or fossils, but this time I'm writing about our current situation with the shutdown over the Covid 19 virus.



The good news is that viruses don't last long on rocks and minerals out on the earth's surface. The bad news is as soon as we take rocks away from their exposure to sunlight they become just like any surface and will be viable up to a few hours or more after contamination by the virus.

As some of you may know Leslie and I have been teaching Disaster Prep. for over twenty years. We have taught hundreds of first responders; fire, LEOs, medics, military, as well as civilian teams such as auxiliary units and CERT (Citizen Emergency Response Team) about dealing with disasters. In fact in the not-to-distance past we had discussions with rock club members about the very problems we are facing now. We are currently at our place in Georgia, helping as many folks up here as we can. We hope to be back in Florida as soon as events permit (and when our son allows us to come back). There are, as of noon today (Tuesday March 24<sup>th</sup>), no cases reported in any of the four counties making up the northeast Georgia Mountains, and we are very comfortable. Stores are open, there is plenty of gas, the power is on, and all is well.

Pandemics have been around for centuries, the Plague of Justinian, the Spanish Flu, The Hong Kong Flu, Black Death, Bird Flu, Swine Flu just to name a few of the more re-

cent (historically speaking.) If we go back further we can find even more plagues. So they are not new and we, as a species, are still here. Maybe not any smarter, but still here.

In this short article I can't begin to give advice that has taken us (Les and me) twenty or more years to learn, but if there are enough folks wanting a class or a program, when events allow us to hold meetings again, maybe we can do one for club members. Perhaps in a few weeks or months, when the virus explosion calms down we can do the class on Disaster Prep. at a club meeting.

Remember one thing, this is what is called an "echo" virus, it will subside when warm weather gets here but will come back next season, maybe stronger maybe not. We have had several these viruses in recent years. How strong it comes back depends on several things. ONE, how many people were infected, got it, then recovered and now have immunity. TWO, did we develop an effective vaccine over the summer, and are people vaccinated. THREE, did the people learn their lesson and prepare for the next time. If the current politics and politicians are any, example we are in serious trouble. Only time will tell.

The preparations for almost all "likely to happen" disasters follow similar paths. One must first define the problem then look for most likely ways to mitigate the issues. In our programs we first look for events likely to happen, and generally fall in one of four categories.

1. Short Term-Local (neighborhood/town) Area. Lasts from one to three days, effects are in a localized area, are usually mitigated by local responders. Some of these are: Local Blackouts, Limited Terrorist Events, Small Area Earthquakes, Small Cyclones, Small Local Volcanoes, Local Road Failures, Local Flooding, Local Ice Events, Local Medi-

cal Incidents, Local Area Fires, HAZMAT (Small Incidents), Sink Holes

In a Disease situation this would be referred to as an "outbreak" that local medics could handle.

2. Intermediate Duration Term-Regional (county/state) Area. Lasts from three days to three + weeks, effects cover larger multiple jurisdictional areas. Usually requires outside help. Might have multiple interdependent incidents. Some of these are;

Large Area Blackouts, Larger Scale Terrorist Events Massive Earthquakes, Massive Cyclones, Larger Volcanoes, Large Scale Fires, Large Area Flooding, Multi-Area Blizzard Events, Epidemic Medical Event, Large Scale Radiation Incident, Larger Scale HAZMT

In a Disease situation this would be referred to, as an "Epidemic" and would require more than local medics.

**3.** Long Term-Major (state/multi-state mult- countries) Area. Lasts into long term activities and recovery. Covers large areas (multiple states or countries.) Always requires outside assistance or mutual aid type actions. Might have multiple incidents. Some of these are:

Major Grid Blackout, Major Terrorist Events Multi-State Earthquakes, Super Cyclones, Large Volcanic eruptions, Multi-State Fires, Multi-State Flooding, Major Radiation Accident, Pandemic Medical Event

In a Disease situation this would be referred to as a "Pandemic". This is our current situation, per our Federal Government CDC.

**4.** Catastrophic, these are really way out there and beyond the scope of this message.

There plans and training for all of these events and each type of event requires event spe-

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cific actions. But all of these events have one thing in common, they all require **PRE-PLANNING** and a check list for taking action before the event happens.

### Remember Mark's Creed

Luck favors the prepared. People who had good outcomes in disaster events weren't just lucky; their actions were the result of preparations and planning.

In a disaster event, by the time you know you need something; it's too late to get it. All too often the results during and after a disaster, good or bad, were based on the amount of forethought and preplanning for equipment and supplies procured before they were needed.

In a disaster it is better to be one hour early than one minute late. In a disaster timing is everything, it's no good to evacuate ten minutes past the time the fire dept. told you to and now the road out of harms way has fire all over it. Or the water is now three feet over the road you were told to leave thirty minutes ago. Or in our current situation, you were warned to have extra toilet paper in the house three weeks ago.

We are currently in the Category 3, Long Term Event listed above. Diseases either at the outbreak, epidemic or pandemics levels will now, even with a small increase, require mitigation. This means that even a small outbreak of a "normal" disease such as flu or childhood diseases or even trauma could require major response and it could affect many people.

The training classes for these events are involved and would take more than a paragraph or two to explain. But at this point everyone needs to know a few basic facts and take

a few basic actions to improve their situation based on our current local and national situation.

The Corona virus has several forms. About 25-35% of common colds, as well as several childhood diseases (depending on whom you talk to) are caused by a type of Corona virus. In some of us it is no worse than a common cold, but for others it will be a life or death situation. This particular virus is called Novel which isn't like ones we are familiar with and will require time to study and prepare for. Currently the best advice is to follow your state and county mandates. Stay away from crowds. Wash your hands and face frequently. Use a hand sanitizer that is between 70% and 80% alcohol (60% will work but not as effective) and use it frequently. I can show you how to make it if it's not available and you happen to have some high test vodka and aloe gel on hand. It's too bad that wine doesn't work Les could really help out there. The reason for the gel is to hold the alcohol on your skin for a couple of minutes to give it time to work rather than immediate evaporate. Also products like Lysol or Basic G work as well. Clean surfaces frequently, if new folks are introduced into your "bubble world" even if it's just you...there are several products available. If you don't know what they are, email me and I'll give you a list. Several good ones on the top of the list are Lysol, Shaklee's Basic G, and PineSol, and of course Clorox Bleach (Sodium Hypochlorite, NaOCl). Hydrogen Peroxide (3% or better) is also good but it will (as with regular bleach) bleach the material it gets on. DON'T FORGET TO DILUTE THE FULL STRENGTH LIQUIDS. In addition be careful and do not mix bleach and acids (vinegar for example) as it produces a toxic (Chlorine) gas Always check to be sure there will be no interaction before mixing any combinations of

cleaners, disinfectants, or sterilizers. Also remember strong UV lights can disinfect but can also harm and burn you if used improperly.

A face mask is at most about fifty percent effective (It doesn't cover the eyes and ears that are great pathways for infection.) Face masks WITH goggles are much better but only if you know how to put them on and take them off without infecting yourself. Other things to be aware are the possible pathways into your body (any opening, yep you know the ones I'm talking about) and be sure all of these are protected. Big offenders are cuts and scrapes; any unprotected cut is a big invitation to viruses and bacteria to feast on your cells and fluids if they are on your skin looking to get in. A quick application of "NuSkin" or something similar, and a Band Aid works great; just refresh them as they wear or wear away. This one is important to me as not being a "sit in a chair" type, I am constantly getting cut or scraped. Leslie has applied three Band-Aids and NuSkin covering four cuts in the past day or so. If you do get cut, let it bleed for a minute or two to flush germs out of the wound before you band aid it or use a good disinfectant (like peroxide or for those brave souls, iodine.) This is one good reason, if you're like me, to wash not only your hands but your arms and face as well.

Personal health is of great importance. This means that you are healthy. Healthy folks fair far better than ones in poor health in any stressful disaster situation. I'm not a doctor but Les and I take Vitamins D and C daily, along with turmeric, and we eat vegetables and fruits (and drink juices) daily. We also have several friends who are MDs and follow healthy lifestyles. They say to follow the "Stay Healthy" path and live within published guidelines for a healthy lifestyle and you are far more resistant to viruses

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and other germs.

In general here are guidelines to follow that are the bases for many published virusfighting recommendations:

- Stay away from anyone presenting symptoms of cough and sneezing or who just look sick.
- Cover your mouth with heavy facial tissue that can be thrown away or at least use your sleeve when coughing or sneezing.
- Wash your hands and face every time you use the bathroom, before eating, or blowing your nose.
- If you are sick, STAY HOME, don't infect others.
- Clean and sanitize surfaces in and around your living space.
- Use soap and water if at all possible but when out and about, at least use an alcohol-based sanitizer.

Les and I are well prepared. We are helping those who can't help themselves. Those who could have prepared but didn't are at the bottom of the list. Those at the top of the list are the elderly (Wait a minute I'm elderly, does that mean Les has to care for me?), those who are disabled, those who are very young, and others who may have a good reason for not being prepared. I don't judge, I look at facts and the results. If you could but didn't, it's on you. I know a couple who have had multiple opportunities to prepare at least in a small way but didn't. They were caught in one of the major storms (no power, no deliveries, no running down to the store) in the mountains and lived off of their friends for several weeks. When all was well, they laughed and said they didn't need to prepare as their friends took care of them (they're not old or infirmed.) But their friends (the one or two they have left) say

something different. They say "Not next time...."

If you are interested in a program sponsored by the rock club either during a rock club meeting or at another time sponsored let an officer know (preferably me). Dave, Mike, and I have been discussing a possible program but unless there is interest, we are not going to spend the time and energy to prepare and deliver one. If you aren't interested enough to take a minute to send an email to one of us or a phone call, telling us what you think, then perhaps there isn't enough interest to have one. Here are the emails and my phone number:

Mark Moore <u>markles@bellsouth.net</u>
Florida 352 586 9607 Georgia 706 835 2077
Dave Letasi <u>dletasi@yahoo.com</u>

Remember to stay safe out there; we need every club member that we have....

M

# V&A snaps up medieval brooch found on Brigstock farmland

The rare, medieval diamond and gold brooch was discovered by a metal detectorist.

A "priceless" 600-year-old brooch that was found on farmland by a metal detectorist has been snapped up by the Victoria and Albert Museum. The flower-shaped diamond and gold piece was found during a dig on land at Brigstock, Northamptonshire, in 2017. It will sit with Queen Victoria's coronet and popstar Beyonce's Papillon ring, in the V&A's jewelry gallery.

The medieval brooch is the only one of its kind found in the UK - and one of just seven known to exist worldwide.

Finder Justin Owens said: "I didn't have high hopes, thinking it might be an old bottle

top or something."

He discovered it during an organized dig on former aristocratic hunting land, between Corby and Thrapston, but its existence has only just been revealed.

The brooch will sit alongside Queen Vic-



**Brooch** 

toria's beloved coronet, designed for her by Prince Albert...

Experts believe it played an important part



Queen Victoria's coronet

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in the display of status and wealth, but may have been torn from the wearer at great force before it was lost, possibly during a hunt. Some of the diamonds have fallen off, and original pearl decoration has been subject to biodegradation.

It is the second acquisition made by the V&A through the National Treasure Act.

The V&A said it was not able to reveal the monetary value of the brooch, but it has been described as "priceless".

Mr. Owens, who has been a hobby detectorist for four years, said he only had to dig about four inches down to uncover the treasure.\*

"At best I'd hope to come across a Roman or medieval hammered coin, but to find something so rare and valuable as this was a total shock," he said.

"It was absolutely caked in mud. I didn't have high hopes, thinking it might be an old bottle top or something.

"But what a discovery. Now I've seen it cleaned up I can't believe how exquisite it really is."

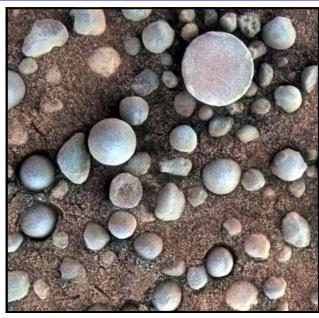
Sent to us by Michael Steverson



### **Blueberries on Mars**

The small spherules on the surface of Mars in this close-up image are near Fram Crater, visited by NASA's Mars Exploration Rover Opportunity in April, 2004. The area pictured is 1.2 inches (3 centimeters) in width. NASA/JPL-CALTECH/CORNELL/USGS

After NASA's Opportunity Rover landed on Mars in 2004, the probe revealed a puzzling phenomenon — tiny spheres, or spherules, just



Martian Blueberries (hematite concretions)

one-eighth of an inch (0.3 centimeters) in diameter, embedded in Martian rock. They appeared dark blue due to a high concentration of the mineral hematite, an iron ore. According to NASA, the tiny objects presented a minor problem for Opportunity, because they obstructed the grinding tool that the probe used to gather samples of the Martian surface.

The spherules were dubbed blueberries, after one scientist observed that the objects resembled blueberries in a muffin, as this 2004 Article from Astrobiology Magazine notes

### **Dorwin's New Acquisitions**

Dorwin bought a couple of interesting fossil specimens at the March club meeting.



Nankinolithus Ordovician Trilobite

This specimen is a member of the Order Asaphida, Family Trinucleidae, Nankinolithus. The cephalic pits (fenestrae) that distinguish the Trinucleids are very evident, the means by which this trilobite filtered detritus from the seafloor. The trilobite presumably hovered at the seafloor, using its legs to kick up particulates, which then passed through the cephalic ring. The taxon is rarely found with this degree of preservation, which is quite 3-D. The brick-red/orange color is natural.



The Mastodon tusk appears to be fully mineralized. It weighs nine pounds and was found in a river here in Florida.

### **Gail's Gift Hut**

Peg and I went to Howard's Flea Market in Homosassa last month and stopped at Gail's Gift Hut, run by Gail and club member, Randy Erickson. It had been a few months since we last stopped at their store and were pleased to see an increase in merchandise. They have hundreds of one and two dollar items and many beautiful high-end crystals and other specimens, including jewelry.

A piece of orange selenite caught my eye and I asked Randy about it. Randy told me that he polished both sides of the translucent mineral, which weighs about eighteen pounds. Then he drilled a hole that nearly reaches the center, and installed a light bulb in the hole. The internal light gives the orange selenite a wonderful glow that is brightest near the light and gradually softens toward the edges of the piece.



Orange selenite illuminated by a light bulb

If you are in the Homosassa area and Howard's Flea Market is open, you should stop and visit Randy and Gail's Gift Hut.. *Mike Stone* 

### **Agate Skull**

www.fossilera.com

This is a gorgeous, 7.7" long, polished agate skull that contains a quartz crystal encrusted cavity that starts at the top of the skull continues and down through the base of the skull. This specimen has undergone intrithe crystal in the shape of a skull.



cate sculpting and One of many sculptured rocks and polishing that left Internet. \$1,245

Agate is a variety of microcrystalline quartz that displays translucence and in some cases banding. Agate primarily forms when silica-rich fluids fill pockets within rock and/or fossils, resulting in deposition of the silica along the walls of the rock. This process can result in banding patterns as the composition and impurities of the fluids change over time. These banding patterns can either form as flat layers or rounded layers, depending on the surfaces available for deposition.

Silicon Dioxide, also known as SiO2 or Quartz, is the second most abundant mineral in the Earth's crust. Quartz crystals generally grow in silica-rich, hot watery solutions called hydrothermal environments, at temperatures between 100°C and 450°C, and usually under very high pressure. Quartz veins are formed when open fissures are filled with hot water during the closing stages of mountains forming, and can be hundreds of millions of years old.

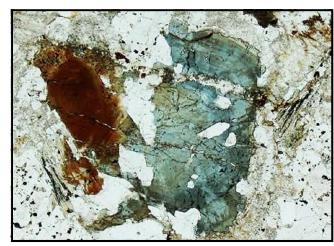
# New Mineral Dutrowite Named After Tourmaline Expert

From https://www.jckonline.com/

The Gemological Institute of America has announced that a newly discovered mineral species of the tourmaline group has been named dutrowite after GIA governor Dr. Barbara Dutrow, "in recognition of her contributions to mineral sciences and crystal chemistry, and particularly for her well-known and comprehensive research into tourmaline and its embedded geologic information," according to a prepared statement from GIA.

Of the 34 tourmaline species cataloged, dutrowite is the first to be named after a woman.

The mineral—formed from the compression and heating of a volcanic rock called rhyolite—was discovered by researchers from Austria, Italy, and Sweden in the Apuan Alps of Tuscany, Italy.



The white mineral is dutrowite

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Dutrow is the Gerald Cire & Lena Grand Williams Alumni Professor in the Department of Geology and Geophysics at Louisiana State University. And "her teaching and research have focused on mineralogy, petrology, geochemistry, and computational modeling and visualization for more than 25 years," according to the same statement.

She's authored and coauthored several publications, including the *Manual of Mineral Science*, which is "a worldwide standard and reference for the study of minerals now in its 23rd edition." Dutrow earned her master's and doctorate degrees in geological sciences from Southern Methodist University in Texas and joined the GIA board of governors in November 2016.

"Gems, and especially minerals, have been my life's passion," Dutrow said in the statement. "It's tremendously gratifying to receive this honor. Discoveries such as this show us that there is still much to learn about our earth and its many minerals, and the geologic information they contain."

Six GIA contributors have had minerals named after them: former GIA president Richard T. Liddicoat was the inspiration for liddicoatite; rossmanite was named for former GIA governor Dr. George R. Rossman; valleyite was named after GIA governor Dr. John Valley; G. Robert Crowningshield, a pioneering researcher at GIA, was the namesake for crowningshieldite; and in 2019, johnkoivulaite was named after GIA researcher John Koivula. Submitted by Michael Steverson

### Also from <a href="https://www.lsu.edu/">https://www.lsu.edu/</a>

Like stars and ships, it's rare for a new mineral to be named after a living person. Ex-

actly that honor was accorded in December to LSU mineralogist Dr. Barb Dutrow by the International Mineralogical Association. The new mineral "dutrowite" is a member of the tourmaline family of gemstone minerals. Tourmalines have been prized for their intense color and clarity since ancient times. They are composed of silicon, aluminum, oxygen and boron and, in this case, precise amounts of sodium, iron and titanium. The new mineral was discovered in the rugged Apuan Alps of Tuscany, Italy, near the picturesque Grotta del Vento or "Cave of the Wind". It formed from the compression and heating of a volcanic rock called rhyolite during the collision of the African plate with the European plate about 20 million years ago. The Italian researchers who discovered and named dutrowite cited in particular Dr. Dutrow's contributions to mineral sciences and crystal chemistry, particularly with respect to her work on the utility of tourmaline and the mineral staurolite for recording chemical signatures of geologic processes.

"I am surprised and thrilled to be honored in this way." said Dr. Dutrow, who has been an LSU professor and Baton Rouge resident for the past 28 years. "A lifelong passion has been to discover and decode the geologic information embedded in tourmaline; this recognition is a highlight of our discoveries!". Dr. Dutrow is the Gerald Cire & Lena Grand Williams Alumni Professor in the Department of Geology and Geophysics at Louisiana State University. Her textbook, the 23rd edition of the "Manual of Mineral Science" is a worldwide standard and reference for the study of minerals.

# Rovie Alford Lapidary Equipment Repairs & Sales Faceting, Cabbing, Tumblers, Saws and Silversmithing Phone 270-999-9144 roviea712@yahoo.com





### For Sale Items

Club members can post appropriate clubrelated type **for sale** items in the *Rock Talk* free of charge. Contact your editors by the 25th of the month to have your items posted in the next issue. Mike Stone n1ve@amsat.org

### New Class Added 2020 SFMS Workshop at William Holland

June 7th - 12th, 2020 www.sfmsworkshops.org

### **Metal Mania with Cindy Moore**

We will explore a number of techniques using a variety of tools including one of my favorites the Rolling Mill and also several specialty tools I designed and created for metalsmithing. Spinner Rings, Air Chased bracelets and earrings, riveting and Wire Weaving are some of the things we will be covering. We will be covering tool and workshop safety. Time permitting, we may add more.

### **Air Chasing**

Using different sizes of copper tubing we can create bracelets, earrings, or pendants. If you wish you can then add some color with the torch or inlay. (see photo)



### Tuesday Jewelry Workshop at the

### Weeki Wachee Senior Citizens' Center

Withlacoochee Rockhounds is giving workshops on wire wrapping (stones), chain making (jump rings) and possibly other related skills at the Weeki Wachee Senior Citizens' Center in Spring Hill. The workshops are normally on the first Tuesday of the month from 9:00 AM until 12:00 noon The cost per workshop is \$1.00. To participate in the workshops, one must be a member of the Withlacoochee Rockhounds, which covers dues to the Weeki Wachee Citizens Club

Weeki Wachee Senior Citizens' Center.
3357 Susan Dr.
Spring Hill FL 34606
For more information call Judith at: 352-587-1702

All Jewelry Classes have been canceled until further notice

### **Dues are Overdue**

The club year runs from January 1st to January 1st, so it's time to sign up for the next club year. Janet, our treasurer, will be accepting membership forms and payments at the club meetings, or you can send the form and your check to:

Withlacoochee Rockhounds PO Box 5634 Spring Hill, FL, 34611-5634



# Vulcan Mine Field Trips All Field Trips have been Canceled Until Further Notice

The Vulcan mine in Brooksville is open for rock, mineral, and fossil clubs on the second Saturday of each month., Everyone is to be at the gate before 9:00 AM. Please make sure that you park off to the side of the road because of trucks entering and leaving the property. First we will go into the mine for a brief safety meeting. Then we have three hours to dig and collect specimens, or you can stay the full five hours. You can leave the mine either at noon or at 2:00 p.m. No one can leave the property before these times unless it's an emergency as a mine employee must escort us into and out of the mine.

Even during the winter months the temperature in the mine can reach 80 plus degrees with high humidity, so bring water, a hat, and sunscreen (also shade if you think you'll need it, because there is none in the mine). Sturdy shoes are helpful, also a rock hammer, chisel, eye protection, a bucket or another suitable container, and .newspaper to wrap delicate specimens.

No bathroom, no water, no shade, please be prepared and dress accordingly.

Children are welcome with proper adult supervision. This is a retired limestone pit. There are sharp rocks, wild animals, insects, and other hazards to be mindful of.

Vulcan Mine Address 16313 Ponce DeLeon Blvd. Brooksville, FL 34641 Lat./long. 28.656481, -82.457544



I hope everyone was able to get out and collect rocks and fossils. My February newsletter article about Scott and my Out West 12-State Adventure continues.

We left Devils tower in Wyoming and headed east to South Dakota. Scott wanted to visit his alma mater, the South Dakota School of mines in Rapid City. We hunkered down in our next Best Western and I decided to rest up in the hotel while he visited with the school administrators. This was the first day I took off from visiting museums and the many sites on the trip.

The next day we drove to Hill City and visited the Black Hills Geological Research Institute Museum, famous for it dinosaur fossils and the Tyrannosaurus rex skeleton called "Stan". Pete Larson is the owner of the museum and I first met him in 1979 on a fossil col-

lecting trip with Sue and Scott. Scott was only going on three years old at the time. Pete's team had discovered the famous T rex skeleton called "Sue" in 1990. No it was not named after my wife Sue, but after Sue Hendrickson. She discovered "Sue" and was one of the field crew exca-



Stan

vators removing a duckbilled dinosaur skeleton near Faith, South Dakota at that time. You can see "Sue" on exhibit in the Chicago Field Museum. We visited the exhibits and enjoyed the many fossils and



**Oviraptor Anzu skeleton** 



ostrich dinosaur skeleton of Struthiomimus

play. I purchased two very rare claw core bones that Pete's crew found in Montana. They came from two different baby dinosaurs. One was called Struthiomimus, an ostrich looking beaked dinosaur. and the other a baby dinosaur called Anzu, a strange large oviraptor. The first of its type was believed to be stealing eggs from out of a dinosaur nest found in Mongolia. Recent finds have proven that these dinosaurs were actually sitting on their nest of eggs and not eating them.

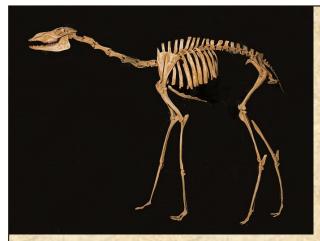
minerals on dis-

We left Hill City and travelled

south to Custer. Custer has several really fantastic rock shops that I have frequented for over the



last 45 years. We first visited Dave's Rock Shop that it was formerly called until recently, Scott's Rock Shop. Oh the irony. The new owner, Dave, had many fantastic specimens for sale. He had many beautiful Fairbairn agates that were either polished or in the rough. Thousands of these agates were found in nearby rock formations. I bought several for gifts. I also discovered a very rare early Miocene upper jaw of the small camel called Stenomylus that was found near the famous Agate Springs Bone Bed just south of Harrison Nebraska. I grabbed it for my collection immediately. There's a fantastic museum at Agate Bone Bed National Park, with several mounted skeletons of giant pigs and



Skeleton of the gazelle like Camel Stenomylus from Agate Springs



Prehistoric skeleton of Moropus from Agate Springs Ne-

Moropus, a strange calicothere beast that couldn't make up its mind if it was a horse, tapir or rhino. It had massive arms with large claws. With these they might have dug up roots for its diet.

We talked with Dave for several hours and then traveled a mile eastward to Ken's Rock Shop. I first started trading fossils with Ken in 1973. Ken's sons now run the shop and they also collect minerals and fossils, locally. They have some of the finest minerals and fossils for sale in South Dakota. They're famous for fossil Cycad wood and Badland

fossil bones. In one glass showcase I found the skull of the giant pig called an Entelodont (related to the giant pig found at Agate Bone Bed). These skulls are quite rare and quite large. Of coarse I had to ask the price and immediately went into sticker shock once hearing the reply. I didn't take it home that day but after nearly six months of negotiations, I received it just prior to Thanksgiving in 2019. Sometimes these things take time. Patience is everything. Once it was cleaned and prepped it was 22 inches long and 90 percent complete. If you are ever in South Western South Dakota check these fantastic rock shops out. Again we had another fantastic adventure.



Giant Entelodont pig skull from Ken's Rock Shop now in my collection.

### **Check This Out**

Watch mining for amethyst in Uruguay on our website.

https://websitebuilder.godaddy.com/builder/edit/desktop/a2568f52-3ba7-4147-a8f9-799e169d7bf8



Ken's Rock Shop in Custer South Dakota

### **Rock Art**







# Radon and Radioactive Rock Collecting

A couple of recent problems occurred that have prompted this article about the necessary detective work I performed when we moved into our new house. I am a retired physical scientist with degrees in nuclear engineering and radiation sciences. Among several certifications, I was certified as a radiation protection officer and served on several radiation protection safety committees, and also I was the director of a nuclear facility. And of course I hold a very important position that puts all the previous positions to shame; I am the Vice President of the Withlacoochee Rockhounds.

At the same time as our move to the new house, I was writing an educational program on radon, a radioactive gas that is part of the uranium-thorium decay chain. Radon is present in many homes in this country, as well as around the world. Since radon is found in uranium ores, it is also in ore samples in rock collections. Radon radiation is measured in curies or picocuries, the number of radioactive disintegrations per second of a radioactive material.

And since we are talking about a specific amount of radon, it is designated as picocuries per liter of gas.

Shown on EPA (Federal Government) maps, this house is in Citrus County is in a Zone 2 level (moderate risk) radon prone area. Radon itself has only a 3.8-day half-life, which means every 3.8 days half of it is gone and every following 3.8 days another half of what is left is gone. But it is produced continually by the decaying of other radioactive materials that have a half-life of millions of years, so it is being continually being formed. Radon is an alpha emitter, which is very dangerous internally but not as dangerous externally.

Our old house in Levy, County lies in a level 3 (low risk radon) area. Radon is only a hazard if it gets into a house where it is breathed in with every breath we take. When it decays it emits alpha radiation while in the lungs or to a lesser degree in the other parts of the body through the bloodstream.

Sections 307 and 309 of the Indoor Radon Abatement Act of 1988 have directed the EPA to list and clearly show areas of the U.S. with the potential for elevated indoor radon levels. Radon exposure (by some estimates) is the second highest cause of lung cancer after smoking. Since the readings must indicate how much material is being measured, the levels and therefore the exposure is quoted in picocuries per liter of air. Without radiation meters, radon cannot be detected, because it has no smell or taste, and can't be felt. One brilliant rock hound actually wanted to taste a radioactive Uranium ore sample. The other normal human senses are oblivious to its presence (but remember some of us are not normal). It can only kill immediately if you are in a place where the radon displaces all the oxygen in the air, causing suffocation, which, since radon is rare is not likely to happen. It kills slowly over time by causing cancers and other harmful maladies, for example cell wall degradation. This includes CNS or Central Nervous System cells.

Our brand new concrete block house is located in the town of Inverness, Citrus, County, Florida (a zone 2 moderate risk area). The house was sealed in accordance with good building practices. We know this since we watched it being built. The work included sealing the cinderblock walls and concrete floors, both indoors and out, including porches and the garage before being covered in sheetrock and painted to prevent radon intrusion, as well as satisfying Leslie's aesthetic senses.

Specifically, sisqueen, a plastic sheet, placed on all bare ground before the concrete was poured. Then after the block was laid a hardened concrete (hydraulic cement) was placed at the floor wall interface. The walls and floor were sealed with a sealant (walls bricklock, floor a plastic polymer) then sheetrock and paint (latex good quality) and a new form of heavy duty vinyl plank floor was added.

The apparent problem all started when I was researching for my new program. I ordered a rather inexpensive but quality radon testing meter. And just to check it out, I plugged it in, in the master bedroom of the new house. Fifteen or so years ago I tested the old house with an older and similar meter (but a much more expensive meter) and found the radon levels to be very low (less than 0.3 pCi/L), well below the mediation level. Since radon gas dilutes as it rises to the surface and mixes with air, it produces relatively lower levels of radiation at the surface compared to deep underground. Radon is also an inert gas and doesn't chemically combine with other materials. This is both good and bad. It is good because it doesn't get "locked up" with materials

### Continued from pervious page

that could be ingested and stay in the body, but it's bad because as a gas it works its way to the surface, unobstructed without chemically combining and being locked into underground minerals; it therefore it is exposed on the Earth's surface. To detect radon, the meters and detectors need to be very sensitive and therefore the production cost is high. Currently the lower priced instruments (which are all I needed for this program) cost less than two hundred dollars. During my testing programs, the very low priced stationary detectors (several months exposure time required) have been found to be not repeatable and the responses are therefore suspect, unless several measurements are made and averaged. There are many reasons for not wanting to use these low cost, long time frame monitors, which I will discuss with anyone who is interested.

My meter took two or three days to get a first reading. So much to my surprise when I looked at the first reading after a couple of days, it read 5.6 pCi/L, which is in the unsafe region and well above the federal guidelines requiring mitigation. Not believing the reading, I reset the meter and started it again. A couple of days later the meter it read 5.7 pCi/ L. This was a strange turn of events. Two days after moving the meter to the living room and resetting it, the reading was 7.4 pCi/L. Next I called the manufacturing company, and after talking to the owner, I decided to buy a second unit. They shipped it express, and two days later I had a second meter side by side with the first one. I was sure that the first meter was defective. Two days later both meters displayed their readings, 7.6 and 7.8 pCi/L. Well what do I do now?

I decided to map the house to try to deter-



A home radon detector from Walmart. \$132.44

gas was coming in (under sink plumbing, gas pipes, HVAC system holes, sewer pipes, etc.). I began moving the meters to different locations in the house and recording the results. After about ten measurements in the living area, I moved one of the meters out to the garage. Two days later the first reading was 75 pCi/L,

mine where the

almost eighty times the safe EPA guideline limit. Now I was in a real panic mode. What kind of house did we buy? I moved one of the detectors to the back porch. Two days later it read 4.0 pCi/L.

This is going to be more difficult than I thought, so I began mapping the readings and then taking my most sensitive Geiger counter and going about looking for the leak into the house. Even my most sensitive Geiger counter failed to read more than a tiny bit above background, however the high reading was in more than one area, the living room wall near the front door, and the garage. Thinking about the amount of radiation (clicks on the Geiger counter) I realized that the dose over a short time would be almost unreadable on the GC.

After fretting over this for several days, one night after going to bed I woke up in the middle of the night and realized what I had stored in garage and in my office next to the front door during the move. As part of my rock

collecting and for use in my demonstrations I have a serious amount of different uranium ores, Byproduct materials, such as trinitite, and other radioactive sources. The materials were stored behind lead and bismuth shielding, and the dose near the materials was very low, well below safe storage levels, for OCCASIONAL area access. It was well below levels requiring radiation area postings. However it was not below the radiation levels produced by radon, which for safety purposes is considered living in the area 100% of the time. The next day I relocated all but a very small display sample stored in my office high up away from people and moved the material out to my workshop which is located about fifty feet away and then stored it behind lead, bismuth, and water shielding.

Retesting with the two meters now showed less than 1.6 pCi/L in the living room, less than 1.0 pCi/L in the garage, but 3.6 pCi/L on the outside porch (nearest the outdoor shop.) I moved the last of the ore displayed in my office that I had been stabilized to prevent bits from falling off and being ingested. I placed it in floating display frames, because even small amounts of radiation were too much in the living area and I moved the last (known) samples out to the shop. The ore samples themselves were producing radon, which was going into the air, until I sealed the samples. But even if not sealed the amount of radon produced by the small samples is just a fraction of what is produced in the ground beneath a house. Remember the best radiation is no radiation.

Back in my working day, the byword for receiving radiation exposure was ALARA, which stands for As Low As Reasonably Achievable. Any radiation dose is harmful to the body, not withstanding those who claim that a

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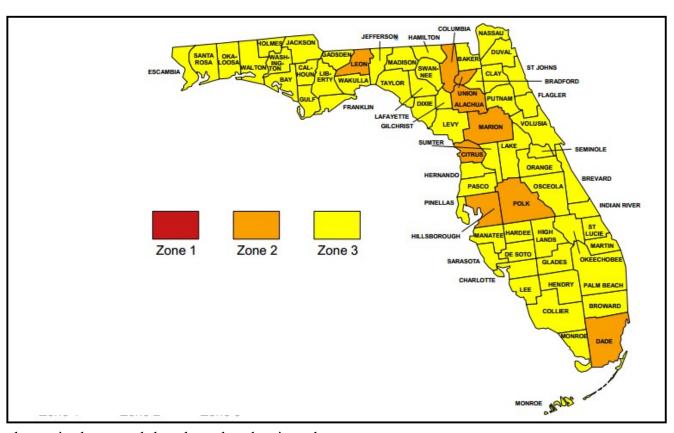
small amount increases diversity thru gene mutation. Yep, just like Spiderman and the Hulk or on the dark side, "The Blob". Did you ever wonder what causes those X-rays you get to show bone vs. other less dense tissue? The bone is denser and adsorbs more radiation than the tissues; therefore there is less radiation to expose the film hence the light bone and darker tissue. What happens to the radiation that is absorbed? It deposits its energy in the material, the denser the material the more that is absorbed and the more damage it does to your body. So, if you have a rock collection or even just a specimen or two beware if there is even a possibility that part of it might be radioactive. You might be exposing yourself to small amounts of radiation and maybe even to radon.

In my humble opinion the less radiation received by your body the better. Even though radon is only dangerous if it decays inside your body, even small external doses can cause problems down the road (in your age not the next block.) If you want, need, or just have interests in the above subjects and/or information, just catch me at a club meeting. If you want me to look at a sample just let me know and I'll be sure to bring my Geiger counter to a meeting. I'm usually there early with Dave Letasi and Pat Gould and we are always willing to discuss rock hound subjects and measure your rocks to see if they are radioactive...better safe than sorry.

https://www.epa.gov/sites/production/files/2015-07/documents/zonemapcolor.pdf

### Why is there radon in Florida?

Uranium is an element that is everywhere on the Earth's surface. At one time all of the rock on the planet was igneous (the primordial soup), so a part of all rock contains some uranium. Although originally



deeper in the mantel, but through volcanic and drift mechanisms it became disbursed. Even some sedimentary rock components were at one time igneous, so when it metamorphosed the uranium was still there (at least in microscopic amounts). Additionally deep down there is base rock (basalt or some form of igneous rock such as granite) and through geological processes it is transferred up toward the surface. There are no igneous or metamorphic rocks found naturally on the surface of Florida. However, there are several types found a few thousand feet below the surface and the drilling of wells has also found granite in quantities capable of releasing radon. In some north Florida and central Florida areas the rock emitting radon is closer to the surface.

### **Use Our Website**

I try to send an email to all members, with a link to the *Rock Talk* before the jewelry workshop, which normally is a week and a day before the club meeting.

If you don't receive an email with a link to the *Rock Talk*, you can access our website for the newsletter, club meeting program, and the project for the next Tuesday morning jewelry workshop.

Also, previous *Rock Talk* newsletters can be downloaded from our website. They have been posted from June 2016.

www.withlacoocheerockhounds.com
Mike Stone, editor/webmaster



### Withlacoochee Rockhounds



### Bench Tips by Brad Smith



Bench Tips for Jewelry Making and Broom Casting for Creative Jewelry are available on Amazon

### **Problems with Small Drills**

Drilling small holes can be a problem. With drills that are less than 1 mm (18 gauge or .040 inches), some chucks will not tighten down well enough to hold the drill securely. The problem is easily solved in either of two ways; with a chuck adapter or by buying your small drills with a 3/32- inch shank size. Either way you have a large shank that can be gripped in your drill press, Foredom, or Dremel, so changing bits is fast and easy.



Drill adapter



Chuck adapter

Chrysocolla in Malachite

### **Pre-made Bezel Cups**

As a general rule of thumb, I assume that it is going to take me 15 to 20 minutes to make a bezel for an ordinary cabochon, so for some projects buying pre-made cups can save a lot of time. But if you go this route, keep in mind three things.



First, try to get cups made from fine silver, not sterling. Fine silver is softer and burnishes over the stone more easily.

Second, you might have trouble matching the shape and size of the stone with the shape and size of the bezel cup. Purchased cups can only be found in a limited number of standard sizes. You might have to adjust your choice of gemstone to match the cup. Pre-made cups often have fairly low sidewalls. While these are fine for low-dome stones, they're not dependable for stones with steep sidewalls.

Third, before setting, check the fit of your gemstone in the cup, particularly around the bottom. The bottom corners of a stamped cup are much more rounded than a bezel you would fabricate yourself. This causes a problem with stones

that have a sharp edge around the bottom. Burnishing the bezel over one of these stones will place a lot of stress on the stone and may cause it to crack. To avoid this, I round off the bottom edge of the stone with a diamond file (or use sandpaper on soft stones).



Learn New Jewelry Skills With Brad's How-To-Do-It Books Amazon.com/author/bradfordsmith



### **April Club Meeting Canceled**

### **April Rock Talk**



### **Show Us Your Stuff**

We're always looking for information for the Rock Talk. Club members would enjoy seeing other members' rock cutting and polishing equipment, display cabinets, projects, and favorite specimens. Take a photo and send it to your editors along with a description and we will be glad to include it in our newsletter.

Mike Stone n1ve@amsat.org

# **Club Members' Business Cards**

Club members who have businesses related to any of our club activities can have the images of their business cards posted in each issue of the Rock Talk. This is an additional benefit of being a **Withlacoochee Rockhounds** member. You can send electronic images or an actual business card to:

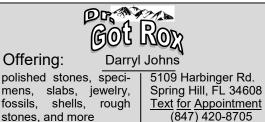
n1ve@amsat.org

or Mike Stone 4504 Kingston Dr. Hernando Beach, FL 34607









Facebook: Dr.GotRox

Email: dr.gotrox@gmail.com

### **Your Favorite Specimen**

We are always looking for something of interest for our club members. We're sure many club members have specimens in their collections that would be of interest to others in the club. If you would send us a digital photograph of your specimen we can publish it in the *Rock Talk*. A bit of information such as what it is, when, and where you found it would be great. If you don't have a digital camera, bring your specimen to a club meeting for others to see, and perhaps someone at the meeting could photograph it for the next issue of *Rock Talk*.

Rock Talk editors: Mike Stone and Peggy Burns n1ve@amsat.org

### **Getting to Know You**

Send us a few words about your interest(s) and/or hobby(s), whether or not they are related to rock hounding, we will print them in future issues of *Rock Talk*, and you might find that other club members have similar interests.

### Withlacoochee Rockhounds is now on Facebook

https://www.facebook.com/withlacoocheerockhounds1/?ref=page\_interna



Withlacoochee Rockhounds PO Box 5634 Spring Hill, FL 34611-5634

Withlacoochee Rockhounds Membership Form	
Annual Dues: Individual member, \$20. 00. Under 18 years of age, no charge.	arge.
Please Print Clearly Last name First Name under	Check if under 18
Street Address: City State ZIP	
Phone Number (s)	
Email address:	
Give this completed form along with your check for dues made out to "Withlacoochee Rockhounds" to club secretary Janet Wheeler at a club meeting. Or mail the form and your check to: Withlacoochee Rockhounds PO Box 5634 Spring Hill, FL 34611-5634	t to
2020	2020

### **Rock Talk**



Drocidont

### Your Business Card Size Ad in Rock Talk

The cost for non-club members to advertise their businesses in Rock Talk is \$10.00 per month. . Contact Mike Stone to set up an ad in both the club newsletter and our website. It will benefit both your business and our club.

### **Advertisers Needed**

Please help us find advertisers for the Rock Talk and our website. The club can use the monthly income. Both the Rock Talk and our website have more exposure than only club members

Contact club treasure Janet Wheeler: ceecgir@tampabay.rr.com or send to:

Withlacoochee Rockhounds
PO Box 5634
Spring Hill, FL 34611-5634

Withlacoochee Rockhounds PO Box 5634 Spring Hill, FL 34611-5634

### Withlacoochee Rockhounds

### **Purpose**

We are a non-profit organization whose purpose is to foster interest and promote knowledge of minerals, gems, fossils, lapidary arts, and earth sciences, through regular meetings, informative programs, workshops, and field trips. PLUS our annual gem and mineral and jewelry show. Membership is open to anyone sharing such interests.

#### Dues

Dues are \$20.00 annually for adults and no cost for children under 18 years of age.

ludith Riry

### **Club Meeting Location and Time**

Weeki Wachee Senior Citizens Center, 3357 Susan Drive in Spring Hill. The meetings are held on the second Wednesday of the month at 7:00 PM.

### 2020 Club Officers and Appointees

050 507 4700

riesidelit	Juditii Diix	352-587-1702	iudithbirx(α)hotmail.com
Vice President	Mark Moore		markles@bellsouth.net
Secretary	Melodye Steverson		melodye@designsbymelodye.cor
Treasurer	Janet Wheeler		ceecgirl@tampabay.rr.com
Rock Talk Editors	Mike Stone / Peggy Burns	603-524-0468	
Club Web Master	Mike Stone	603-524-0468	n1ve@amsat.org
	Janet Wheeler	727-938-3644	ceecgirl@tampabay.rr.com
Gem Bag Coordinator	Gloria DuPont	352-848-5199	ddupont@tampabay rr com
Audio/Visual Coordinator	Michael Steverson	407-376-5570	highlander56@gmail.com

### **Board of Directors**

Ralph Barber (past president) Judith Birx (president) Roberta Oldread (2020) Melodye Steverson (secretary) Ginny Steverson (2021) Mike Stone (2021) Lynn Walters (2021) Janet Wheeler (treasurer)