

HUI PŌHAKU 'Ō HAWAII

Rock & Mineral Society of Hawai'i, Inc.



Meeting Times

MEETING
Wednesday
June 24, 2015

6:15-8:00 pm
Makiki District Park
Admin Building

NEXT MONTH
Red White and Blue
Minerals

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

MEMBERSHIP
DUE COSTS 2015
Single: \$10.00
Family: \$15.00

© Rock & Mineral Society of Hawai'i, Inc.
P.O. Box 23020
Honolulu, HI
96823-3020

Yellow Minerals By Dean Sakabe

The Topic for June is Yellow Minerals. Of which we shall immediately begin with **Gold**. This virtually indestructible native element has been used since prehistoric times. The latin name for gold is "Aurum". So when Jons Jakob Berzelius established the system of chemical symbols, he used the familiar Au.

Coral is the term used to describe a group of marine invertebrates, that collectively belong in the class Anthozoa of Phylum Cnidaria. While we are used to seeing the clusters of white coral on display in stores, this is not what we want and is truly a waste of coral. Other colored Coral has also been used in jewelry for many generations, most notably Red Horn Coral, Black Coral and Pink Coral. For our purpose there exists Gold coral, of which there are only four species, *Narella*, *Gerardia*, *Callogorgia gilberti* and *Calyptrophora*. These



crystalline Gold on white Quartz matrix, Eagle's Nest Mine in Placer County, California



Gold Coral, Davidson Seamount, California

are usually deep water coral, in the case of *Gerardia* coral, it is found in 400 meter deep water south of Oahu. These corals live exceedingly long lives and grow excoriatingly slow. Again for the *Gerardia* coral it is 3 inches per year and their growth rings may occur only once a decade. But this coral exhibits a chatoyance property, which

Yellow Minerals

along with its golden color was why it was searched for jewelry purposes.

Pure **Sulfur** is bright yellow, very soft, very light, and very brittle. Sulfur, is usually found where volcanic activity is present, however it also occurs in petroleum deposits. Of note, pure sulfur is also odorless, yes it does not smell. The rotten egg smell that is associated with sulfur, occurs when water is mixed with Sulfur producing Hydrogen Sulfide (gas). Of note, the common method of mining sulfur is to induce hot water to the deposit. This melts the sulfur forming a brine, which is then pumped out and the sulfur is extracted from this brine, by evaporating the water.



Sulfur, Agrigento, Sicily, Italy



Gypsum, Red River Floodway, Winnipeg, Manitoba, Canada

Gypsum is composed of Calcium Sulfate Dihydrate, it is very soft and is used as a fertilizer, plaster, and blackboard chalk. Gypsum's name is derived from the Greek word "gypsos" meaning chalk or plaster. Gypsum was mined near Paris, France. There it was heated or burned, driving out the water, where it was sold as "Plaster of Paris" This compound when water was reintroduced hardens up in whatever form the paste made, which made it useful in construction or as casts (at least prior to fiberglass casts). The Gypsum we are interested in happens to be the yellow rosettes from Red River Floodway area in Winnipeg, Canada. The created floodway system happened to cut thru a glacial clay layer where Gypsum was present. The Gypsum rosettes form in the clay. The crystals Fluoresce and Phosphoresce a pale white under ultraviolet light.

Citrine is the yellow variety of Quartz. Whereas it does occur naturally yellow in some places and in Bolivia there is Ametrine, which is purple and yellow. Most of the Citrine which one sees starts out in life as an ugly (brownish) Amethyst. There they heat treat the Amethyst turning it into the pleasing yellow to orange-yellow Citrine.

Heliodor is the yellow variety of Beryl. It is a beryllium aluminum silicate in which the yellow is produced when iron replaces some of the aluminum in the crystal structure. The name Heliodor is derived from the Greek "helios doron" meaning *gift from the sun*.

Yellow Minerals

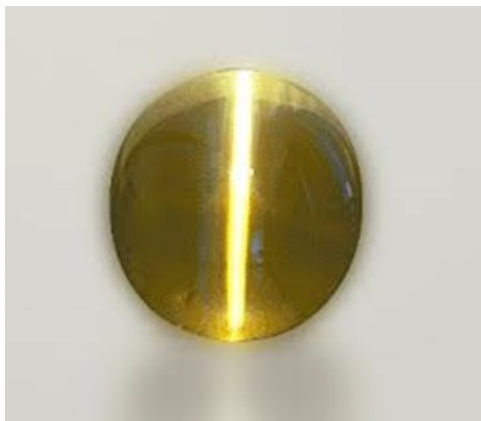


Heliodor, Zelatoya Vada Mine, Tien Shan Mtn, Tajikistan

Heliodor can also contain trace amounts of uranium, making it slightly radioactive. Heliodor was discovered in Namibia in 1910 in a pegmatite that also produced aquamarine. The largest faceted heliodor is 2,054 carats and on display at the Smithsonian Institution.

Chrysoberyl is a Beryllium Aluminum Oxide best known for its Cat's Eye effect. This occurs when the Chrysoberyl contains a large number of parallel oriented fibrous inclusions. Oddly enough the cat's eye sometimes presents itself as a singular line whereas one side of the stone is lighter in color from the other side. This is sometimes known as the "milk and honey" effect. The other variety of Chrysoberyl is the color-changing Alexandrite. This stone is green under daylight and red under incandescent light.

There are many other yellow minerals which one can mention. Such as Calcite, Amber, Petrified Wood, Dinosaur Bone, Tiger Eye, Corundum, Smithsonite, Tourmalines, Spinel, and the nice Carnotite.



Cat's Eye Chrysoberyl



Calcite, Xia Huan Pu Mine, Hunan,

WE HAVE A FACEBOOK PAGE! LET'S GO LIKE IT!

HTTP://WWW.FACEBOOK.COM/PAGES/ROCK-AND-MINERAL-SOCIETY-OF-HAWAII/103902329673700?V=WALL&REF=SGM
 MAHALO TO MARKUS FOR ESTABLISHING OUR *ROCK FACE!*

Officers

President

Faye Chambers
 cateyes@hawaii.rr.com

Vice President/Admin.

Brenda Reichel

Vice President/Lapidary

Dean Sakabe
 Dean.d.sakabe@verizon.com
 (808) 282-6681

Treasurer

Debbie Iijima

Secretary

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.

HUI PŌHAKU 'Ō HAWAII 
Rock & Mineral Society of Hawai'i, Inc.

P.O. Box 23020

Honolulu, HI 96823-3020