

HUI PŌHAKU 'Ō HAWAII

Rock & Mineral Society of Hawai'i, Inc.



Meeting Times

MEETING

Wednesday
July 22, 2015

6:15-8:00 pm

Makiki District Park
Admin Building

NEXT MONTH

Presentation by
Bryan Swoboda

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

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P.O. Box 23020

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Minerals that are Red, White, and Blue By Dean Sakabe

July's topic is minerals that are Red, White, and Blue.

So Just to get them out of the way, the two top gemstones that meet this criterion are Diamonds and Corundum. Which incidentally are the two top per carat stones around. i.e. Red Diamonds and Pidgeon Blood Rubies.



Spinel, an Magnesium Aluminum Oxide representative of a group of members. The Magnesium can be

replaced with Iron, Nickel, Manganese, and Zinc. Furthermore the Aluminum can be replaced with Iron, Chromium, Manganese, and Titanium. Red Spinel's are often referred to as the poor cousin of Rubies, although it is normally more pinker than Ruby. Perhaps the most notable is the Spinel Twin Law. Here it produces a twin plane that is parallel to one of the octahedral faces.

Also of note the Red, Pink, and Violet Spinel's will usually fluoresce red or yellow under Short wave Ultraviolet light. The most famous spinel is the Black Prince's Ruby that is the centerpiece of the Royal Crown of Great Britain.

Spinel Law twin ("Star of David" Twin), Magok, Myanmar



Tourmaline, Mozambique

Tourmalines, an Aluminum Boron Silicate come in just about every color. We are not just talking about single color crystals, but multicolored containing two or more colors within the same crystal, additionally one can also find tourmalines with a cat's

Minerals that are Red, White, and Blue

eye in them. The name comes from the Sinhalese word "Turмали" or "Thoramalli", for the stones originally coming out of Ceylon (Sri Lanka today)

Smithsonite is a Zinc Carbonate, with the Zinc component being replaced by other elements which makes other colors possible. Copper gives a green to blue color. Cobalt gives a Pink to Purple color. Cadmium makes Smithsonite Yellow. Iron give it a bron to reddish color. As appears, Smithsonite is named in honor of James Smithson, the founder of the Smithsonian Institution. Smithsonite was used as an ore for Zinc. In fact, the Romans had extracted Zinc from Smithsonite and then mixed it with copper to make Brass.



Blue Cap Tourmaline, Sapo Mine, Minas Gerais, Brazil



Hematite, Smithsonite, Tsumeb, Namibia

Garnets are a group of minerals which are closely related. The most common grouping are these two groups. Group 1, which are garnets containing Aluminum, which includes Pyropes, Almandines, and Spessartines. The other group is Group 2, which are garnets containing Calcium, which includes Uvarovite, Grossular, and Andradite. Between these two groups the common philosophy has been that Garnets come in every color, but Blue. However material from Bekily, Madagascar happens to be of the color change variety and it happens to change from red in daylight to sometimes a blue under fluorescent

lighting. The garnet has small amounts of Chromium and Vanadium while possessing characteristics of Spessartine and Pyrope garnets, so it a very odd ball type of garnet. But it comes in blue, so it can now be said that Garnets like Tourmalines come in every color of the rainbow.

Flourite is a Calcium Fluoride, which is very popular to collect. It comes in all different colors ranging from pure Flourite, which is colorless, to every



Color Changing Garnets, Bekily, Madagascar

Minerals that are Red, White, and Blue



Rainbow Fluorite

color in the rainbow. Fluorite is also one of the most fluorescent minerals. As many specimens strongly fluoresce, and different specimens will fluoresce in different colors. In fact, the word "fluorescent" is derived from the mineral Fluorite. The name of the element fluorine is also derived from Fluorite, as Fluorite is by far the most common and well-known fluorine mineral.

Opal, which is a hydrated amorphous form of Silica. Opal has an amorphous character, which classifies it as a mineraloid. In other words it does not form in crystalline form. It is sometimes in veins, lumps, pinpoints. Opal can also be found in material replacement, such as the replacements of fossils or tree limbs.



Opal, Virgin Valley, Nevada



Boulder Opal, Australia

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!*

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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.

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