

HUI PŌHAKU 'O HAWAI'I

Rock & Mineral Society of Hawai'i, Inc.



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MINERALS FROM THE INDIAN SUBCONTINENT

The minerals and gemstones from the Indian Subcontinent are very vast and diverse. One has to only look at images of the Maharajah's and Maharani's to see that they are adorned with a multitude of gemstones. Below is a short sampling of some of the mineral legacies which has come from this region.

Golconda Diamonds are a standard of very high quality diamonds often absolutely colourless ("D" color), with a high level of transparency. They are chemically pure natural type-IIa diamonds. These diamonds have very little nitrogen, and do not react to infrared spectroscopy. Some of the Golconda diamonds include the Great Table Diamond, the Koh-i-Noor Diamond, the Orlov Diamond, the Sanc Diamond, the Great Mongul Diamond and the Hope Diamond.

The **Padparadscha** Sapphire from Sri Lanka is a very special

variety of gem corundum, a natural mixture of pink and orange. The name Padparadscha is derived from the Sanskrit/Singhalese *padmaraga*, a color akin to the lotus flower (*Nelumbo Nucifera* 'Speciosa'). Today other sapphires have been found in Vietnam's Quy Chau district, Tanzania's Tunduru district, and Madagascar. However these stones are often heat-treated or Beryllium diffused to reach a rich "orange-juice" or "papaya" orange. The difference between these stones and Padparadscha's are that Padparadscha's were natural and the heated or Beryllium diffused stones tend to be darker, with brownish overtones.

Kashmir Sapphires, these blue sapphires are first discovered in the Padar region of Kashmir, allegedly where a landslip had uncovered their occurrence in the 1870's. This mine is in a remote region high in the Great Himalayan mountains of northwestern India.

MEETING

Wednesday
June 25, 2008
7:00—9:00 pm
Makiki District
Park
"Minerals from
the Indian
Subcontinent"

NEXT MONTH

Wednesday
July 23, 2008
"Moonstones and
Pearls"

LAPIDARY

Classes on
Thursday
Evenings
7:00—9:00 pm

MEMBERSHIP COSTS 2008

Single: \$10.00
Family: \$15.00

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Lying at an elevation of approximately 15,000 feet, they are located in the small Kudi Valley, near the hamlet of Soomjam, in the Paddar region of Kashmir. In its glory years crystals as large as 5 inches were found. They range in color from near colorless to a deep blue, including a highly prized, rich "velvety" blue that is considered sapphire nirvana.

Moonstones from Sri Lanka, the classical country of origin of the moonstone, shimmer in pale blue on an almost transparent background. Specimens from India feature a interplay of light and shadow on a background of beige-brown, green, orange or brown. This gemstone belongs to the feldspar mineral group, of which almost two thirds of all the rocks on Earth consist. Moonstone is as 'adularia', a potassium aluminosilicate, which is also found in the European Alps near the Adula Group – hence the name 'adularia'. Moonstones from Orissa, India have been found with a smoky color and a champagne colored. Some of these also have a cat's eye effect or a four-spoked star.

Apophyllite, whose name roughly means "to leaf apart" in Greek, was given its name because its crystals tend to peel

or flake apart when they are heated, due to the loss of water molecules. This silicate is found in the Deccan Basalts in India especially around Poona. The color is mostly clear or colorless, however it can also occur as yellow, red, or the most sought after green.

Cavansite is a hydrated calcium vanadium silicate which was only discovered in the last 30 years. The best crystals come from the zeolite quarries in the Poona district. The deep blue spherical rosettes are generally found on matrix coated with snow-white crystallized Stibite.

Okenite, is a hydrated calcium silicate hydroxide. This unusual mineral is found in areas east of Bombay City (Kandivali and Kurar areas). Okenite frequently forms "cottonball" clusters where the crystals are so thin they look like tiny fibers. The clusters are composed of straight, radiating, thread thin, crystals, sometimes forming in volcanic bubbles called vesicles, which are lines with delicate tufts of okenite, these are sometimes called "Okenite Geodes". One note of caution, the clusters are composed of straight, radiating, thread thin crystals,



Apophyllite, Stilbite, Quartz on matrix
Ahmednagar, India



Stilbite on Apophyllite on Calcite Jalgaon, Maharashtra, India



Scolecite
Mahodori River Quarries, Nasik, Maharashtra, India



Gyrolite, Prehnite, Quartz on matrix
Khandivali area, Bombay (Mumbai), Maharashtra, India

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Minerals from the Indian Subcontinent, page 3

sometimes forming in volcanic bubbles called vesicles, which are lines with delicate tufts of okenite, these are sometimes called "Okenite Geodes". One note of caution, the clusters seem to bring out an urge in people to touch the fine fibers and to "test" the minerals softness. Discourage this as Ed Sawada can tell you, the crystals are very delicate and once touched, are never the same again

Gyrolite is another Hydrated calcium silicate hydroxide, which often forms individual nodular aggregates. These aggregates can appear glassy, dull or even fibrous. Unlike other similar looking minerals, such as prehnite or smithsonite. The aggregate nodules often accompany other fine and rare minerals such as appophyllite, okenite, and other zeolites. Much gyrolite forms inside of volcanic bubbles called vesicles. Gryolites were mined from the zeolite quarries around Bombay.

Scolecite is a hydrated calcium aluminum silicate which forms sprays of radiating crystals. These zeolites are found in Nasik around the Mahodori River quarries. Scolecite's structure has a typical zeolite openness in that contains open channels that allow water and large ions to travel into and out of the

crystal structure. The size of these channels controls the size of the molecules or ions and therefore a zeolite like scolecite can act as a chemical sieve. Scolecite, a calcium zeolite, natrolite, a sodium zeolite, and mesolite, a calcium and sodium zeolite, are closely related and sometimes found together.

Green **Aventurine** Quartz, is actually a quartzite and a rock, not a mineral. It is composed essentially of interlocking macrocrystalline quartz grains and other color imparting minerals. The green is from tiny platelets of green chromium mica called fuschite. Some aventurines contain different varieties of mica, hematite or other sparkly inclusions giving other colors from orange to red. These colorful specks add sparkle and also create or help create the body color of the aventurine they inhabit. The best green aventurine comes from the region of Bellary. A town in the state of Mysore in south central India, 270 miles northwest of Madras.



Sapphire
Ratnapura, Sabaragamuwa Province,
Sri Lanka



Fluorapophyllite
Pashan Hill Quarry,
Maharashtra, India



Cavansite on Stilbite.
Wagholi Quarry, Ma-
harashtra, India



natural Padparadsha Sap-
phire
Ratnapura, Sabaragamuwa
Province, Sri Lanka



The "Maharani" chryso-
beryl cat's-eye,
Sri Lanka (Smithsonian
Collection)

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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.

Rock & Mineral Society of Hawai'i, Inc.

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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, 7:00 - 9:00 pm. Enter from Keeaumoku Street. Parking is free but limited.

The Newsletter is published monthly, a week 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.

NEWSLETTER COMMENTS? SUGGESTIONS?

I am hoping to 'freshen up' the newsletter a bit., and would love your input! If there is anything that you would like to be added, taken away or changed around, please email me at elise.thomasson@gmail.com All comments would be appreciated.

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