

# HUI PŌHAKU 'O HAWAI'I

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



VOLUME 46, NO. 1

JANUARY 2010

### RED MINERALS

BY DEAN SAKABE

This year we are starting up with a mineral that can be found in most of our collections. **Red minerals.** A very special color that is usually placed in a class by itself. Case in point, Corundum. Almost all colors of corundum are sapphires. With the exception of the red variety of corundum. This is not called a red sapphire. It is Ruby. Only red corundum receives this distinction. If it is pinkish in color, then it is Pink Sapphire. If it is more purplish, then it is Purple sapphire. Only red corundum (most likely colored by chromium) gets to be called Ruby.

Other red minerals are : **Crocoite**, a lead chromate, which gets its unusual name from the Greek word "Krokos" for crocus or saffron, which refers to its yellowish orange color. For those like myself cannot distinguish too many different color combinations. It is close enough for me to call it red, versus an orange-red. Crocoite was at one time mined as an ore of Chromium and lead. Thankfully, they are not mining it for specimens instead of smelters. The main source comes from the Dundas District of Tasmania, Australia. The crystals there have usually long thin prisms. Most specimens do not have any crystals over 5 cm long. Crocoite's high density and luster are the result of its lead content. Crocoite aggregates are composed of bars and splinters, each with differing sizes, additionally they are going in a dozen different directions. This effect

produces a character to these specimens that makes it very distinctive.

**Cuprite**, or copper oxide is a major ore of Copper and still mined in many places around the world. Cuprite as an oxidation product of copper sulphides in the upper zones of veins and often associated with native copper, Malachite, Azurite, Limonite, and Chalcocite. There is a fibrous form of Cuprite known as Chalcotichite. Cuprite shows well developed cubic crystal forms.

**Almandine**, is the most common of the garnets, this Iron Aluminum Silicate, is usually found in garnet schists (metamorphic rock composed mostly of mica). Transparent crystals are frequently cut into gemstones.



(1) Crocoite  
Adelaide Mine, Dundas, Tasmania

### MEETING

Wednesday

January 27

6:30—8:00 pm

Makiki District

Park

Administration

Building

### NEXT MONTH

### LAPIDARY

Every Thursday

7pm-9pm

Second-floor Arts

and Crafts Bldg

Makiki District

Park

### MEMBERSHIP

### COSTS

2008

Single: \$10.00

Family: \$15.00

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## Red Minerals, page 2

Almandine, like other garnets, forms rounded crystals with 12 rhombic or 24 trapezoidal faces or combinations of these and some other forms. Magnesium can substitute for the iron and become more like pyrope, the magnesium aluminum garnet. Pure almandine and pure pyrope are rare in nature and most specimens are a percentage of the two. One of the classic sources of this garnet is Alabanda, in Asia Minor (the Asian side of Turkey), hence the derivation of the name for which we get Almandine. Almandine garnets from Idaho and India sometimes have asbestos fiber inclusions, these will produce star stones when properly cut.

**Red Amber**, a fossilized tree resin, can be found in the Dominican Republic. While not as known about as the "classical" Baltic Amber, This variety of amber is fairly rare and very distinct. There is also a natural red amber from Chiapas, Mexico. Chiapas Amber usually has deep red to cognac color (although it sometimes exhibits a green sheen), it will also fluoresce under long-wave UV light. This amber came from the Miocene era, specifically the Oligocene era, 23.8 to 33.7 Million years ago. The tree that produced this is the leguminous *Hymenaea courbaril*, a close relative of the *Hymenaea* tree which produced the Dominican variety. There are sometimes bugs, dirt, or leaf matter was trapped in the amber.

**Rhodochrosite**, whose name means rose-colored, is a very attractive mineral with a one-of-a-kind color. This Manganese Carbonate can be an ore of manganese, more likely it is prized more for its ornamental qualities and especially for its specimens. Individual crystals are found in well shaped

rhombohedrons. In a massive form its pink and white bands are extremely attractive and are often used in semi-precious jewelry. Rhodochrosite is often carved into figurines and tubular stalactitic forms are sliced into circles with concentric bands. However Rhodochrosite's softness and brittleness limit it as a gemstone for everyday use.

There are many localities for rhodochrosite, however best locality for rhodochrosite is the Sweet Home Mine in Colorado. It is unmatched for its superb rhodochrosite crystals that exhibit the best features of the species; a fine bright rose color and sharp well formed crystals. Some specimens from the Sweet Home Mine are quite large and of world class distinction. Catamarca, Argentina has an old Inca silver mine that has produced fine stalactitic examples of rhodochrosite that are unique and very attractive. These stalactites are cut cross into sections which reveal concentric bands of light and dark rose colored layers. These specimens are carved and used for many ornamental purposes. Rhodochrosite has also been found in Mont Saint-Hilaire, Canada and Peru. The N'Chwanging Mine, Hotazel, South Africa has produced one of the best examples of scalahedral crystals of rhodochrosite. The unusual crystal habit is due in part to this being one of a few sedimentary crystallizing environments for the species.

**Rhodonite** is an attractive mineral that is often carved and used in Jewelry. It is a Manganese Iron Magnesium Calcium Silicate and named after the Greek work for rose, Rhodon. Its rose-pink color is distinctive and can only be confused with rhodochrosite. Rhodonite does not react to acids and



(2) Almandine  
Fanny Gorge Mine,  
Spruce Pine, NC



(3) Red Amber with  
mosquito  
Chiapas, Mexico



(4) Corundum  
Jagdarak Ruby  
Mine, Sorobi District,  
Konar, Afganistan



(5) Pink Fluorapatite,  
Aquamarine on Muscovite  
Nagar area, Gilgit  
district, Pakistan

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## Red Minerals, page 3

is usually associated with black manganese minerals and pyrite. When left in air. A black coating of manganese oxide covers the exposed area.

**Spessartine**, is a Magnesium Aluminum Silicate garnet, named after its type locality in the Spessart Mts, Germany. Spessartine, like other garnets, forms rounded crystals with 12 rhombic or 24 trapezoidal faces. This classic crystal habit is classic for the garnet minerals. Spessartine is formed in manganese rich metamorphic environments and in some granitic pegmatites. Spessartine is somewhat rare but occasionally will accompany other minerals and make a nice accessory mineral to an outstanding mineral specimen. Spessartine is an uncommon garnet, mostly found in granites and pegmatites. It ranges in color from red-brown to yellow-brown. Its orange occurrence is a gemstone known as mandarin garnet.

**Spinel**, is a magnesium aluminum oxide, which is typically red in color, although a pinkish red. Typically Spinel is the poorer cousin of Ruby, however its pinker color and other qualities make spinels attractive in its own right. Spinel is typically well formed octahedrons. However it is most famous for the Spinel Twin Law. This type of twinning produces a twin plane that is parallel to one of the octahedral faces. The plane acts as a mirror plane and produces a left and right side that are mirror images of each other. This may not sound all that spectacular for a very symmetrical mineral like spinel which is loaded with mirror planes. However this mirror plane is not parallel to any of the others and actually lowers the symmetry of the crystal (only in appearances though).

Spinel resemblance to Ruby is close. It is usually a pinker shade of red, Spinel is slightly less hard (7.5 vs 9). Spinel and Ruby have similar refractive indexes, and densities. In fact they are both colored by Chromium. With this much similarities, Spinel has been mistaken for Rubies. The most notable is the Black Prince's Ruby set in the British Imperial State Crown.

**Rutile** is the most common form of Titanium Diox

ide. Furthermore it derives its name from the latin Rutilus, red, in reference to the deep red color observed in some specimens when viewed by transmitted light. Small rutile needles present in gemstones are responsible for asterism. Asterated gems are known as "star" gems, such as Star Sapphires, Star Rubies, Star quartz, Star Garnets, and the various other stars.



(7) Cuprite  
Christmas mine, Gila, Arizona



(8) Rhodochrosite  
Rivas Pocket, Sweet Home Mine, Alma, Colorado

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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 WEBSITE!

[http://pohakugalore.net/Hui\\_pohaku/Hiu\\_pohaku\\_1.html](http://pohakugalore.net/Hui_pohaku/Hiu_pohaku_1.html)

### Meeting is starting earlier

**Administration Building  
January 27th  
6:30 pm — 8 pm**

The change has incurred due to the Parks change in operating hours. The park closes on Monday—Thursday at 8 pm.

### 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@verizonngni.com

##### *Treasurer*

Debbie Iijima  
539-4552 (day)

##### *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 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.

Any newsletter comments are appreciated, and can be sent to [elise.thomasson@gmail.com](mailto:elise.thomasson@gmail.com)

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Honolulu, HI 96823-3020

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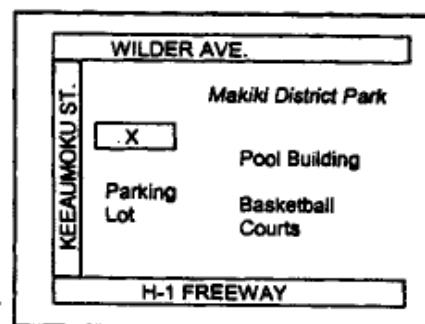


Established in 1970, the Rock & Mineral Society of Hawai'i, Inc. is a non-profit, educational organization dedicated to mineral and rock collecting and appreciation.

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: \_\_\_\_\_

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