

HUI PŌHAKU 'O HAWAI'I

Rock & Mineral Society of Hawai'i, Inc.



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AGATES

BY DEAN SAKABE

February's highlighted rock is Agates. Agates are one of the most varied stone you will ever find. Optimum word is find. Agates are distributed in just about every state of the union and pretty much distributed world wide. However the major beds of agate are probably around 100 or so localities.



(1) Montana Agate

Agates are part of the Quartz family, in particular the microcrystalline (or cryptocrystalline) group, where the individual crystals are too small to be seen, even with magnification. Members of this family of Quartz are Agates, Chalcedony Chrysoprase, Carnelian, Jaspers and Flint.

Agates are formed in at least five different ways. The primary condition necessary for agate formation is the presence of silica, usually from volcanic ash, water from rainfall or ground sources, and manganese, iron and other mineral oxides that form bands and inclusions.

A large portion of the agates found around the world are found "in-site" where they were formed. The main problem with this is that once the deposit is dug out, they are gone. Unless a new deposit of a particular agate is found in the area, they are gone forever.

Which brings up another topic. Agates have rather peculiar names, i.e. Montana Agate (1), Stinky Water Agate, Condor Agate, Nipomo Agate, etc.

The names of that particular agate could be from the area it was found, such as the case of Nipomo Agate (2), which was found in Nipomo, California. The name could also be indicative of what happened to the agate. Such as the term Agatized Coral, was mostly associated with the Agatized Coral found in Tampa Bay, Florida. . This was not to be confused with Michigan's Petosky Stone (3) , which is also Agatized coral, however woe be the person who calls this stone agatized



(2) Nipomo Agate (Nipomo, CA)

MEETING

Wednesday
February 23
6:15-8:00 pm
Makiki District
Park
Administration
Building

NEXT MONTH

Wednesday
March 23

LAPIDARY

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

MEMBERSHIP COSTS 2011

Single: \$10.00
Family: \$15.00

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coral. This stone is named after the city of Petoskey, Michigan. To further complicate matters, there is now a lot of "Agatized Coral" being mined from Indonesia. These stones are generally more colorful and the corals eyes are also more varied in pattern.

Montana Moss Agates are one of the alluvial agates, they are not found in-site. Instead they are in the Flaxville gravel deposits scattered over a large area encompassing hundreds of square miles. The beauty of this is that they cannot be claimed or mined. Instead they are available, in albeit smaller quantities to the public and collectors for many, many years to come. Each Spring brings new exposures and with a little diligent hunting new agates are always found.

Agates are also found in the middle portion of bumpy rocks. Now these rocks are commonly known as geodes. In which a geode is simply a hollow, irregularly rounded rock with inward-pointing crystals. The term may also be used to describe a crystal lined cavity. The origin of geodes is a two-fold process: first, the origin of the cavity; and second, the filling of the cavity. Geodes may form in virtually any rock type. For example, in igneous (volcanic) rocks, cavities are created by gases. Volcanic lava contains dissolved gases that are held in the molten rock by confining pressure. As soon as the pressure is reduced, the gases begin to escape. As the lava quickly cools and hardens, the cavities may remain as "frozen" pores in



(3) Agatized Coral (Indonesia)

the rock. Cavities can range from the size of a pea to openings 10 feet by 30 feet.

The mineral matter that fills the cavities comes from ground water passing through the rock. Water contains dissolved matter such as silicon, oxygen, calcium, and carbonate. Under certain conditions, these chemicals precipitate out of the water, forming a solid mineral that is deposited inside the



(4) Red Desert Plume Agate (Idaho)

cavities. This is the same manner in which lime builds up on a stalactite. One of the most common types of mineral matter filling nodules and geodes is silica, in the form of agate.



(5) Holly Blue Agate (Sweetwater, Oregon)

Agates can also have many names associated with the same material. An example of this is Holly Blue Agate (5), which is also known as Holly Blue Chalcedony. Holly Blue Agate is found in the hills

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(6) Fairburn Agate (Fairburn South Dakota)

around Sweet Home, Oregon, so it is also known as Sweet Home Agate. Just to let you know most of the blue to purple agate was found in the Mount Holly area, hence the Holly Blue moniker. Today the area is bought out by a timber company so there is almost no opportunities to acquire this desired agate. Prices today range from \$50 a pound



(7) Friday Ranch Thunderegg (Madras, Oregon)

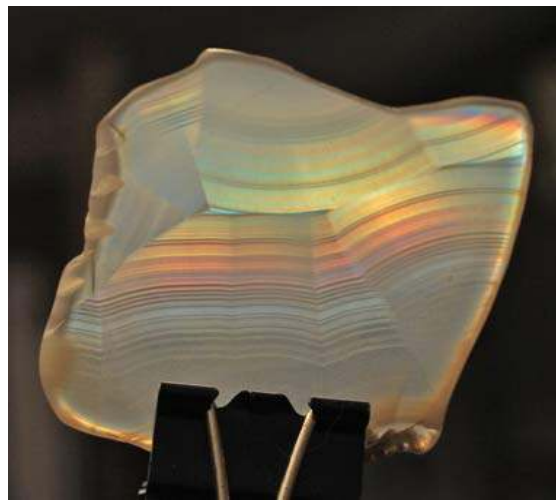
up to \$400 per pound. When one can get it. Yours truly has about 8 pounds worth of this material, which was acquired from an Oregon dealer who got it at an estate sale.

Nipomo Agate, is a very fascinating agate which was found in the bean fields of Nipomo, California. Here Marcasite plumes were encased in translucent agate, creating highly desirable agates.

Unfortunately civilization has caught up with the agricultural land and there are now condos over this collecting site. So sometimes in the nearby stream areas some similar material can be found, unfortunately it is not as striking as the original material.

Fairburn agates, named after Fairburn, South Dakota are noted for their strikingly contrasted, thin bands of wonderful natural colors which are generally yellowish-brown with narrow opaque white bands, or dark red with white bands. Another combination shows salmon-pink bands alternating with white bands. Still other colors included in these agates are black, yellow, grayish-blue and milky-pink.

Agates has many books written about them and have been used by Lapidaries for ages. Ancient Romans carved Cameos from agates, using the colors between the bands of agates for the different reliefs. So I will just end this by this little tidbit. Petrified Wood is where the wood fibers have been replaced by Silica gel. Hence it has been agatized. But Agatized Wood does not sound as nice as Petrified Wood, so Petrified Wood it is. And if one is in the area you should try to take a tour of the Petrified Forest, in Arizona. The sheer size of the logs will amaze you. If you happen to be in Wine country, Calistoga, California has its own Petrified Forest



(8) Tennessee Iris Agate

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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.

WE HAVE A WEBSITE!

http://pohakugalore.net/Hui_pohaku/Hiu_pohaku_1.html

MAHALO TO MARKUS FOR HELPING US GET OUT OF THE ELECTRONIC STONE AGE!

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, 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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