October Virtual Program:
Cosmic Debris: Meteorites, Asteroids, Comets, and Tektites

Our Club is happy to present an illustrated talk by Walter Lombardo on October 12 at 7:00 PM.

Meteorites are objects in the solar system, approximately 4.5 billion years old. This talk will cover the history of meteorites as a science, basic types of meteorites, and ways to distinguish meteorites from other rocks. It will also discuss tektites (Libyan Indochinites) and meteorite “lookalikes.”

Walter Lombardo is a geologist with more than 35 years of experience in mineralogy, mining, and mineral exploration. He managed projects for American Borate Company in Death Valley (Billie Mine), for Cyprus Minerals Company in the California Mother Lode (gold), and several small exploration companies in the southwestern U.S (gold).

For six years he managed the Southern Nevada Office of the Nevada Division of Minerals. And before retiring from the industry, he was a project manager for a company involved in worldwide exploration for uranium, gallium, and germanium.

Walter is the owner of Nevada Mineral & Book Company, a natural history gallery and earth science bookstore located in Orange, California. He has lectured nationwide on topics related to mineral resources, mining and mining fraud, mineralogy, and gemology.

To join our Zoom meeting, see General Meetings on page 3.

Submitted by Ken Rogers
Programs Chair
a note from the EDITOR

This issue marks my first anniversary since I volunteered to be our Club’s Publications Co-Chair. I had the pleasure of working with Jan Ferguson; she was the editor, and I was the designer. She brought me up to speed quite quickly and gave me the background I needed to jump right in. Three months into the position, she stepped down, and I took over as the Club’s Publication Chair.

I’m enjoying being the editor and designer for the Nugget. It has been a long time since I’ve been able to dip into some newsletter design work. Thank you for allowing me to do this for you. I hope that you’re enjoying the new layout and the sprinkling of new content here and there.

I’d like to keep the Nugget fresh and engaging by continuing to make the occasional design change and providing you with reading material that matters to you. So let me know what you like or don’t like.

I would love to hear your feedback, your thoughts, and interests so that I can make the Nugget better for you. And if you would like to write a story about your experiences, an interesting find, perhaps a poem or a how-to piece, please feel free to do so and send it my way. I think it would be a great way to share while we’re all a part. It could be as long or short as you’d like.

You can reach me at: Nugget@culvercityrocks.org

Janet Gampe
Publications Chair

a message from the PRESIDENT

Despite all we’ve been through in the last six months, I’m really pleased to see how well our Club is doing these days.

Here are a few of the things I’m particularly pleased with:

1. We continue to have a great newsletter thanks to Janet Gampe.
2. We have successfully transitioned to online meetings and have not missed a one.
3. Our invited speakers have gotten even better thanks to Ken Rogers.
4. We’ve found a way to make the shop available safely a couple days a week.
5. We added a second Zoom meeting each month to keep Club members in touch.
6. Our membership has actually grown a bit since we closed down last March.

I’ve asked Alexa Hunter to put together a slate of candidates for Club officers in 2021. The list will be in the November Nugget, and balloting will be at our online meeting that month.

If you have an interest in helping the Club on any of our standing committees next year, please get in touch with Alexa at lexhunter@aol.com

Thanks to all for making our Club what it is.

Brad Smith
President
As we continue to navigate through the “Safer at Home Orders” all meetings will be held via video conferencing.

General Meetings are held the second Monday of every month at **7:00 PM on Zoom** until it is safe to resume in person meetings.

Join the Zoom meeting by clicking here: [https://zoom.us/j/3108364611?pwd=WnRTclZTS3RJMEdWdlV2c0mQWxqdz09](https://zoom.us/j/3108364611?pwd=WnRTclZTS3RJMEdWdlV2c0mQWxqdz09)
Meeting ID: 310 836 4611
Password: rocks

**Upcoming Programs:**
November 9 – To be announced
December 14 – Holiday Party TBD

Guests are always welcomed to join us.

**Additional Instructors Needed**
If you are familiar with the safety procedures at the Lapidary Shop, please contact Steve Dover to volunteer. He can be reached at: [skdover@yahoo.com](mailto:skdover@yahoo.com)
Stacy Walbridge, a long-time rock hounder, is originally from Vermont. He began rock hounding while he was stationed at Yuma Proving Grounds in Arizona. He is now retired and lives in Franklin, NC, known as the Gem Capital of the World, thanks to its sapphire and ruby mines.

Stacy spoke about collecting in the Sonoran Desert. The Sonoran Desert is mostly located in Southern Arizona but also extends to Northwestern Mexico and Southeastern California. In Arizona, the Sonoran Desert encompasses three parts: (1) the Colorado Plateau, a semi-arid area with elevations ranging from 5,000 to 8,000 feet, (2) the Transition Zone, with widely varied climate, and (3) the Basin and Range region, with steep linear mountain ranges alternating with wide desert planes.

Stacy does most of his collecting in the Basin and Range region. The formation includes down-dropped faults and uplifted escarpments, and sediment-filled valleys due to erosion and streams. Stacy pointed out an interesting feature in the region, the Imperial Sand Dunes - a band of dunes located in the Southern California border with Arizona, stretching 45 miles and about 6 miles wide. The dunes were formed by windblown sands of ancient Lake Cahuilla, now the Salton Sea area.

Desert collecting has advantages. Arizona has several designated rockhounding areas. Temperatures are moderate October through March. Due to sparse vegetation, minerals are easier to find. Also, the region holds two large mineral shows- Quartzite/ Pow Wow and Tucson.


Stacy also recommended plotting potential collection sites on Google Maps and using Google Earth with USGS Plugin.

He also recommended bringing plenty of water to drink and wash out minerals, a first aid kit, boots, hat,
September Program Report:
Collecting in the Sonoran Desert con’t

long sleeves, warm clothing, gloves, sunscreen, GPS, a collecting kit, and driving an AWD or 4WD vehicle.

Stacy provided an overview of multiple collecting sites, along with pictures of the specimens he collected in each:

- Fossil Canyon - fossil shells
- Hauser Geode Beds - golf ball-sized geodes
- Cargo Muchacho Mountains - petrified wood
- Desert Varnish - view petroglyphs and intaglios made by Native Americans by etching the varnish layer
- Plomosa Mountains-Gold Hill Mine - jasper, agate, malachite, chrysocolla
- Castle Dome-Hull Mine - galena
- Contact Mine - amethyst
- Dudleyville - calcite
- Grey Horse Mine - vanadinite
- Hayden - wulfenite
- Dragoon Mountains - marble, Surprise quartz
- Round Mountains - chalcedony
- Goat Camp - Duncan Fluorite

Stacy finished the lecture by indicating that the Granite Gap Mines, in New Mexico, was a great site to find fluorescents.

Submitted by
Ana M. Strambi Guimaraes
Recording Secretary
President Brad Smith called the meeting to order at 7:00 PM. A quorum was established. Brad informed that the Club has managed to not miss any meetings and attracted three brand new members during the pandemic, despite loss of services such as access to the library and field trips.

Brad announced the Club would hold two meetings per month starting immediately, on the second and fourth Mondays of the month. The second meeting would be an executive meeting.

Brad informed that the Club needed to form a Nominating Committee, who would identify candidates for the various office positions for next year. Volunteers should contact Brad.

The August meeting minutes were approved as read in the September edition of the Nugget.

Guests were introduced.

- Jette Sorensen informed that Walt Lombardo would be the October speaker.

- Steve Dover announced that the shop would be open two days a week, upon reservation, for an instructor and two workers at a time. Wearing a mask and signing a waiver would be mandatory.

- Brad Smith indicated Ken Rogers was planning a sale at the back of the shop, pending research of the Culver City rules to confirm the event could be held legally.

- Adrienne Louie indicated she was looking for volunteers for the next year gem show. Stephanie Dangott committed to being in charge of the food.

- A discussion took place as to whether the Club would hold a holiday party this year. Brad Smith agreed to discuss that at the next executive session.

- Steve Dover informed the Club received a refund from Culver City for the picnic cancellation.

Meeting adjourned at 7:25 PM.

Submitted by
Ana M. Strambi Guimaraes
Recording Secretary

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Executive Meeting Minutes
September 28, 2020

Those present: Darren Cokin, Janet Gampe, Alexa Hunter, Adrienne Louie, Darrell Robb, Brad Smith, Jette Sorensen, Ana Strambi Guimaraes, Lorraine Watkins

Meeting called to order at 7:20 PM.

- Members discussed ideas for the holiday celebration, expected to be virtual.

- Brad Smith asked for a volunteer for the Nomination Committee; Alexa Hunter volunteered.

- Members discussed ideas on how to improve membership and increase membership renewals, such as having members add positive reviews on Google Maps.

- Brad Smith informed that Adam Dean, California Federation of Mineralogical Societies (CFMS) field coordinator, was selling off part of his rock collection; Brad could provide contact information to those interested.

- Members discussed adding a Buy, Sell & Trade section to The Nugget. Janet Gampe shared a mockup she had developed for that. Jette Sorensen also suggested a “bragging” section to feature members that want to share what they have been making lately.

- Members discussed future meeting programs. Jette Sorensen suggested members could do demos and Ana Strambi suggested Show & Tell.

- Brad informed that some clubs around the country were having shows outdoors.

The meeting was adjourned at 8:08 PM.

Submitted by
Ana M. Strambi Guimaraes
Recording Secretary
The Most Unusual Gems You’ve Never Heard Of

TUCSON – In February, during one of the annual gem shows here, Ray Zajicek displayed a stone that was not for sale: a 32-carat hexagonal crystal of red beryl — or “red emerald,” as the emerald dealer prefers to call it. “It’s probably 10 times rarer than green emerald,” Mr. Zajicek said.

For an industry that creates sales allure from notions of value, wealth and scarcity, rare can be a loaded word. But in this case, it’s an accurate one.

Unlike the classic green emeralds found in Colombia, Brazil, Zambia, Afghanistan, Ethiopia and elsewhere, red beryl is the result of such a rare geological occurrence that it has been found in only one location: a mine, closed since 2001, in the remote Wah Wah Mountains of Utah.

How does that happen?

“These seemingly unique situations are related to very specific geologic conditions,” said Christopher P. Smith, president and chief gemologist at American Gemological Laboratories in New York. As for red beryl, he said, the presence of a specific manganese compound produces its distinctive cherry-red color. And the one thing possibly more surprising than nature’s creation of these one-source gems? The fact that they are discovered at all.

It almost always happens by accident. “Someone kicks over a rock and finds a pretty stone,” said Shane McClure, global director of colored stone services at the Gemological Institute of America.

That’s more or less what happened near Milas, a town in the Anatolian mountains of Turkey, about an eight-hour drive south of Istanbul. In the 1970s, bauxite miners discovered large, gem-quality specimens of a color-changing mineral called diasporo embedded in some of the ore. “Bauxite used to sell for $20 a ton and they thought the crystals were lowering the quality of the bauxite so they put them aside,” said Murat Akgun, who was a jeweler in Istanbul’s Grand Bazaar in 1998 when he fell in love with the gem and embarked on a mission to sell it internationally. “I was fascinated by the colors and variety and how they formed,” he said. Diasporo, which blushes from a kiwi green under fluorescent lighting to a raspberry pink in candlelight, now is marketed under the brand names Csarite and Zultanite (Mr. Akgun owns the trademark for Csarite). At the current pace of mining, Mr. Akgun said, there probably is a 30-year supply of the mineral. So enough of it is available to sustain demand, underscoring one of the truisms of the gem trade: Rarity is a double-edged sword.

John Bradshaw, owner of Coast to Coast Rare Stones International in New Hampshire, is well versed in the challenge. A specialist in single-source gems, he sells his inventory of esoteric finds during the Tucson gem shows. And benitoite, a bright blue stone found only in San Benito County in central California, has ranked as one of his most sought-after gems.

“You need a stone to be rare enough to attract interest but not so rare that you cannot develop a market for it,” said Stuart Robertson, vice president of Gemworld.
“People line up on opening day and at 10 a.m., when the show opens, they literally race to our booth,” Mr. Bradshaw said. “By noon this year, we had sold 187 stones between 25 points and 3 carats, mostly to Japanese dealers.” (The Japanese also are Mr. Zajicek’s biggest customers for red beryl, a fact that the Dallas-based dealer speculated has something to do with the appeal of its American provenance.)

Mr. Bradshaw was hesitant to reveal his wholesale prices but said that a faceted benitoite of 1 to 2 carats could sell for $3,600 to $5,000 per carat, with a 10 to 15 percent premium for round stones. That is only slightly less than the cost of a one-carat round diamond, which sells for $4,000 to $7,000, depending on its color, clarity and cut.

In the case of grandidierite, a green single-mine gem from southern Madagascar that is named after the French explorer Alfred Grandidier, “asking prices are all over the board,” Mr. Bradshaw said. “A lot of people are afraid of selling it too inexpensively.”

While dealers have trouble pricing gems that lack true comparisons, the average man or woman shopping for a piece of jewelry probably doesn’t even know such gems exist. They usually aren’t found at a local jeweler, unless the store serves gem and mineral collectors, and are unlikely to be found in finished pieces of jewelry.

Anyone with a taste for such offbeat adornment probably has to find a retailer whose supplier sources stones on the secondary market. That’s where many single-mine gems end up, after deposits have been exhausted or mines stop operations. An example: pezzottaite, a pink gem discovered in central Madagascar in 2002 that now is available only secondhand.

“It was super-popular for about a year,” said Tom Cushman, a gem dealer who splits his time between Sun Valley, Idaho, and Madagascar. “But there was not enough to hit critical mass. I had an oil man from Oklahoma and he wanted something nobody else had. He bought a suite of four stones — and that’s it.”

Cultivating a get-it-before-it’s-gone mentality is part of the playbook for dealers of tanzanite, a blue-violet variety of the mineral zoisite that was found in the foothills of Mount Kilimanjaro.

Famously introduced to the world in 1968 by Tiffany & Company, whose advertisements touted its singular origin, the stone continues to be widely available, despite many marketing claims that supplies have been running out.

“For a long time, they said there are only 10 years left,” said Ian Harebottle, a former chief executive of the mining company Tanzanite One, which holds the concession on the government-controlled mine. “But that’s if we were only mining in a small-scale way. As long as you improve your efficiencies, increase demand and pricing goes up, then you can afford to keep getting deeper.”

Regardless of how the marketers spin it, playing the single-source angle can be crucial to making the sale, said the British jewelry designer Stephen Webster, who has worked extensively with both tanzanite and the color-changing diaspore from Turkey.

“It’s probably more engaging,” he said, “than saying, ‘This is whatever-nite and they find it all over Asia.’”

6 to Know

Creating a list of single-source gems is not as easy as it might seem. Each gem dealer has guidelines, and some are stricter than others. But here are six gems commonly

continued on next page
The Most Unusual Gems You’ve Never Heard Of  con’t

considered to be from single sources.

Ametrine

A bicolor variety of quartz that is purple amethyst on one side and orange citrine on the other, ametrine occurs naturally only at the Anahí Mine in the Sandoval Province of eastern Bolivia.

But because there is a lot of synthetic or artificially induced ametrine on the market, the material is neither rare nor expensive. It is, however, fashionable — the Italian jewelry company Faraone Mennella used the gem for its Arcobaleno necklace.

At an average size of 20 carats in polished form, the gem lends itself to striking settings, matched only by the drama of its history: A 17th-century Spanish conquistador received the mine as a dowry when he married a native princess named Anahí, of the Ayoreos tribe, according to the authors of a 1994 article in the journal Gems & Gemology.

The article included a caveat about ametrine’s formation, a helpful reminder of the mysterious circumstances that create all single-source gems: “The unusual color patterns probably result from the uncommon geologic conditions under which these quartz crystals formed,” the authors wrote, “although the crystal chemical properties controlling the sector color zoning still elude explanation.”

Benitoite

In the early 1900s, prospectors looking for copper and cinnabar discovered benitoite near the southern edge of San Benito County, about halfway between San Francisco and Los Angeles. It became a collector darling not only for its single-mine origin but also for its beguiling blue hue.

“No gemstone in the world has the same composition as this stone,” said Dave Bindra of B&B Fine Gems in Los Angeles. “The physical beauty is outstanding.”

Benitoite’s color is created by the presence of iron and titanium impurities, and their transfer of an electron — the same subatomic process thought to give a blue sapphire its color. The gem also has a dispersion rate similar to that of a diamond; when white light enters the stone, it bounces back in a display of rainbow colors, an effect known in the industry as “fire.”

Even though benitoite was named the California state gemstone in 1985, “most people have never heard of it,” said John Bradshaw, a rare-stone dealer from New Hampshire. Each year, he sells it at one of the Tucson gem shows, drawing from stock that he and his business partner have accumulated over the past three decades (the mine closed in 2004).

“We’ve parceled the rough into different bags and boxes, and each calendar year, we bring one out,” Mr. Bradshaw said.

Diaspore

A vein of bauxite, or aluminum ore, runs through the hills and pine forests of Turkey’s Anatolian Mountains. In the 1970s, miners discovered that the ore included a mineral called diaspore, which can appear to be pink, green, yellow, champagne or even ginger under different lighting conditions.

“When you first see it, you go, ‘It’s kind of brown,’” said
Rudi Wobito, the Toronto-based cutter and distributor of Csarite, one of the mineral’s two trademarked names. “But it isn’t really. You need to look at it in your living room, in your backyard, in the shopping mall. Everywhere you go, it will look a little different.”

Diaspore itself is not uncommon. What is unique about the find in Turkey is that “this deposit produces large, transparent, gem-quality crystals,” said Christopher P. Smith, president and chief gemologist at American Gemological Laboratories in New York. Many designers have worked with the gem, including the Los Angeles-based Erica Courtney and Nak Armstrong, the Texas jeweler whose Csarite pieces are sold at Barneys New York.

**Grandidierite**

The gem-rich island nation of Madagascar is the only known source of gem-quality grandidierite, a translucent bluish-green stone discovered in 1902 and named for the 19th-century French explorer Alfred Grandidier.

With a ranking of 7.5 on the Mohs scale — which determines hardness based on the ability of one mineral to scratch another, and is named for its inventor, the 19th-century German mineralogist Friedrich Mohs — the gem is durable enough to be used in jewelry, although it is so scarce that faceted gems tend to end up in gem and mineral collections rather than jewelry. After all, no designer wants to create a collection based on a gem that is all but impossible to get.

On a recent buying trip to Sri Lanka, a trading hub for gems from Madagascar, Mr. Bradshaw saw a 4.43-carat grandidierite that, he said, caused his “jaw to hit the desk.” He posted a short video of it on his Instagram feed and soon heard from a retailer in New York City, who had a client who was, Mr. Bradshaw said, “dying for a great stone.” Apparently, the client had seen a 6-carat grandidierite the month before but, after deciding not to buy it, changed her mind two days later and found that the stone had been sold.

Yet she declined to buy the 4-carat gem. “She said, ‘It can’t be that rare because you found another great one too fast,’” Mr. Bradshaw recalled the retailer’s telling him. “Just because a 6-carat stone and a 4-carat stone happened across her desk in a month doesn’t mean you could find one for another 10 years,” he said.

**Red beryl**

Also known as red emerald or bixbite, this unusual gem has much the same composition as a typical beryl — beryllium, for starters — but also a specific manganese compound that produces its bright red hue.

As with most mineral deposits, the mine, known as the Ruby-Violet Claim, was discovered in 1958, when miners searching for uranium in the Wah Wah Mountains of Beaver County, Utah, stumbled upon the red crystals. In 1976, the Harris family purchased mining rights to the property and spent the next two decades digging more aggressively. A deal to sell the mine to Gemstone Mining Inc. of Utah collapsed in 2001, and production came to a standstill.

Ray Zajicek, a gem dealer in Dallas, said, “I believe there are no greater than 30,000 cut stones, and probably less than 300 carat-size stones, in the world, produced between 1976 and 2002.”

At the Tucson gem shows in February, Mr. Zajicek held a 2-carat emerald-cut red beryl to the light: “A man offered me $30,000 per carat, and I said, ‘No, there’s nothing like it.’”
The Most Unusual Gems You’ve Never Heard Of con’t

Tanzanite

The blue-violet variety of the mineral zoisite, tanzanite is found only in the shadow of Mount Kilimanjaro in Tanzania. But unlike many of the stones in this rarefied category, “there is no lack of material,” Mr. Bradshaw said.

A set of very specific geological conditions in East Africa transformed zoisite into tanzanite.

“One, you needed a source of vanadium,” an element found in many minerals, Mr. Smith said. “And then there were two different types of folding which took place in this region — stacked or isoclinic folding in a horizontal direction and the other in a vertical direction — and it was this combination that created the right environment for this color variety of zoisite. In areas where there was only one type of this folding, they don’t find gem-quality crystals.”

In the mid-1960s, Tiffany & Company trumpeted the gem’s discovery and it became a designer sensation, first among high-end jewelers such as Donald Claflin and Jean Schlumberger, and then, as time passed, among mass-market manufacturers with ties to the cruise ship industry. It continues to be promoted as a gem with a finite supply, bound to run out one day.

Is it really that rare?

“Rarity is a context you have to wrap your head around,” said a diplomatic Mr. Smith. “It doesn’t have a singular definition.”


Submitted by Devon Lloyd
Minerals Chair

CFMS Shows

As Californians continue to obey Safer at Home orders, many clubs have cancelled their shows. Please check with the CFMS website for the latest information: https://www.cfmsinc.org/shows-2/
CCRMC Community Marketplace

Introducing the all-new community marketplace! The Club is happy to present a space for our members and friends to sell, trade or give away any items related to rocks, minerals, gems, lapidary equipment, jewelry tools and supplies, and rockhounding.

How to purchase an item
1. If you have any questions, reach out to the seller
2. Make arrangements directly with the seller for purchase, pick-up, delivery, etc.

How to sell an item
Send an email to nugget@culvercityrocks.org with the following info:

- Title of the item for sale or the name of your sales event with a brief description
- Picture of the item for sale (if applicable)
- Price
- Seller’s name and contact information
- Date of event (if applicable)

The I Need Cash Sale (Miracle Mile 90019)

Beads
- Gemstones in many shapes and sizes
- Pearls - Glass - Seed Beads (at or below cost)
- Silver - Sterling (Bali) [$0.60/gr & up] - Silver Hill Tribe [$0.85/gr & up] – Vermeil [$0.75/gr & up]

Findings
- Head Pins & clasps

Chains
- Sterling, fine silver, gold fill

Pendants
- Gemstones, carved opal

Sterling Silver - scrap, sheet (.925)

Gemstone Rough & Slabs
- Jadite, nephrite jade, nephrite w/ black magnetite, bertrandite, sugilite, quartz, turquoise, coprolite, dino bone, horse canyon agate, jaspers

Specimens & Crystals

Great low, close out prices

Contact: Ken Rogers 323-965-2752 (10am-10pm) or kenrogers4u@gmail.com

Outdoors - masks - distancing - NO crowds by appointment only & groups of 3 max

The Annual Adam Dean Rock Sale

We have a massive pile of rough at $1.00 a pound and a lot of other material including Cady Mountain agate at just $5.00 a pound and some very awesome Lapis from Mount Baldy.

Visit the LA-Rocks group on Facebook to see more photos. https://www.facebook.com/groups/411978609512229

Private Message Adam Dean for an appointment. Get the good stuff before the deals are gone. We will honor discounts for bulk purchase, all prices are negotiable.

We are set up to sell by appointment only. We can only allow several people in at a time and you must have a mask, if you don’t have one we can provide one for you.

Best Wishes
Adam and Teresa Dean
www.theagatehunter.net
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