

HUI PŌHAKU 'O HAWAI'I

Rock & Mineral Society of Hawai'i, Inc.



VOLUME 46, NO. 1

AUGUST 2010

QUARTZ INCLUSIONS

BY DEAN SAKABE

Quartz is the most common mineral species on earth. It is found on just about every continent, even our little islands has several locations where Quartz specimens have been found. Consequently, because of the large and diverse nature of quartz occurrences, there is an excellent chance that quartz will be found with something else growing by it, which will eventually become engulfed by the faster growing quartz crystal. These are in essence Quartz inclusions.

Inclusions can be generalized as two types:

1. Minerals that formed earlier and were captured by later forming quartz.
2. Minerals that were forming or floating in the hydrothermal fluids that were deposited on the growing quartz crystals.

Examples of the first type include rutile, actinolite, hedenbergite, some hematite, and tourmaline (1) crystals that formed early and had rock crystal deposited on it thereby encasing the early minerals. The latter type includes chlorite, cookeite, hematite, mica, pyrite, galena, adularia, and many others that were deposited as the quartz was crystallizing. In some specific instances, such as asteriated quartz, rutile (2) is thought to have been in solid solution in the quartz, and upon cooling, the rutile was forced out of the quartz structure, resulting in microscopic, yet highly oriented needles. Light, playing off these oriented needles, presents a six-ray star typical of asterism.



(1) Tourmaline in Quartz (Brazil)



Tourmaline on/in Quartz
(Minas Gerais, Brazil)



(2) Golden rutile in Quartz,
(Mato Verde, Brazil)

MEETING

Wednesday
October 27
6:15-8:00 pm
Makiki District
Park
Administration
Building

NEXT MONTH

Wednesday
November 17

XMAS POTLUCK!

Friday
December 3

LAPIDARY

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

MEMBERSHIP

DUE COSTS
2010

Single: \$10.00
Family: \$15.00

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Quartz Inclusions, page 2

BE SURE TO RENEW YOUR MEMBERSHIP USING THE ATTACHED FORM!

The first example of a quartz inclusion is in a Quartz itself. Phantom quartz (3) is caused when something temporary interrupts the crystal's growth process. Then, when the conditions change, and the crystal starts growing again, small bubbles or small settling particles of fine grained minerals adhere to the crystal face of the newly growing quartz crystal. This process results in "phantoms" that look like a crystal grown inside of another crystal.



(3) Double-phantom quartz
(Mato Verde, Brazil)

Enhydros are Quartz with fluid inclusions. These inclusions could have occurred when the edges of the quartz formed faster than the center. This forms troughs that sometimes trap water solution or other foreign matter. When these troughs were covered by more crystal growth, the captured water would "gas out" or cool and contract and a bubble would form in the liquid.

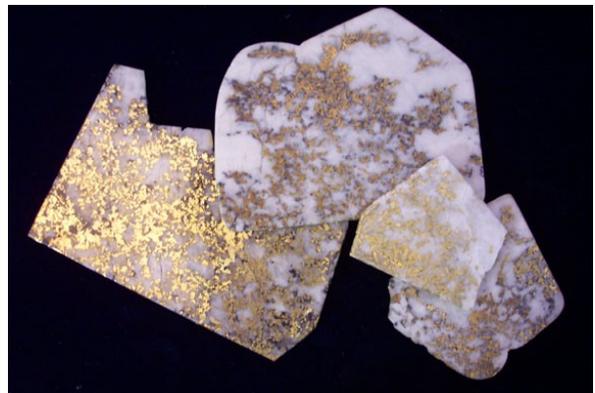
A common inclusion which you will find is Chlorite(4). This is an Iron, Aluminum, or something from the Magnesium Silicate Hydroxide group which form as a coating on a crystal

early in the crystal growth. Conversely, an uncommon inclusion is one had by Ed Sawada of which the composition of the inclusion is not known.



(4) Chlorite Quartz

Gold in Quartz is another "inclusion", and the best specimens come from the "sixteen to one" mine in Alleghany, CA(5). Here the quartz is snow white, with almost pure gold veining thru out the quartz.



(5) Gold in Quartz
16 to 1 mine, Alleghany, California

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Quartz Inclusions, page 3

Nipomo Agate (6) has Marcasite (7) plumes encased in clear agate. These prized agates were found in the bean fields of Nipomo, Ca. Sadly, the bean fields are now covered by condos, so any examples of this agate you find are 15 years or older.



(6) Sagenitic Agate,
Myrick Springs, California



(7) Marcasite in Quartz,
Nipomo, California

Spider Quartz, is a newly discovered quartz from Madagascar, and has Hollandite crystal inclusions within the quartz crystal which resemble little spiders within the quartz.

Examples of dendritic inclusions include dendritic agate, flower stone, Indian agate, mocha pebble, river agate, and the descriptively-named scenic agate and tree agate, whose dendrites resemble the landscape and trees.

Chalcedony is a mineral porous enough to accept dyes, along with various layers of agate. Examples of these stones include emeraldine, false lapis and Swiss lapis.

Some of these close associations of the varieties of silica suggest that quartz is an ultimate product of recrystallization which may take place after very long periods of time. Agate jasper, an intermediate between jasper and chalcedony, a close mixture, is often banded or veined. Examples include hemachate, hyaline quartz, jaspagate and jasponyx.

Many fossils are preserved by silicification of their soft parts, or of their calcareous shells and bones. Particular names are given to fossil corals like beekite, beekite, coral agate, and petrified honeycomb. Silicified wood also appears in chinarump.

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News and Notes, page 4

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.

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](http://www.facebook.com/pages/Rock-and-Mineral-Society-of-Hawaii/103902329673700?v=wall&ref=sgm)

MAHALO TO MARKUS FOR ESTABLISHING OUR ROCK FACE!

THE METAPHYSICAL PROPERTIES OF METALLIC MINERALS BY JADE EMORY

Metaphysically, gold relates to the Sun in one's astrological birth chart, and silver relates to the Moon in one's birth chart. Platinum relates to the soul and the Ascendant in one's birth chart. All these metals have notable "medicine" powers. People who wear gold are enhancing their male side and people who wear silver are enhancing their female side, regardless of their physical gender.

The first peoples of many lands identified the Creator as the Sun God, which provides warmth, light and crops. Hence religious objects were often made out of gold. In many cultures brides prefer gold for their wedding bands. Columbia, South America developed a refined form of platinum 1500 years before Europeans discovered one. The Spanish conquistadores did not appreciate platinum the way they did gold. Unfortunately, they desecrated the gorgeous religious objects of the South American Native cultures and melted down the gold.

A notable difference is in Japan, where the overwhelming majority of brides prefer platinum. Platinum dates back 3000 years, beginning in Egypt as far as we know. Archeologists found Egyptian gold pieces which contained traces of platinum. Even more thrilling was that they uncovered a box dating to the 7th century B.C. made of gold and silver, balancing yang and yin, which also had a panel made of platinum. Ancient Egypt surely was an evolved culture. European scientists finally became attentive to platinum in the mid 1700s, because its high melting point made progress difficult. Yet any sensitive person wearing platinum can instantly feel the high vibration of platinum compared to gold or silver.

PARKING AT MAKIKI PARK

Parking along Keenamoku St. starts at 5:30
After that, good luck because it drops off really fast!

Rock & Mineral Society of Hawai'i, Inc.

2008 Officers

President

Faye Chambers
621-6710
cateyes@hawaii.rr.com

Vice President/Admin.

Ed Sawada

Vice President/Lapidary

Dean Sakabe
535-5012 (day)
625-2671 (eve.)
dsakabe@verizon.net

Treasurer

Debbie Iijima
539-4552 (day)

Secretary

Jade Emory

Newsletter Editor

Elise Thomasson
elise.thomasson@gmail.com

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, 7:00 - 9:00 pm. Enter from Keenamoku 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.

Any newsletter comments are appreciated, and can be sent to elise.thomasson@gmail.com

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P.O. Box 23020
Honolulu, HI 96823-3020

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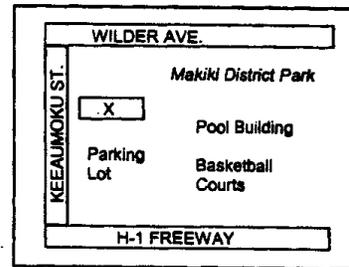


Established in 1970, the **Rock & Mineral Society of Hawai'i, Inc.** is a non-profit, educational organization dedicated to mineral and rock collecting and appreciation.

The group meets on the fourth Wednesday of each month at the Makiki District Park on Keeaumoku Street in Honolulu from 7:00 to 9:00 pm. The public is invited to attend any single meeting as guests. Parking is free but limited. Membership is open to all ages, including non-residents.

The benefits of membership include:

- Attendance at informative monthly meetings.
- Monthly newsletter, either a printed copy or electronic distribution via email.
- Access to a well-equipped lapidary shop, available on Thursday evenings periodically throughout the year. Classes and training in lapidary techniques provided by experienced club members.
- Rockhounding field trips to various locations around the islands.
- Participation in club-sponsored shows and exhibits, where members can display and/or sell minerals, rocks, fossils, and lapidary items, including jewelry.
- Networking with other members to exchange ideas and information.



For more information:

President - Faye Chambers (808) 226-8478

Vice-President/Lapidary - Dean Sakabe: (808) 535-5012

***** MEMBERSHIP APPLICATION FORM *****

Membership for calendar year: Single \$10.00 Family (2+) \$15.00 New Renewal

Name(s) (please list childrens' names and ages): _____

Mailing address: _____

City: _____ State: _____ Zip: _____

Phone Number(s): _____

Email address: _____

Please send the monthly newsletter: via email (PDF file) printed copy via regular mail

Special Interests: Lapidary Faceting Thumbnails Micromounts Fossils Other

Please make check payable to: **Rock & Mineral Society of Hawai'i, Inc., P.O. Box 23020, Honolulu, HI 96823-3020**

RMSH Use Only:

Received by: _____ Date received: _____

Amount received: \$ _____ Method of payment: Cash Check # _____ Receipt given: Y/N

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P.O. Box 23020
Honolulu, HI 96823-3020