



GEM SCOOPS



Vol. 50, No. 7

Pendleton District Gem and Mineral Society

July 2012

No Meetings July, August

Summer Happenings

July 26-29, 2012: Franklin, NC. 47th Annual Macon County Gemboree: Thursday - Saturday 10am-6pm; Sunday 11am-4pm. Macon County Community Building. Fine Gemstones and Jewelry, Rough and Cut Gemstones, Mineral, Fossils & More.

July 27-28, 2012: Franklin, NC: Facetor's Frolic. The two day Frolic will be located at the Fun Factory, 1024 Georgia Road, about a block away from the local Club Show (see above) and within a mile or two of the other 3 major shows in town. There will be 11 dealers in the Factory, selling software, rough, supplies, and machines, along with a demo area for live faceting.

July 28-Aug. 2, 2012: Spruce Pine, NC: The 28th Annual Grassy Creek Mineral and Gem Show will be held Sat., July 28 - Sun., August 5, 2012. There are 72 vendor spots selling various items of interest to rock hounds. The Grassy Creek show overlaps the NC Mineral and Gem Festival, so be sure to catch both. The fire department will be putting on their famous BBQ on Saturday. Admission is free. The show is located at 12966 South Hwy 226.

August 2-5, 2012: Spruce Pine, NC. NC Mineral and Gem Festival, The Pinebridge Coliseum, Festival Hours Thursday-Saturday 10-6; Sunday 12:30-5. This is an indoor festival! No worries about the weather! And we provide a free shuttle to parking and other activities going on during the festival. Thurs.: Senior Citizen Day. Seniors admitted for just \$1.

JULY 2012 MEETING CANCELED

During the June meeting it was voted to cancel PDGMS meetings for the months of July and August.

Meetings will resume in September and the September meeting will be the Club Picnic which has been postponed due to poor attendance during the summer months.

Minutes

Pendleton District Gem and Mineral Society

June 19, 2012

John Ishler gave an excellent presentation on the Precious Metal Clay process. Besides him, there were only six other members present.

Michelle knocked herself out with great snacks - too bad there weren't more there to enjoy it.

About the future: Betty Janzen made a motion that Programs for the summer months of July and August be suspended and that the picnic be held in lieu of a September meeting. The motion was seconded and passed.

Betty also volunteered for President provided her only duties would be that of presiding over

regular meetings. If we are to continue as an organization, it is imperative for the Board to meet and plan some kind of giant push to get present members who have not attended for a long time to come to the picnic to be recharged. It is clear that new, energetic and younger members must be recruited some how.

Ted

The first meeting in the fall will be the Club Picnic. It will be held on Sept. 18, 2012.

2012 Officers

| | |
|-----------------------|--------------|
| President: | |
| V.P.: | |
| Secretary: | |
| Treasurer: John Isler | 864-885-9126 |

2012 Directors

| | |
|----------------|--------------|
| Ted Wallenius | 864-882-3940 |
| Jim Duzenberry | 864-654-5741 |
| Fred Sias | 864-654-6833 |
| Rich Warner | 864-654-0913 |

MINERALOGY

North Carolina Emeralds and the North American Emerald Mine By Carl Talbott, SFMS Editor

Of the 300+ minerals found in North Carolina, few are more valuable by weight than emerald. A form of beryl crystal, usually colored green by chromium, emerald was designated as the official North Carolina State Precious Stone in 1973. Perhaps this recognition was associated with the 1969-1971 discoveries of nine large emeralds in the Hiddenite District of Alexander County, North Carolina. These nine included the largest emerald ever discovered in North America at the time (found by Michael 'Butch' Finger at what is now the North American Emerald Mine) weighing 1,438 carats.



**Butch Finger &
1,438 ct Emerald
Found 1969**
Rockhound Magazine Photo 1972

emerald ...”

Speer notes that local farmers in the 1800s often found 'green bolts' crystals in freshly plowed fields at first thought to be caused by lightning strikes. In 1875, Statesville (NC) naturalist, John Adlai D. Stephenson (b.1825, d.1897), began acquiring these crystals and later introduced mineralogist William Earl Hidden (b.1853, d.1918) to emerald discovery sites in Alexander County. Hidden had been in North Carolina searching for platinum to supply Thomas Edison's electric light bulb with filament material. Hidden subsequently purchased a mining lease of Alexander County's Warren Farm property and mined emeralds there from 1880 until 1888. An emerald twin crystal of 1,270 carats found there in 1881 is now in the Smithsonian Museum collection.

Although Hidden's mining operation closed in 1888 as a result of property disputes, it reopened in the 1970s as a prospect-for-fee mine and is known today as the Adams mine. Although other small mining operations started at various times in the twentieth century, only the Rist mine (now the North American Emerald Mine), located several miles northeast of Hidden's operation, continues as a dual-production mine. It produces road & construction gravel by crushing bedrock from a 6 acre open-pit mine while emerald-bearing quartz veins in the pit walls are carefully explored prior to destruction and incorporation into bedrock crushing.



NAEM Open Pit Wall
Photo by Ed Speer

As Jamie Hill² explained, his process of emerald mining is a stripping away of pit wall bedrock material (using explosives) between visible vertical seams of quartz and hand-tool searches for cavities (known as 'pockets') in the quartz seams. On average, one out of three of these cavities will contain emerald crystals, sometimes in large numbers. The emerald crystals and any other valuable minerals are carefully removed before the exploration process resumes. If the demand for gravel declines, then the emerald exploration process slows because the two are linked in that profit from gravel production in turn finances exploration of possible emerald locations.



**NAEM Quartz Seam
with Pocket**
Photo by Ed Speer



**NAEM Emerald 1,869 ct
Found by Hill in 2003**
Photo by NAEM Inc.



NAEM Emerald in Vug
Photo by Ed Speer

In addition to the Adams Mine and the NAEM, both of which are closed to the public, the Hiddenite District encompasses the Emerald Hollow Mine where the public can dig for gem stones, sluice in the local creek, or purchase buckets of unsalted or salted mine ore for various fees. Much further to the west (in the Spruce Pine Mining District), near Spruce Pine, North Carolina, the 100+ year-old Crabtree Emerald Mine offers the public fee-based access to old mine-ore dump sites that likely contain a variety of gem stones including emerald. The mine shaft itself is now flooded, and thus, the dump sites are not being renewed.

Other green-colored minerals and crystals, sometimes mistaken for emerald, include green corundum (known as "oriental emerald"), green garnet (known as demantoid), hiddenite, diopside, alexandrite, green tourmaline, and perhaps also chrysolite and diopside. Each of these minerals has a higher specific gravity than the emerald. Moreover, the "oriental emerald" is much harder while the demantoid (the color of which has usually a yellowish tinge though sometimes very similar to that of the emerald) is singly refracting. Hiddenite is very rare and is considered to be more valuable than the emerald. Diopside is much more of a bottle-green color than is the emerald. Alexandrite is distinguished from emerald by its hardness and its remarkable dichroism. The color of green tourmaline, though often not dissimilar to that of pale emeralds, is frequently distinctly bluish in character; this mineral is easily distinguished from emerald, however, by its specific gravity, which is 3.07 g/cm³. Chrysolite is yellowish-green, and can be distinguished from emerald by its color and its faint dichroism. Finally, diopside is always of a very dark emerald-green color; it is only semi-transparent and far softer than the emerald.

Speaking of color, some enterprising marketers are selling Morganite as pink emerald. Morganite is pink beryl colored so by the presence of manganese. Using this marketing logic, we could have aquamarine peddled off as blue emerald; but this would be an illegal misrepresentation to the more ignorant of us gemstone buyers.

References:

1. Speer, Wade Edward (2008, revised 2011), Emerald Crystal Pockets of the Hiddenite District, Alexander County, North Carolina, Fieldtrip Guidebook, Geological Society of America, Southeastern Section 57th Annual Meeting April 2008, Charlotte, North Carolina, USA
2. Hill, James K. (2012), personal communication with the author.

**ROCKHOUDING & GOLD PANNING IN
NORTH CAROLINA NATIONAL FORESTS**

(from www.fs.usda.gov/activity/nfsnc/recreation/rocks-minerals/?recid=48112&actid=59)

Some visitors to the national forest like to try their hands at finding minerals or panning for gold. Visitors are asked to following these guidelines when rock-hounding or gold panning in the National Forests in North Carolina.

- Rockhounding and gold panning may take place on most national forest lands – provided only small quantities of material are removed for personal, non-commercial purposes.
- Recreational rockhounding and gold panning are not allowed in Congressionally-designated wilderness areas or in the corridors of designated wild and scenic rivers.
- Recreational rockhounding and gold panning are not allowed in forest areas where mineral rights are owned by a private party, or in an area that is under mineral lease to a private party.
- Permits are required for removal of mineral materials for scientific and research purposes.
- Commercial removal of minerals requires a prospecting permit from the Bureau of Land Management.
- Materials must be removed using small hand tools without mechanical means or motorized equipment. Removing mineral materials with a pick, shovel, sluice box or similar large tools can cause significant impacts to resources is considered mechanical so therefore not allowed.
- Suction dredges are not allowed by forest closure order.
- Gold pans may be used for gold panning in the beds of streams, but the banks of streams cannot be disturbed by digging or removing materials.
- Any disturbance to or removal of historical or archaeological artifacts is prohibited by federal law.

{Editor's Notes:

Defining a **shovel** (of any size) as a **large, mechanical tool** strikes me as arbitrary.

For your info, five North Carolina rivers have been designated “**wild and scenic**” under the federal Wild & Scenic Rivers Act where rockhounding and gold panning are outlawed. These are Wilson Creek in the Pisgah National Forest, Chattooga River and Horsepasture River in the Nantahala National Forest, New River in the New River State Park, and Lumber River in the Lumber River State Park. See www.rivers.gov/wildriverslist/html for wild & scenic rivers in your state.

Some SFMS members have heard that gold panning restrictions in the field are far more severe than what is detailed here. If any member encounters a US Forest Ranger with different views from the above, please contact me.}