

HUI PŌHAKU 'Ō HAWAII

Rock & Mineral Society of Hawai'i, Inc.



Meeting Times

MEETING

Wednesday
September 27, 2017

6:15-8:00 pm

Makiki District Park
Admin Building

NEXT MONTH

Corundum and
Copper Based
Minerals

LAPIDARY

Every Thursday
6:00-8:30pm
Makiki District Park
2nd floor Arts and
Crafts Bldg

MEMBERSHIP

DUE COSTS 2017

Single: \$10.00

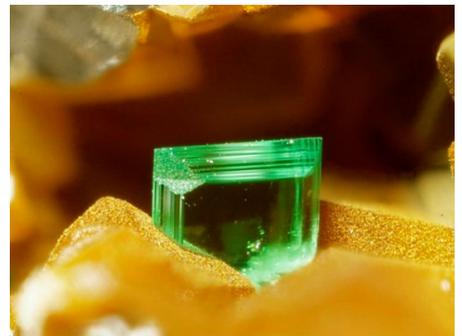
Family: \$15.00

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Uncommon, Unusual, and Rare Rocks and Fossils By Dean Sakabe

This month's topic is Uncommon, Unusual, and Rare Rocks and Fossils. So what are talking about? Well it can be some crystal habit that is not in the minerals normal tendency. A rare mineral that one does often see or have association with. An odd ball or rare fossil.

Torbernite, whose name derives from the Swedish chemist Torbern Bergman (1735–1784), is a radioactive, hydrated green copper uranyl phosphate mineral, found in granites and other uranium-bearing deposits as a secondary mineral. It has a vibrant green color, with well developed crystals, which make this collectible. However, Torbernite is a hydrated mineral, therefore it can suffer from the loss water



Torbernite, Sebadelhe da Serra, Portugal

molecules, leading to an alteration into its pseudomorph, Meta-Torbernite. Furthermore Torbernite is also radioactive, which outgasses radon. Therefore proper handling and storage should be taken.



Manakarra Grape Agate, Suluwesi, Indonesia

Manakarra Grape Agates. These newly discovered purple botryoidal agates from Sulawesi, Indonesia are included in this discussion. Why you may ask, as agates are very common, found all over the place, even in Hawaii. However Agates are normally lapidary type material, found in nodules, seams, and masses. They also come in druzy and in just about any color combination which one can think of. The Grape Agates are not any of these. They come in Botryoidal masses and unless

Uncommon, Unusual, and Rare Rocks and Fossils

one is very artistic not used in jewelry too often. These Grape agates are mainly specimen pieces, which for an agate is not common.

Zultanite is the trade name given to the transparent, gem quality variety of color-change Diaspore, or Aluminum Oxide. It was first found around 1970, high up in the Anatolian mountains of Turkey. It has a hardness of 6.5 – 7.0 mohs, with a high refractive index of 1.7. This means that when the stone is cut correctly it will be very brilliant with lots of light dispersment. In other words it sparkles a lot, even in low light.



Gypsum, Cuper mine, Lubin, Poland

A hold over from last month, Selenite, this specimen from a closed mine in Poland is being shown as it is not the normal Gypsum specimen. It is extremely fragile and formed in thin crystals.

Benitoite is one of the most attractive of rare gems. Gem quality crystals have been found only in San Benito County, California. It was declared the state gem of California in 1985, Benitoite was discovered in 1907. At first, it was thought to be volcanic glass or a Spinel. However, the stone's greater dispersion and birefringence values distinguished it from sapphire. Thus leading it to be a new gemstone.

Furthermore, due to its rarity gem cutters will sacrifice the correct cut in order to produce the largest possible gemstone. Thus, it is common to find windows and less than



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optimal proportions in faceted stones. Flattened, triangular, typically small crystals show strong blue/colorless dichroism. However, to obtain the blue color, faceters usually orient the crystal along the *e* axis. This yields good color but smaller gems.

Zultanite, Anatolin Mtns, Turkey

The only mines which yield gem quality material are in San Benito County, California. However they ceased production in 2005.

Richterite is a Sodium Calcium Amphibole. Richterite was named in 1865 for the German minerologist Hieronymous Theodor Richter. It has a long and prismatic crystal structure, and comes in colors ranging from brown, grayish brown, yellow, green, and harder to find blue. One could find it intermixed with Sugilite, however blue Richterite

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Helicoprion Fossil

by itself is relatively hard to get ahold of. Mainly because the owner does not realize what they have other than a very nice translucent blue stone, which resembles dark blue chalcedony.

Stony-iron Meteorites account for less than 2% of the meteorites. They are composed of roughly equal amounts of nickel-iron and stone. The stony-iron meteorites are thought to have formed at the core/mantle boundary of their parent bodies. Finally the Stony-Iron Meteorites are also divided into two groups: pallasites and mesosiderites.

Pallasites could be the most alluring of the meteorites. They consist of a nickel-iron matrix filled with olivine crystals. When olivine crystals are of sufficient purity, and display an emerald-green color, they are known as the gemstone Peridot. Pallasites take their name from a German zoologist and explorer, Peter Pallas, who described the Russian meteorite Krasnojarsk, found near the Siberian capital of the same name in the 18th Century.

The Mesosiderites are the smaller of the two stony-iron groups. They contain both nickel-iron and silicates and usually show an attractive, high-contrast silver and black matrix when cut and polished. The seemingly random mixture of inclusions lead to some very striking features. The word Mesosiderite is derived from the Greek for "half" and "iron".

What is really, really rare are Lunar and Martian Meteorites. There are around one hundred different Lunar Meteorites and thirty or so Martian Meteorites. They belong to the Achondrite group. Here impacts on the Lunar and Martian surfaces by other meteorites fired fragments into space. Where upon some of those fragments eventually fell on earth.

An example of rare and/or unusual fossils could be one of the type where a fish is being gluttonous and is eating another fish. Which is too large and both die in conditions where upon they become fossilized. Or in the case of the other picture, this is the business end of the Helicoprion. Almost all fossil specimens are of spirally arranged clusters of the individuals' teeth, called "tooth whorls." The rest of the shark is sort of cartilage, so no other parts i.e, skull, spine, fins have not been preserved in the fossil record. The Helicoprion lived around 290 million years ago, leaving scientists to make educated guesses as to its anatomy and behavior.



Fossil of a fish eating another fish

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Newsletter Editor

The Rock & Mineral Society meets on the 4th Wednesday of each month (except for adjusted dates in November and December) at the Makiki District Park, 6:15-8 pm. Enter from Keeaumoku Street. Parking is free but limited.

The Newsletter is published monthly, some days prior to the meetings and is distributed in electronic format by email (Adobe Acrobat PDF file attachment). Printed copies are "snail" mailed to those who do not have email. The electronic format usually contains full-color images; the print version may be limited to B&W due to reproduction costs.

DOOR PRIZES

Please note that we have instituted door prize drawings at our monthly meetings. Because of Hawaii's gambling laws, these drawings cannot be conducted in the common "raffle" format where tickets are sold. Rather, each *paid* member attending the meeting will receive a drawing ticket upon request. A voluntary donation of \$1.00 is requested and encouraged. Drawings will be conducted at the end of the meeting with available prizes awarded in random order. You must be present to win. Please remember: if you win a prize, please bring one to the next meeting. This helps to keep our drawings going. Thank you.

From Keith Kruger :

Show Reminders:

If you have signed up to be a vendor at the show, please don't forget to bring your General Excise License.

The new law concerning the sale of Ivory and other animal products is now in effect. If you have questions about any items you plan to sell, check the following links online:

http://www.capitol.hawaii.gov/session2016/bills/SB2647_HD2_.htm

http://www.capitol.hawaii.gov/session2016/bills/GM1226_PDF

2017 Hawai'i Rock and Mineral Show



**FREE
ADMISSION**

facebook.com/RockandMineralSocietyofHawaii

Oct. 14 & 15, 2017 • 10 am to 5 pm

Outrigger Waikiki Beach Resort, Honolulu • Leahi Room, Upper Lobby



Special displays and dealer sales
Rocks * Minerals * Gems * Jewelry
Lapidary * Fossils * Meteorites & More!



We can also help identify your mineral & fossil specimens.

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