

CENTRAL OREGON ROCK COLLECTORS



Sinkholes: When the Earth Opens Up

by Jeremy Hall April 1, 2024

Rock Seeker via: Bruce VanderZanden

Part 1



On occasion, the ground opens up and creates an opening deep into the Earth, generally in a fairly sudden manner. We know these as sinkholes, and they're responsible for both terrible disasters and some of the most beautiful places in the world depending on where and when they happen.

So, let's take a closer look at sinkholes, their causes, and a couple of famous examples of this natural phenomenon.

What Are Sinkholes?

Sinkholes occur when a void is created beneath the ground, causing the surface to collapse.

Sinkholes vary widely in size, from small depressions a couple of meters across and a meter or so deep to gigantic holes that can swallow buildings. The latter are what most people picture, although they're quite uncommon. Basically, the ground seems to open up. The depth of sinkholes also varies, from a few feet to hundreds. It's a widely classed phenomenon, but they all occur through the same basic action: a void is created underneath the ground and the weight of the ground itself causes the collapse.

Due to the different ways they form, they can happen suddenly or over time.

How Do They Happen?

There are a number of actions that can lead to sinkholes occurring, both natural and man-made. These are broadly classified into a few categories, but each situation is a bit different.

The “classic” sinkhole is usually caused by underground erosion of the bedrock. Rocks like limestone, which is water soluble, are particularly prone to this type of sinkhole. Essentially, the action of groundwater eventually dissolves a pocket underneath the surface. These are generally known as dissolution sinkholes.

Eventually, the ground has thinned enough it can no longer support its own weight and collapses to the depth of the pocket underneath. These sinkholes occur naturally in many cases, and they’re responsible for some interesting geography in some areas.

Perhaps the most famous are the cenote caverns found in Central and South America, particularly on the Yucatan Peninsula. They’re found as deep shafts breaking the surface of the jungles, extending downwards into the groundwater.

The water found in cenotes can be brackish or marine in nature.

Essentially, these holes go down into the exposed groundwater, creating a sheltered spot. They’re often connected to underwater cave systems in the limestone. While some are popular spots for tourists, diving in the caverns and connected caves is a highly specialized task.

Not all sinkholes are caused by complete erosion of the bedrock, of course.



In other cases, known as cover-collapse sinkholes, a void can remain undisturbed in sediment for some time. Think of a void in something like an alluvial gravel deposit, it’s formed because the rocks are simply locked into place around the pocket.

It’s a simplistic example, but for various reasons infilling sediments may not actually fill an entire area, thus creating a natural hazard.

As time goes on and the surface becomes heavier due to more sediment, it will eventually collapse.

Cover-collapse sinkholes tend to create a more dramatic, sudden effect. While dissolution generally occurs over fairly long periods of time, a cover-collapse sinkhole will... well, collapse. They’re generally the cause behind the more dramatic events that make the news cycle. *To be continued...*

Beers Mountain Field Trip



About 32 rockhounds showed up to brave the cool, windy day.



Upcoming Events

Rock shows you may want to visit

MAY 2025

3-4—ROSEBURG, OREGON: Annual show; Umpqua Gem & Mineral Club; Douglas County Fairgrounds, 2110 Frear Ave; Sat. 9-5, Sun. 10-4;

24-25—LAKEVIEW, OREGON: Annual show; Tall Man Rock Chippers; Lake County Fairgrounds Lakeview Oregon, 1900 N. 4th St; Sat. 9-5, Sun. 9-4;

JUNE 2025

19-22—PRINEVILLE, OREGON: Annual show; Prineville Rockhound Pow Wow; Crook County Fairgrounds, 1280 South Main Street; Thu. 9-5, Fri. 9-5, Sat. 9-5, Sun. 9-4;

20-22—HILLSBORO, OREGON: Wholesale and retail show; Gem Faire Inc; Westside Commons, 801 NE 34th Ave; Fri. 12-6, Sat. 10-6, Sun. 10-5;

26-29—MADRAS, OREGON: Annual show; Madras Rock and Gem Club; Jefferson County Event Complex, 430 SW Fairgrounds Rd; Thu. 9-5, Fri. 9-5, Sat. 9-5, Sun. 9-2;

Save the Dates... CORC Field Trips

May 17 & 18:
Milepost 27 & 32

June 14 & 15:
Bear Creek

July 19: Picnic at
American Legion Park
Redmond

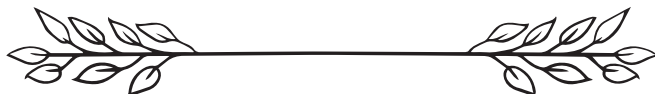
August 16:
Richardsons Rock Ranch

September 13 and 14:
Joe Cota's Rock Shop/Dig
in Sweet Home

October 11 & 12: 3 Amigos Claim

November Holiday Party: TBD

Please Know All CORC Field Trips are Subject to Change



STATE BY STATE

ROCKS, GEMS,

MINERALS

New York



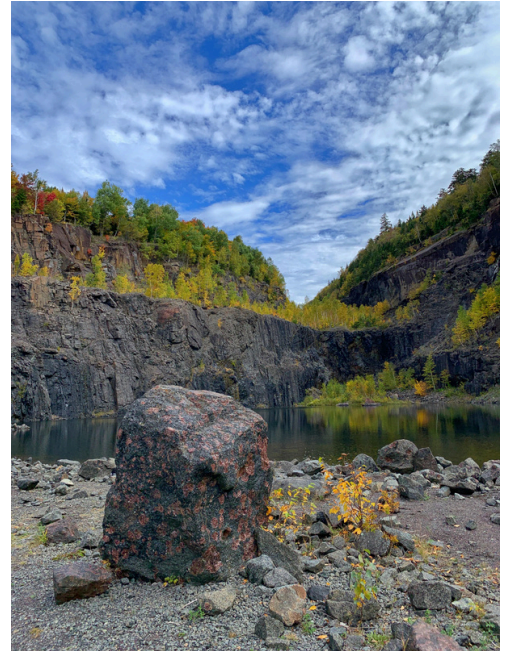
State Gem: Garnet

The pink and purple mineral, tremolite (“hexagonite”), is found only in St. Lawrence County, NY. The garnet, generally deep red in color, is New York's official gemstone. The largest garnet mine in the world, the Barton Mine, is located in the Adirondack Mountains.

Eight generations ago, entrepreneur Henry Hudson Barton began turning garnet from New York state's famed Adirondack mountains into sandpaper abrasive for the building of post-Civil War America. To read more visit barton.com



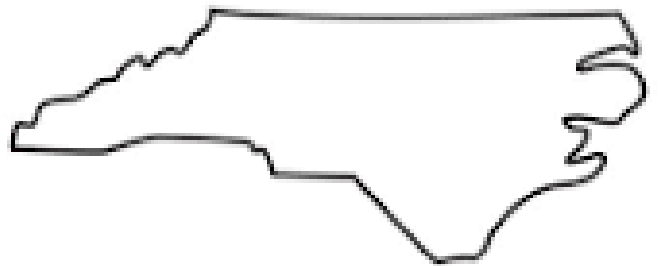
Garnet species are found in every colour, with reddish shades most common. Blue garnets are the rarest and were first reported in the 1990s.



Gore Mountain
Garnet Mine in NY

Garnet species' light transmission properties can range from the gemstone-quality transparent specimens to the opaque varieties used for industrial purposes as abrasives. The mineral's lustre is categorized as vitreous (glass-like) or resinous (amber-like).

North Carolina



State Mineral: Gold

The Carolina gold rush, the first gold rush in the United States, followed the discovery of a large gold nugget in North Carolina in 1799,[2] by a 12-year-old boy named Conrad Reed. He spotted the nugget while playing in Meadow Creek on his family's farm in Cabarrus County, North Carolina.[3][4] Conrad took the 17-pound (7.7 kg) gold nugget home to show his father. However, gold was not



commonly seen in their community and the value of the nugget was not understood. The nugget was used as a door stop in the family's home for several years.[5] In 1802, Conrad's father, John Reed, showed the rock to a jeweler, who recognized it as gold and offered to buy it. Reed, still unaware of the real value of his "doorstop," sold it to the jeweler for US\$3.50 (equivalent to \$76.91 in 2024) (approximately one week's pay for a farm laborer at that time). The large nugget's true value was around \$3,600.

State Rock: Granite

North Carolina Granite Corporation Quarry Complex is a historic granite quarry and national historic district located at Mount Airy, Surry County, North Carolina. The district encompasses 22 contributing buildings, 1 contributing site, and 8 contributing structures in an area approximately one mile long and 1/3 mile wide.

Notable contributing resources include the cutting shed (1927), the office building (1928), and a building originally used as a blacksmith shop. It is the world's largest open faced granite quarry. Granite from the quarry was used to build the United States Bullion Depository at Fort Knox, the Arlington Memorial Bridge in Washington, the Wright Brothers National Memorial at Kitty Hawk, and the Albert Einstein Memorial in Washington. It was added to the National Register of Historic Places in 1980.



State Precious Stone: Emerald



An Emerald is a green variety of beryl highly prized as a gemstone. Emeralds are one of the 'big four' gemstones (Diamonds, Emeralds, Rubies, and Sapphires) that are most popular for jewelry and commercial use. The beryl's natural color is clear, but gets its color from small amounts of chromium and vanadium. They will lose their color if heated. Emeralds occur naturally as six sided prisms, sometimes called 'bolts,' and are usually elongated with smooth sides.

North Carolina has the only significant emerald deposits in North America. Emeralds were first found in Alexander County in 1874, and later in Mitchell County (1890) and Cleveland County (1897). Today, these are North Carolina's three known emerald districts.

North Carolina's emeralds are found in pockets of quartz veins. Pockets can range from a few centimeters to three meters in length.



References:

statesymbolsusa.org google.com visitnorthcreek.org reddit.com.
en.wikipedia.org rockchasing.com ncpedia.org

Memorial Day



A time to
Remember and Honor
all those who have died
serving this country
to make it free.

Thank you!



NEXT CLUB MEETING: May 21
Doors open at 5:30 meeting starts at 6
Speaker: Bruce Mckay
“12 Day Land Rover Trip
in Morocco to Obtain Gemstones.”

If you won at Bingo please bring a rock related item.
We will also have time for show and tell.

Meetings are held at: 3800 SE Airport Way, Bldg 3, Redmond, OR 97756

2025 CORC Board Members

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President

Nancy Johnston

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Snow Hartley

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Membership

**Renew ONLINE at the
CORC website.**

(corockcollectors.com

->Membership-> Join Now)

Renew by MAIL or IN PERSON.

**Print the membership form from the CORC
website and mail it to:**

Central Oregon Rock Collectors (CORC)

4817 SW Volcano Ave

Redmond, OR 97756

or bring it to the next meeting or field trip.

Annual membership dues are:

\$20 for individuals,

\$25 for household

and \$5 for juniors.

**(Note: Junior memberships are for minors
who are accompanied by a club member
from a different household.**

e.g. Grandparents, aunts, uncles)

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Contact Us:

Email: corc.rocks@gmail.com

**Mailing Address: 4817 SW Volcano Ave
Redmond, OR 97756**

**Meeting Address: 3800 SE
Airport Way, Bldg 3, "The Annex",
Redmond, OR 97756**

ANNOUNCEMENTS

**Sanding/Polishing
Slabs/Thundereggs**

.50/square inch

**Contact: Dan Siroshon
(541)954-8234**

**Do You Need
a Rock Cut?**

**Check out the
pinned post
on our Facebook
page to find
someone
that can
help you out!**

EST. 1935
PETERSEN
ROCK GARDEN



Volunteers wanted:
staff for the museum/gift shop
Interested?? contact:
petersengardenmuseum@gmail.com

Museum/Garden Hours:
Now- May 22
Wednesday - Sunday 10 - 4
May 23 until winter starts
7 days a week 10-4

Volunteers Needed

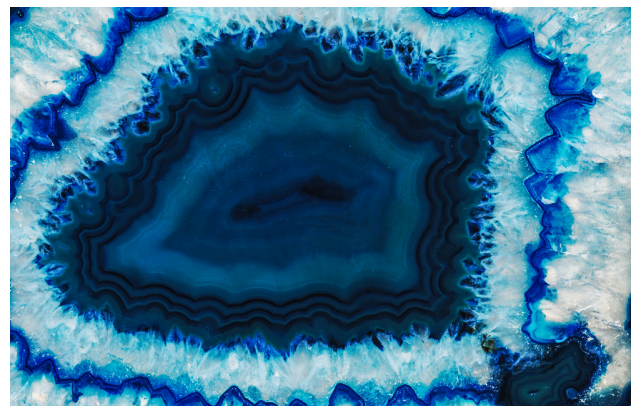
**The 2025 Prineville
Rockhound Pow Wow
June 19-22**

People are needed to:

Help with set up on June 17th

Staff our booth during the show.

**If you are interested email us at:
corc.rocks@gmail.com**



**CigarBoxRock
Lapidary**

63291 Nels Anderson Rd
Bend, Or

Open Tuesday- Saturday
9:00am - 3:00 PM

CBR@Bendnet.com

541-389-9663 Or

541-280-5574

Follow us Facebook
and Instagram

Cigarboxrock.com



**We are looking for a
Volunteer Coordinator
to be a part of our team!**

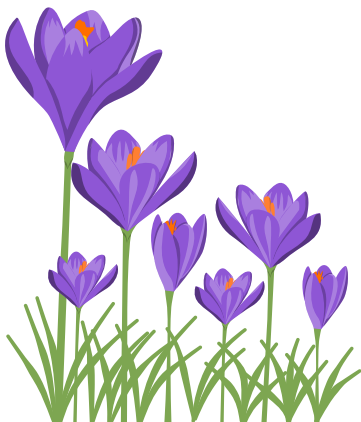
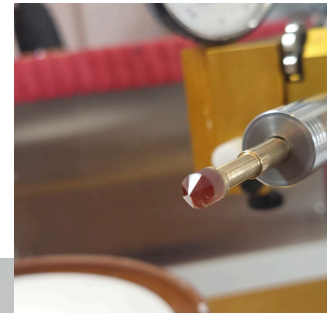
**Contact
corc.rocks@gmail.com**

Faceting and Cabbing Machine

**Dale B. Barrett, who lives in Redmond,
will cut and facet stones for members at
a very affordable price.**

**Contact Dale @ 541-694-0325
or**

Email: Commandchief68@gmail.com



**To post an announcement or ad in the
CORC newsletter please email
corc.rocks@gmail.com**

**You must be a
current member to do so.**