

HUI PŌHAKU 'Ō HAWAI'I

Rock & Mineral Society of Hawai'i, Inc.



Meeting Times

MEETING

Wednesday

October 26

6:15-8:00 pm

Makiki District Park

Admin Building

NEXT MONTH

Opals

November 16

LAPIDARY

Every Thursday

6:30-8:30pm

Makiki District Park

2nd floor Arts and
Crafts ldg

MEMBERSHIP

DUE COSTS 2011

Single: \$10.00

Family: \$15.00

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Pearls By Dean Sakabe

Pearls, unlike gemstones produced deep inside the Earth, are created by mollusks. These animals live can live in both salt and fresh water habitats. Their various species number in the hundred thousands. However, even with this large number of species, pearl-producing mollusks are rare, and only found in less that 1 out of every 10,000 animals.

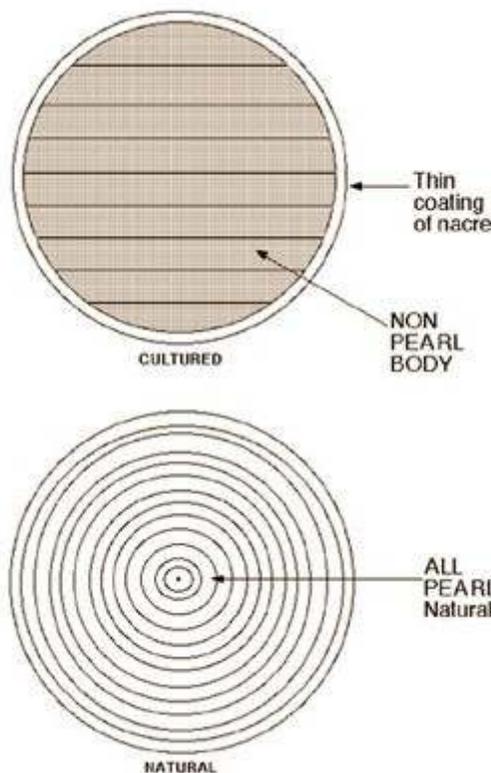


Diagram comparing a cross-section of a cultured pearl, upper, with a natural pearl, lower

Contrary to popular belief, pearls hardly ever result from the intrusion of a grain of sand into an oyster's shell. Instead, a pearl forms when an irritant such as a wayward food particle becomes trapped inside the mollusk. The animal senses the object, and coats it with layers of aragonite and conchiolin. These two materials are the same substances the animal

uses to build its shell. Within most pearls, the aragonite is arranged in sheets of flat, six-sided crystals. Between each sheet, the mollusk secretes a very thin layer of the membrane-forming protein conchiolin. This composite material is called Nacre or mother-of-pearl.

Pearls

The most distinctive feature of a nacreous pearl is the way it glows from within. This property, known as "luster," gives pearls their unusual beauty. Luster results from the reflection of light rays not only off the surface of the pearl, but also off the concentric inner layers of nacre. Because a pearl's surface is mostly round, it acts as a convex mirror, reflecting light so that it appears to emanate from within the pearl. The multiple layers of nacre also give rise to the "iridescence" or "orient" of pearls. This is a characteristic that resembles the shimmer seen on a soap bubble. The layers of nacre act like tiny prisms, refracting light so that it appears with all the colors of the rainbow.

During the Middle Ages, beds of European Pearl Mussels in Scotland, Germany, Scandinavia and Russia provided "river pearls". But with broadening European exploration and trade, the popularity of these freshwater pearls was eventually overshadowed by the availability of more lustrous marine pearls from the Persian Gulf region. Additionally, immense quantities of pearls were coming from Venezuela as that region joined Spain's territories.

North American freshwater pearls went almost unnoticed until the mid-1800s, when reports started to arise of people finding spectacular pearls in rivers and streams around the United States. These discoveries triggered the beginning of large-scale harvesting for these pearls at first, and for the mother-of-pearl later. This was used in buttons, and today for the mussels are harvested for the shells to produce nuclei for cultured pearls.



Hudson Strait Pearl of Blue Mussel

The Akoya is the original cultured pearl. This is the one that Mikimoto had developed, and became the first cultured pearl to be commercially successful. Akoya comes from the name of the oyster which is found in Japan and China, its scientific name is *Pinctata fucata*. The three areas in Japan where these oysters are most commonly found are in Ise, Kyushu and Shikoku.

Pearls

Chinese Akoya pearls are grown in warmer waters. This produces a thicker nacre coating, but they do not have the luster of Japanese cultured pearls. In the early 1950's, when cultured pearls were becoming popular, the quantity available was much less than today. Most of the necklaces produced then were graduated and ranged in size from 3mm to 7-1/2mm. As more pearls were produced, uniform necklaces became popular and remain the most popular today. A uniform necklace is one in which there is a half millimeter difference between the center pearl and the end pearl in the necklace.

Tahitian Black Pearls, also called South Sea Black pearls are grown in the waters of French Polynesia and the Cook Islands. They are saltwater pearls from the *Pinctada Margaritifera* or black-lipped oyster and can range from gray to black with red, green or blue overtones. This oyster also is found in Fiji, Tonga, Samoa, New Caledonia, the Philippines, Hawaii, Panama, and the Gulf of Mexico. An adult *Pinctada Margaritifera* oyster can reach a diameter of 30 centimeters, with weight exceeding 5 kilograms (about 1 foot in diameter and over 10 pounds). Rare specimens as large as 9 kilograms (over 19 pounds) have been harvested. It takes about two years before the oyster is ready for harvesting, but only about 30 percent of the oysters cultured produce a pearl.



Gold South Sea pearls are among the rarest pearl produced in the world today. Their golden colors are completely natural, being produced by the gold-lip variety of the *Pinctada maxima* pearl oyster. They are grown primarily in Australia, the Philippines, and Indonesia, and the Philippine pearls are darkest in color

Gold Pearl Necklace
(Philippines)



Pearls

Blue Pearls are grown in New Zealand's native abalone called Paua, (or *Haliotis Iris*), where they are found in the coastline waters. The Paua is able to create the broadest range of color and most magnificent iridescence of all the abalone species. They are currently captured and kept in five secluded bays. Even with these precautions and care, only one Paua in five produces a marketable blue pearl. Furthermore, only one in fifty produces a near perfect pearl, with exquisite color, a mirror finish, and a totally smooth surface.



Pink Conch Shell Pearl



World's largest Melo Pearl (37.6 mm and 397 cts)



Largest known pearl from a Giant Clam (Pearl of Lao Tzu, 6.4 kg)



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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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.

Parking at Makiki Park

Parking along Keeaumoku St. starts at 5:30

After that, good luck because it drops off really fast!

Mahalo

Keith Kruger donated a Celestite Geode to the Rock and Mineral Society.

This Geode was then sold by Russell Kimura at the Rock Show with the proceeds, then donated to the Rock and Mineral Society.

Mahalo Keith!

Have an idea for the newsletter?

We welcome all articles and ideas, and we want to make you a contributor. Feel free to send your idea to elise.thomasson@gmail.com. It would be wonderful to share stories, pictures, tips and tools.



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