

# HUI PŌHAKU 'Ō HAWAI'I

## Rock & Mineral Society of Hawai'i, Inc.



### Meeting Times

#### MEETING

Wednesday  
September 25, 2019

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

Next Months Topic  
Fossils

#### LAPIDARY

Every Thursday  
6:00-8:00pm  
Cleanup @ 7:45pm  
Makiki District Park  
2nd floor Arts and  
Crafts Bldg

#### MEMBERSHIP

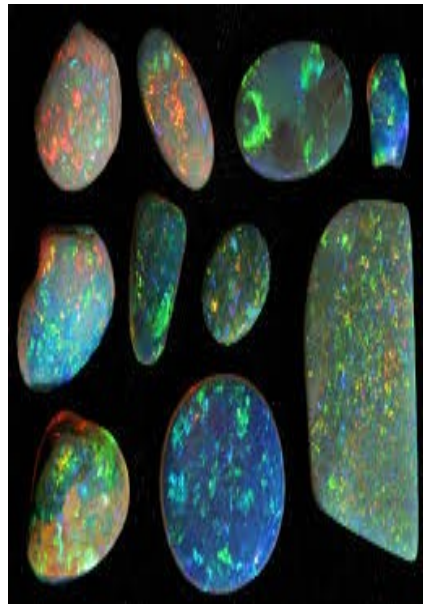
DUE COSTS 2019

Single: \$10.00

Family: \$15.00

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Hawai'i, Inc.  
P.O. Box 23020  
Honolulu, HI  
96823-3020

### Opal SiO<sub>2</sub>nH<sub>2</sub>O



Opal is an hydrous silicon dioxide with a chemical composition SiO<sub>2</sub>nH<sub>2</sub>O. Clean quality opal is one of the most spectacular gemstones. A single stone can flash every color of the spectrum with intensity that can surpass that of fire diamonds. This phenomenon is often called opalescence. The intensity and distribution of color flashes is a determining factor in the value of an Opal.

Opals are without a clearly defined shape or form and also without a definite chemical composition. This is why opal is considered a "mineraloid" rather than a mineral.

Opals were formed where deeply weathered sedimentary rocks released silica into the groundwater. Impermeable barriers between the sedimentary rocks hardened the silica to gel estimated as much as 30 million years to develop.

Opals are commonly used in jewelry for producing necklaces, pendants and earrings.

A condition called crazing affects certain Opals causing them to form internal cracks. It often takes place when an Opal is removed from damp conditions and allowed to dry too quickly. The origin is often the determining factor to its resistance to crazing as some localities are less prone than others. A gradual drying process over months or even years can effectively stabilize the stone.



#### AUSTRALIAN OPALS

1. Australia produces 95% of the world's precious opals.
2. Opal is the country's gemstone
3. Lightning Ridge is renown for its production of Black Opals which are most desired.
4. Boulder Opals are mined in Queensland.
5. The towns of Quilpie, Clowah and Winton are main mining towns as well as wholesale centers.
6. Australia is the only part of the world where opalized animal and plant fossils have been found.



Common opal also known as patch is a variety of opal that does not exhibit flash or play of color. Two varieties of common Opals are fire opals (orange color) and hyalite (translucent). Commonly confused with Quartz and Chalcedony.

## Corundum ( $Al_2O_3$ )



Corundum is a rock-forming mineral that is found in igneous, metamorphic, and sedimentary rocks. It is an aluminum oxide with a chemical composition of  $Al_2O_3$ . Corundum is known for its extreme hardness for cutting gemstones as well as industrial abrasives. It is the third hardest mineral only after Diamonds and Moissanite.

Two types of Corundum is Ruby and Sapphire.

Traditional sources of alluvial deposits include Burma, Cambodia, India, Afghanistan, Madagascar and Nigeria.

Corundum can also show a phenomenon called asterism or "star effect". It appears as a six ray pattern across the stones curved surface. It arises from white light reflecting from Rutile oriented needle like inclusions.

The most renown Rubies that are found in Myanmar, Himalayas and Vietnam typically formed in marble.

Rubies can command the highest per carat price of any colored stone. The quality of the Ruby is determined by its color, cut, and clarity.

The trace element of Chromium causes the red color in Rubies. The brightest and most valuable rubies are of a blood red color or also called pigeon's blood.

Chromium also causes fluorescence.



Purple, Violet, and Green are the most common hues found in Sapphire.

These colors contain trace amounts of Vanadium.

Should trace amounts of iron / titanium be present, the gemstones will be colored yellow to green.

The alluvial deposits of Kashmir is most known for gem quality specimens. The Sapphires there are known for the cornflower blue hues.

Rubies and Sapphire found in basaltic rock tend to have a higher iron content which will tend to make the crystal in matrix darker and less intense in color

Gem quality rubies from pink to purple are being recovered in the Luc Yen and Quy Chau mining regions in Vietnam.

The deposits are located within the Bac Bo mountain range, in the rice paddies and rivers that cross the area.



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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.



Current Board of Directors for 2019

President—Matthew

Vice President—Jon

Vice President Lapidary—Dean

Treasurer—Debbie

Recording Secretary—Blair

1 Year Officer—Ray

2 Year Officer—Teresa

3 Year Officer—Tony

3 Year Officer - Roger

Message from Matthew for All Members,

Its time again for our yearly elections.

We are sending this out to be sure that no member misses their opportunity to become an officer or director.

First and foremost, you must be a member in good standing to vote and /or be a candidate. Have you paid your dues in 2019 ? Do you need to update your email address ? If not sure, this would be a good time to contact Debbie to check.

In accordance with our By laws, two Board Members will be elected for 2020 along with all Officers which are annual positions. This brings us to the first phase of our election, nominations, which will take place at the September club meeting. Individuals do not need to be present to be nominated however must consent to running for election if nominated to be considered a candidate.

The official election for all positions will be done during our October meeting. We need as many members present at the meeting to ensure we have a quorum. Please make it a point to attend in October if your schedule permits

Thank You,

Matthew



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