



# THE GOLDRUSH LEDGER



CHARLOTTE GEM & MINERAL CLUB

DECEMBER 2015

## THE PREZ SAYZ

**T**hose members who attended the December 11 Christmas party heard about an exciting new CG&MC program to be launched in January of 2016. For several years we have been searching for a suitable venue in which to hold lapidary classes for members and the public. Years ago we had a small workroom on the second floor of a commercial building but faulty structural issues compounded by bad weather ultimately led to terminating that arrangement. At another point in time we were providing cabbing classes in a member's basement but that proved to be less than ideal. For the past couple of years Genies, Pixies, faceting machines and rough have been in storage in our trailer.

But all of that is about to change. We are currently establishing a workshop/classroom at "Art in

the Dairy" at 7701 Tuckaseegee Road, which is approximately 1.5 miles from the Charlotte Douglas Airport. When it was built in 1940, this building was Blacks Dairy. It produced milk delivered by horse-drawn carts to people in the surrounding community. Approximately 20 years ago it became a privately owned art center with studios offering classes in pottery, fused glass, silver smithing, etc. At the present time there are two pottery makers, one fused glass artist and a silversmith (Dan Haga). We plan to start cabochon classes on Saturdays in January and expand into faceting, casting, wire wrap, polymer clay and seed beading before the winter is over. It is anticipated that we will be able to initiate night classes as part of our schedule.

The Dairy is a funky single story yellow building with a mural painted on the exterior front wall. It will be heated and air-conditioned

and the bathroom even has a shower. Our entry is at the rear of the building where there is ample parking. It is conveniently located – going north on the 485 Inner Beltway, past the new Premium Outlet Mall get off at Exit 9 (Charlotte Douglas Airport). At the bottom of the exit ramp go straight through the 4-way intersection onto Tuckaseegee Rd. The Dairy is .9 of a mile ahead on the right. There is a church directly across the street

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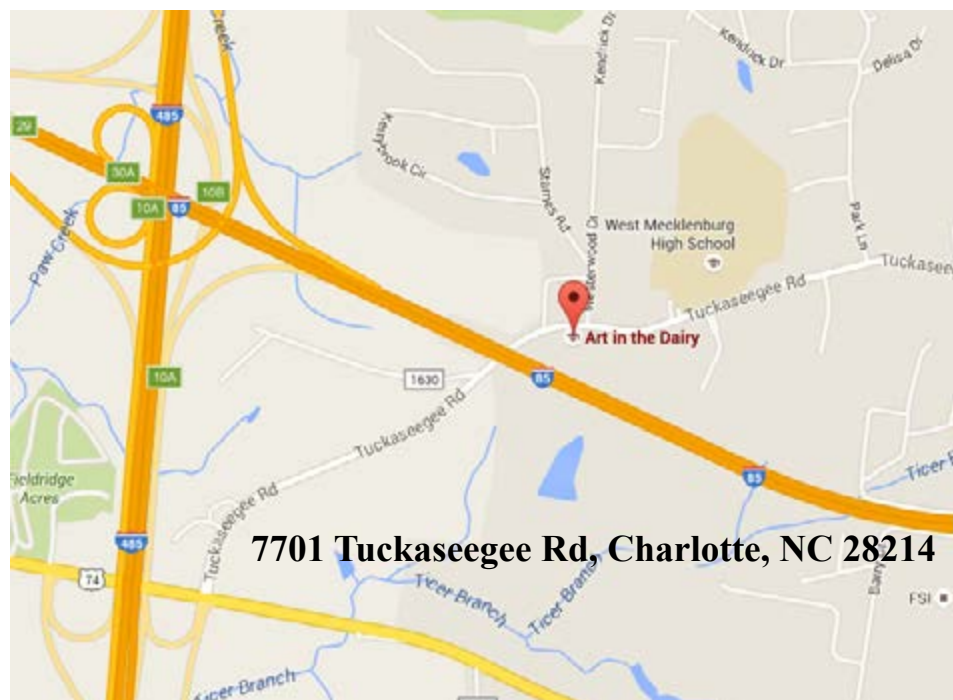
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Mary Fisher

and West Mecklenburg High School is within walking distance . . . it is a very safe area!

Cabochon classes will cost \$40 per day for club members and \$60 for non-members. These (reasonable) fees will pay the rent and cover the cost of equipment maintenance. Instructors will volunteer their time. If you are interested in taking a Saturday cabochon class with Sarah Lee Boyce in January, you can call Kim Gwyn at (803) 370-0244 to reserve a space. Keep an eye on the website (charlottegem.com) and club newsletters for workshop information and future activities. The success of this venture depends very much on the involvement of club members. I can assure you that not only does Art in the Dairy offer a unique opportunity to develop a new skill; it also represents a great way to relax and forget the stress and anxieties of the world around us. See y'all there

*Murray Simon: President  
Charlotte Gem and Mineral Club*



**7701 Tuckasee Rd, Charlotte, NC 28214**



***Charlotte Gem and Mineral  
Club Monthly Meeting***

**\*No Monthly Meeting  
For December!**

**\*Dues are Due starting in  
January**

**Happy Holidays!**

**The CGMC is looking forward to a  
great new year in 2016!**



ROCK OF THE MONTH

# CINNABAR

*From Wikipedia, the free encyclopedia*

Cinnabar and cinnabarite, likely deriving from the Greek κινναβαρί (kinnabari), refer to the common bright scarlet to brick-red form of mercury(II) sulfide, formula  $\text{HgS}$ , that is the most common source ore for refining elemental mercury, and is the historic source for the brilliant red or scarlet pigment termed vermilion and associated red mercury pigments.

Cinnabar generally occurs as a vein-filling mineral associated with recent volcanic activity and alkaline hot springs. The mineral resembles quartz in symmetry and in its exhibiting birefringence; cinnabar has a mean refractive index of  $\sim 3.2$ , a hardness between 2 and 2.5, and a specific gravity of  $\sim 8.1$ . The color and properties derive from a structure that is a rhombohedral crystalline lattice belonging to the hexagonal crystal system, crystals that sometimes exhibit twinning.

Cinnabar has been used for its color since antiquity in the Near East, including as a rouge-type cosmetic, in the New World since the Olmec culture, and in China since as early as the Song dynasty, where it was used in coloring lacquerware.

Associated modern precautions for use and handling of cinnabar arise from the toxicity of the mercury component, which was recognized as early as ancient Rome.

## Etymology

The name comes from κινναβαρί (kinnabari) a Greek word most likely applied by Theophrastus to several distinct substances. In Latin it was sometimes known as minium, meaning also “red cinnamon”, though both of these terms now refer specifically to lead tetroxide.

## Properties

Cinnabar is generally found in a massive, granular or earthy form and is bright scarlet to brick-red in color, though it occasionally occurs in crystals with



a non-metallic adamantine luster. It resembles quartz in its symmetry. It exhibits birefringence, and it has the highest refractive index of any mineral. Its mean refractive index is 3.08 (sodium light wavelengths), versus the indices for diamond and the non-mineral gallium(III) arsenide (GaAs), which are 2.42 and 3.93, respectively. The hardness of cinnabar is 2.0–2.5 on the Mohs scale, and its specific gravity 8.1.

## Structure

Structurally, cinnabar belongs to the trigonal crystal system. It occurs as thick tabular or slender prismatic crystals or as granular to massive incrustations. Crystal twinning occurs as simple contact twins.

## Occurrence

Cinnabar generally occurs as a vein-filling mineral associated with recent volcanic activity and alkaline hot springs. Cinnabar is deposited by epithermal ascending aqueous solutions (those near surface and not too hot) far removed from their igneous source. It is associated with native mercury, stibnite, realgar, pyrite, marcasite, opal, quartz, chalcedony, dolomite, calcite and barite.

Cinnabar is essentially found in all mineral extraction localities that yield mercury, notably Puerto Princesa (Philippines); Almadén (Spain); New Almaden (California); Hastings Mine and St. John's Mine, Vallejo, California;[11][page needed][better source needed] Idrija (Slovenia); New Idria (California); Giza, Egypt; Moschellandsberg (de) near Obermoschel in the Palatinate; Ripa, at the foot of the Apuan Alps and in the Mount Amiata (Tuscany); the mountain Avala (Serbia); Huancavelica (Peru); Murfreesboro, Arkansas; Terlingua, Texas (United States); and the province of Guizhou in China, where fine crystals have been obtained. It was also mined near Red Devil, Alaska on the middle Kuskokwim River. Red Devil was named after the Red Devil cinnabar mine, a primary source of mercury.

Cinnabar is still being deposited, e.g., at the present day from the hot waters of Sulphur Bank Mine in California and Steamboat Springs, Nevada.

## Mining and extraction of mercury

As the most common source of mercury in nature, cinnabar has been mined for centuries, even as far back as the Neolithic Age. During the Roman Empire it was mined both as a pigment, and for its mercury content. To produce liquid mercury (quicksilver), crushed cinnabar ore is roasted in rotary furnaces. Pure mercury separates from sulfur in this process and easily evaporates. A condensing column is used to collect the liquid metal, which is most often shipped in iron flasks.



## Toxicity

Associated modern precautions for use and handling of cinnabar arise from the toxicity of the mercury component, which was recognized as early as in ancient Rome. Because of its mercury content, cinnabar can be toxic to human beings. Though people in ancient South America often used cinnabar for art, or processed it into refined mercury (as a means to gild silver and gold to objects) “the toxic properties of mercury were well known. It was dangerous to those who mined and processed cinnabar, it caused shaking, loss of sense, and death. Data suggest that mercury was retorted from cinnabar and the workers were exposed to the toxic mercury fumes.” Overexposure to mercury, mercurialism, was seen as an occupational disease to the ancient Romans, “Mining in the Spanish cinnabar mines of Almadén, 225 km (140 mi) southwest of Madrid, was regarded as being akin to a death sentence due to the shortened life expectancy of the miners, who were slaves or convicts.”

## Decorative use

Cinnabar has been used for its color since antiquity in the Near East, including as a rouge-type cosmetic, in the New World since the Olmec culture, and in China since as early as the Song dynasty, where it was used in coloring lacquerware.

Cinnabar’s use as a color in the New World, since the Olmec culture, is exemplified by its use in royal burial chambers during the peak of Maya civilization, most dramatically in the Tomb of the Red Queen in Palenque (600–700 AD), where the remains of a noble woman and objects belonging to her in her sarcophagus were completely covered with bright red powder made from cinnabar.

The most popularly known use of cinnabar is in Chinese carved lacquerware, a technique that apparently originated in the Song dynasty. The danger of mercury poisoning may be reduced in ancient lacquerware by entraining the powdered pigment in lacquer, but could still pose an environmental hazard if the pieces were accidentally destroyed. In the modern jewelry industry, the toxic pigment is replaced by a resin-based polymer that approximates the appearance of pigmented lacquer.



## Other forms

- Hepatic cinnabar or paragit is an impure brownish variety from the mines of Idrija in the Carniola region of Slovenia, in which the cinnabar is mixed with bituminous and earthy matter.
- Hypercinnabar, crystallizes at high temperature in the Hexagonal crystal system.
- Metacinnabar is a black-colored form of  $\text{Hg(II)S}$ , which crystallizes in the Cubic crystal system.
- Synthetic cinnabar is produced by treatment of  $\text{Hg(II)}$  salts with hydrogen sulfide to precipitate black, synthetic metacinnabar, which is then heated in water. This conversion is promoted by the presence of sodium sulfide.

*From Wikipedia, the free encyclopedia*

## UPCOMING SHOWS

**Jan. 9-10—NASHVILLE, TENNESSEE:** Annual show; Intergalactic Bead Show , TN State Fairgrounds; 500 Wedgewood Ave. ; Sat. 10-5, Sun. 10-5; Admission \$5; Looking for a relaxing way to spend the weekend? Then shop the Intergalactic Bead Show! Intergalactic Bead Shows unites beaders, jewelry makers and enthusiasts with some of the world's finest and rarest beads as well as precious stones, gems and finished jewelry from all over the world. We provide buyers with a relaxing, beautiful ambiance in which to shop as well as high quality products from some of the best artisans in the industry. ; contact Shawanna Whitson; e-mail: [Info@beadshows.com](mailto:Info@beadshows.com); Web site: [Beadshows.com](http://Beadshows.com)

**Jan. 16-17—DELAND, FLORIDA:** Annual show; Tomoka Gem & Mineral Society, Volusia County Fairgrounds, Tommy Lawrence Building; State Rout 44 , (1 mile East of I-4, Exit 118); Sat. 10-6, Sun. 10-5; \$4 Admission , Children Free; 45th Annual Gem & Jewelry, Minerals & Fossils Show & Sale Demos & Classes in Faceting, Lapidary, Wire Wrapping and lots more Over 50 Vendors Free parking Don't forget to stop by the Coquina Kids table for great demos for the kids ; contact Rosemary van Wandelen, 3051 Keyport St, Deltona, FL 32738, 386-479-1509; e-mail: [rrborzoi@yahoo.com](mailto:rrborzoi@yahoo.com); Web site: [www.tomokagms.org](http://www.tomokagms.org)

**Jan. 23-24—PANAMA CITY, FL 32404, FLORIDA:** Annual show; Panama City Gem & Mineral Society, Central Panhandle Fairgrounds; 2230 E. 15th St.; Sat. 8 -5 , Sun. 9 -4 ; Free Admission; Minerals, Fossils, Wire wrap Jewelry, Beads & Beadwork, Super Door Prize. We would love to see you there.; contact Steven Shipton, 5113 E. 13th Ct, Panama City, FL 32404, 850-867-0586; e-mail: [shipton3@comcast.net](mailto:shipton3@comcast.net)

**Jan. 30-31—DURHAM, NORTH CAROLINA:** Annual show; Intergalactic Bead Show, Durham Convention Center; 301 W. Morgan St. ; Sat. 10-5, Sun. 10-5; Admission \$5; Looking for a relaxing way to spend the weekend? Then shop the Intergalactic Bead Show! Intergalactic Bead Shows unites beaders, jewelry makers and enthusiasts with some of the world's finest and rarest beads as well as precious stones, gems and finished jewelry from all over the world. We provide buyers with a relaxing, beautiful ambiance in which to shop as well as high quality products from some of the best artisans in the industry. ; contact Shawanna Whitson; e-mail: [Info@beadshows.com](mailto:Info@beadshows.com); Web site: [Beadshows.com](http://Beadshows.com)