



# THE AMMONITE



Newsletter of The Western Dakota Gem & Mineral Society – May 2009



## FROM THE PRESIDENT by Deb Radomski

Mickey Snook was chewed-out recently by a bystander who overheard him talking to another person about rock hunting. The bystander was livid about rock hunters he let onto his private property near the Buffalo Gap area outside of Hot Springs. The hunters left trash on his property and left his gates open. Due to the open gates, some of his cattle got out and one was hit and killed on the road. The man does not know if they were members of our club or not, and does not care. He is sure to spread his story to anyone who will listen and will advise them NOT to let rock hunters on their property. Every member is responsible to conduct themselves, and those with them, to the rules of the club – whether on private land or public. Anyone found not treating the land and land owners with respect can be removed as a member from WDG&MS. Be sure to identify yourself as a member of the club, and perhaps show your membership card, when you ask for permission from a landowner to hunt on his/her property. Make a good impression so that you, and other club members, will be invited back.

**If you were not able to attend the April meeting, be sure to read the minutes at the end of this newsletter. A few decisions were made concerning the upcoming Show that may/may not impact you or someone you know.**

Steve Evans is learning website creation and has offered to create a site for WDG&MS. He will have more information at the next meeting and will be able to answer general questions you may have so we can decide if we would like him to move forward on this. A site would be a way to share information on field trips and special events and be a place for non-members to go to find out more information about the club. Things to consider would be maintenance, any costs, site links and security.

If you have been to any meetings in the last 6 months you know that the issue of Public Lands, and therefore less hunting grounds, has been a hot topic. The same issue, but under the new name of South Dakota Wild Grassland Coalition was brought to the attention of members at the last meeting. Although you are free to endorse any position you personally feel to be right, be sure to carefully read any material and ask direct questions before you sign any petition or contact any of your state officials. Things are not always as they seem.

## CLUB CALENDAR:

MONTH	REFRESHMENTS	DOOR PRIZES	PROGRAM
MAY	Deb Radomski	Jamie Brezina	Alaskan Rockhounding
JUNE	Bonnie Norrod	Steve Shivers	Show – last minute prep
JULY	Juliet Wild	Mickey Snook	??
AUGUST	Picnic	Picnic	Picnic
SEPTEMBER	Don & Annette Rathert	Don & Annette Rathert	??
OCTOBER	Melanie Beckman	Deb Radomski	??
NOVEMBER	Paula Holm	Rita Hanson	??
DECEMBER	Dinner	Dinner	Dinner

## FEATURE STORIES:

### How Gem Hunting Works (Parts 1 & 2 of 5)

by Ed Grabianowski

<http://adventure.howstuffworks.com/gem-hunting.htm>

Gem hunting is like playing the geological lottery. One person may spend hours performing backbreaking work and pay fees for access to mine tailings only to find a few semiprecious stones that aren't worth much. Another

person may randomly reach into a pile of dirt and pull out a diamond worth thousands of dollars.

Looking for interesting gems and crystals can be a rewarding hobby, even if you don't hit the jackpot. Many recreational gem hunters enjoy spending time outdoors, learning about geology and hanging out with their gem-hunting friends. Others are more goal-oriented; they look for their own birthstones or for attractive gems that they can make into jewelry. And then there are the collectors,

who want to track down as many different types of gems and rocks as possible to catalog and display.

There are many different ways to experience gem hunting, from fee digs to staking your own mining claim (all discussed later). This article will outline the basics, from equipment and preparation to the legal issues amateur gem hunters should know. We'll tell you where to go hunting and what to do with your gems after you've found them.

Before you can attain geologic glory, there are a few details to mention about this hobby. Let's examine the different types of gem hunting and which would be the best option for you.

### Hunting Gems for Fun and Profit

Gem hunting is simply the act of going out and looking for interesting geologic finds. There are a few different types of gem hunting:

#### Recreational mining

If you dig up your own rocks and dirt to find gems in, then you're a **recreational miner**. You might be allowed to excavate a disused area of a mine owned by someone else or get permission to quarry part of someone's property -- including, in some cases, government property. **Panning** or **sluicing** for gold, known as **placer mining**, is another form of recreational mining.

#### Mine tailings

When a large-scale, commercial mining operation extracts minerals from the ground, it ends up with leftover gravel and dirt. It usually isn't worth the time for these groups to sort through leftovers in order to find small gems that they missed, so they just pile it in a place called a **mine dump**. Sometimes you can comb

### ZODIAC STONES (part 5 of 12):

From Wikipedia, the free encyclopedia

Early civilizations such as India and Babylon have attributed gemstones with magical properties. Over time, astrologers assigned gems of certain colors to the twelve signs of the zodiac to help people influence the planets in their favor.

Sign	Dates	Stone	Sign	Dates	Stone
Aquarius	January 21 - February 18	Garnet	Leo	July 23 - August 23	Onyx
Pisces	February 19 - March 20	Amethyst	Virgo	August 24 - September 22	Carnelian
Aries	March 21 - April 20	Bloodstone	Libra	September 23 - October 23	Peridot
Taurus	April 21 - May 21	Sapphire	Scorpio	October 24 - November 22	Beryl
Gemini	May 22 - June 21	Agate	Sagittarius	November 23 - December 21	Topaz
Cancer	June 22 - July 22	Emerald	Capricorn	December 22 - January 20	Ruby



Moss agate



Montana moss agate



Faceted Botswana agate



Banded agate.

**Agate** (pronounced ['ægət]) is a microcrystalline variety of quartz (silica), chiefly chalcedony, characterised by its fineness of grain and brightness of color. Although agates may be found in various kinds of rock, they are classically associated with volcanic rocks but can be common in certain metamorphic rocks. Colorful agates and other

through mine dumps for free; other mines charge a fee to dig through their remnants. This is one form of a **fee dig**.

#### Fee dig

In addition to **mine tailings**, some mines prepare gravel and dirt deposits specifically so people can come and dig, looking for gems. Fee digs attract both tourists and gem hunters. Some mines even import rock and dirt from other regions so people may search for exotic gems normally not found in that area. Or, mines might provide material from deep underground, where the average gem hunter couldn't go. Fees can range from \$50 to \$100 or more, depending on the length of time you spend at the site. Essentially, you're leasing the mineral rights to whatever you find. However, some fee digs charge a percentage of the wholesale price of any rough gems you find.

#### Geology hiking

Hunting for gems can be as simple as heading out into the wild and seeing what you can find on a walk. You won't be heading to a specific mine or looking through pre-dug piles of gravel -- you'll be searching for gems and minerals already at the surface, exposed by rock falls and erosion. You might do a little digging or chiseling, but no serious mining. You'll probably be hiking in a state park or on private land, where someone has given you permission

Now that you know the different types of gem hunting, let's examine the ideal gem-hunting grounds to meet your needs.

*(To be continued in the next Ammonite).*

chalcedonies were obtained over 3,000 years ago from the Achatas River, now called Dirillo, in Sicily. The stone was given its name by Theophrastus, a Greek philosopher and naturalist, who discovered the stone along the shore line of the river Achatas (Greek: *Αχάτης*) sometime between the 4th and 3rd centuries BC. The agate has been recovered at a number of ancient sites, indicating its widespread use in the ancient world; for example, archaeological recovery at the Knossos site on Crete illustrates its role in Bronze Age Minoan culture.

**Formation and characteristics:** Most agates occur as nodules in volcanic rocks or ancient lavas where they represent cavities originally produced by the disengagement of volatiles in the molten mass which were then filled, wholly or partially, by siliceous matter deposited in regular layers upon the walls. Such agates, when cut transversely, exhibit a succession of parallel lines, often of extreme tenuity, giving a banded appearance to the section. Such stones are known as banded agate, riband agate and striped agate.

In the formation of an ordinary agate, it is probable that waters containing silica in solution -- derived, perhaps, from the decomposition of some of the silicates in the lava itself -- percolated through the rock and deposited a siliceous coating on the interior of the vapour-vesicles. Variations in the character of the solution or in the conditions of deposition may cause a corresponding variation in the successive layers, so that bands of chalcedony often alternate with layers of crystalline quartz. Several vapour-vesicles may unite while the rock is still viscous, and thus form a large cavity which may become the home of an agate of exceptional size; thus a Brazilian geode lined with amethyst and weighing 67 tons was exhibited at the Dusseldorf Exhibition of 1902. Perhaps the most comprehensive review of agate chemistry is a recent text by Moxon cited below.

The first deposit on the wall of a cavity, forming the "skin" of the agate, is generally a dark greenish mineral substance, like celadonite, delessite or "green earth", which are rich in iron probably derived from the decomposition of the augite in the enclosing volcanic rock. This green silicate may give rise by alteration to a brown iron oxide (limonite), producing a rusty appearance on the outside of the agate-nodule. The outer surface of an agate, freed from its matrix, is often pitted and rough, apparently in consequence of the removal of the original coating. The first layer spread over the wall of the cavity has been called the "priming", and upon this base zeolitic minerals may be deposited.

Many agates are hollow, since deposition has not proceeded far enough to fill the cavity, and in such cases the last deposit commonly consists of quartz, often amethyst, having the apices of the crystals directed towards the free space so as to form a crystal-lined cavity, or geode.

On the disintegration of the matrix in which the agates are embedded, they are set free. The agates are extremely resistant to weathering and remain as nodules in the soil or are deposited as gravel in streams and shorelines.

**Types of agate:** A Mexican agate, showing only a single eye, has received the name of *cyclops agate*. Included matter of a green, golden, red, black or other color or combinations embedded in the chalcedony and disposed in filaments and other forms suggestive of vegetable growth, gives rise to dendritic or moss agate. *Dendritic* agates have fern like patterns in them formed due to the presence of manganese and iron oxides. Other types of included matter deposited during agate-building include sagenitic growths (radial mineral crystals) and chunks of entrapped detritus (such as sand, ash, or mud). Occasionally agate fills a void left by decomposed vegetative material such as a tree limb or root and is called limb cast agate due to its appearance.

Turritella agate is formed from silicified fossil Turritella shells. Turritella are spiral marine gastropods having elongated, spiral shells composed of many whorls. Similarly, coral, petrified wood and other organic remains or porous rocks can also become agatized. Agatized coral is often referred to as Petoskey stone or agate.

Greek agate is a name given to pale white to tan colored agate found in Sicily back to 400 B.C. The Greeks used it for making jewelry and beads. Today any agate of this color from Sicily, once an ancient Greek colony, is called Greek agate. Yet the stone had been around centuries before that and was known to both the Sumerians and the Egyptians, who used the gem for decoration and religious ceremony.

Another type of agate is Brazilian agate, which is found as sizable geodes of layered nodules. These occur in brownish tones interlayered with white and gray. Quartz forms within these nodules, creating a striking specimen when cut opposite the layered growth axis. It is often dyed in various colors for ornamental purposes.

Certain stones, when examined in thin sections by transmitted light, show a diffraction spectrum due to the extreme delicacy of the successive bands, whence they are termed *rainbow agates*. Often agate coexists with layers or masses of opal, jasper or crystalline quartz due to ambient variations during the formation process.

Other forms of agate include carnelian agate (usually exhibiting reddish hues), Botswana agate, Ellensburg blue agate, blue lace agate, plume agates, tube agate (with visible flow channels), fortification agate (which exhibit little or no layered structure), fire agate (which seems to glow internally like an opal) and Mexican crazy-lace agate (which exhibits an often brightly colored, complex banded pattern) also called Rodeo Agate and Rosetta Stone depending on who owned the mine at the time.

## PLACES AND FACES:

By Hazel Williams

I had never before been interested in “rocks” although I had noticed rock shops on just about every corner of every town in the Black Hills. I couldn’t help but to wonder what was so interesting about rocks and why everyone was looking for them. When my kids were small, they always brought that “special” rock in the house and, of course, when they weren’t looking, out it would go to join all the other rocks in the drive. Now as a member of the Western Dakota Gem and Mineral Society, I know why there are so many rock shops in South Dakota (and why my kids loved rocks). This is one of the most geologically diverse regions in the world. (Yea, I’ve been doing my homework). More and more people come to the Black Hills year after year because there are so many places to look for minerals and semi-precious stones. You don’t have to wander far into the hills either, just step out of your vehicle and look down. I will never forget my first experience on a field trip with the club. We went to Railroad Buttes (I think) and one of the ladies, (it’s been too long ago to remember which one and being new to the club, didn’t know anyone) was just walking along the dirt road and found a fairburn. Boy, did that start me looking harder. Here I was wearing myself out roaming the hills, walking up and down, trying not to fall, and really trying to find that special rock. I thought that was what I was supposed to do. Just to let you know, I didn’t find it that day and wouldn’t have known it if I had of found it.

So you see, you can find some interesting deposits right along the road, especially in areas where the rock has been cut back for the roadway. There are also numerous abandoned mines in the Black Hills but most are on private land and you need permission from the owner before entering his land to collect rocks. Check out this website about the Etta mine in Keystone. Very interesting site although the mine is closed to the public. [http://www.dakotamatrix.com/Black\\_Hills\\_pegmatites.asp](http://www.dakotamatrix.com/Black_Hills_pegmatites.asp). Take your family with you, along with a picnic lunch. It’s a great and cheap way to spend the weekend and to spend some quality time with family and friends.

#### **FUN AND MISC:**

By Becky Bender

#### ***A Fairburn Agate Lament***

*I think that I shall never see,  
A Fairburn agate meant for me.  
I trudge and dig,  
Hunt high and low,  
But still am left with naught to  
show.  
Oh how I envy those who find  
A Fairburn-lovely, lined and free.  
But if they’re out there  
I’ve come to see,  
Then they will indeed ---  
Come FIND ME!  
So I press on and still am happy,*

*Finding a Fairburn won’t be  
snappy.  
We’re blessed with so many  
beauties,  
It’s hard to choose!  
I know any day hunting,  
I cannot lose.  
Dear friends, good times, a sunny  
day  
All this fun is just the way,  
To spend some time in Grasslands  
fair,  
Hunting for the Fairburn, rare.*

*And if I’m lucky, patient, true,  
He’ll send a call, and if, at all  
That Fairburn’s listening,  
Why, I’ll catch sight of it  
Lying there glistening. With happy  
smile and  
Shout of glee--- why, he’ll be  
Mine---And oh, that’s FINE,  
But---  
I’ll go out and hunt again ---  
Another time!*



#### **March 10, 2009 Minutes, by Hazel Williams:**

The 10 April 2009 meeting was called to order by Deb at 7:30 pm. The March minutes were approved and 2d. The club had 2 new members to join this month. There are 27 families and 42 single members. Treasurer’s report: Rita briefed the treasurer’s report as having a balance of \$8,719.87. Bills were paid totaling \$1,868.84 and a deposit of \$375.50 was made. Steven Evans motioned to accept the treasurer’s report and was 2<sup>nd</sup> by Wes.

**NEW BUSINESS:** Don gave a report on the Blue Ribbon Rocky Mountain Federation. He received a letter approximately 2 weeks ago stating the club insurance had been cancelled. He briefed that we have a new policy and asked what to do with the remaining balance paid on the old policy. New insurance is 1/3 cost of what other was. The new policy will cover the show in June. Oct is the Roswell NW Rocky Mountain Federation Show. Don stated they will vote on State Director when his turn expires. Don was voted in by the club to continue as the WDG&MS rep. Mickey and Deb stated the contacts for the show have been sent out. Recommended changes were made to the flyers and they have been printed and mailed (copies to pick-up and distribute are available). Advertising will be listed in the Rock and Gem magazine.

The members that attended the field trip to the School of Mines were very impressed. It was noted the School of Mines will give private tours to groups for free. If you are interested in going to Dale’s for cabbng instruction please sign up on the sheet that is being passed around, or contact Steve Shivers to be added to the list. Deb stated 4 more programs are needed for rest of the year. If you have anything interesting for show and tell, please sign up. The Pocket guides were received. The club was overcharged by \$58.00 but will be reimbursed. Price for each guide is \$3.06. They will be sold for \$5 to non-club members and \$4.00 to members

during the show. There are 150 geology and 50 dinosaur guides. Mickey stated a landowner at Buffalo Gap, near Hot Springs by the Cheyenne River, complained of rockhunters leaving trash and being responsible for the death of one of his cattle. If you pack it in you pack it out and leave the gates as you found them. Deb stated to inform the landowners that you are a club member and to clean up after yourself. Jim Osborne briefed on the SD Wild Grassland Coalition. He stated rockhunting sites are being lost. That about 50,000 acres might be closed in the grasslands which would include Indian Creek, and the Red Cloud area. He advised everyone to vote and to give your views. Be responsible. The Rock Swap in May is by Jolly Lane. Don and Jamie mentioned the Rock Swap in Scottsbluff NE 22-25 May.

**SHOW:** A discussion took place concerning vendors at the show. Dale stated members should be able to have a booth. Jamie will find out what he can about the club members setting up a booth - if there will be enough room, etc. He will get back with us. Cost will be \$75.00 per booth. For the Silent Auction, the club will receive 20% of the sales. New for this year: **You must be a member to have items in the silent auction. You must also contribute help to the Show in order to get in free. If you are able to help (have time off work, healthy enough, etc.) but elect not to, then you must pay admission fee just like the general public.** If you are not working a booth please relieve others for food breaks, etc. This decision will be revisited before the 2010 show if it doesn't work out. Silent Auction will be on back table; bring in and list what you want to sale; sign a contract; put a minimum bid; club gets 20%. Ellen is in charge of Children's booth, Jan the Information table. Jamie and Mickey will get door prizes from the dealers. Contest winners: best showcase and Best in Show will receive a \$30.00 rock/item and the Grand prize winner will get a \$40.00 item and a plaque. Sign up sheet for the show field trip on Monday, June 29th will be at the information booth. Show set up is Fri 26 June at 8 am and tear down when show is over at 4 pm on Sun 28 June. The 27<sup>th</sup> and 28<sup>th</sup> will be the show with a field trip on the 29<sup>th</sup>. A Potluck dinner will also be held and members are requested to bring a dish for Friday night around 6 pm.

Deb stated the 25<sup>th</sup> of each month is the deadline for input for the newsletter. Photos, articles, etc. are needed for each newsletter. She requested members submit their email address if they want the Ammonite by email rather than being sent a hard copy.

There are 2 display cases for sale that Dale is holding for the club. If not bought by club members they will be donated to the 4-H. Paul is in charge of the display cases for the show. Meeting was closed at 930 pm.

### Western Dakota Gem & Mineral Society 2008-2009 Officers and Chairpersons (area code 605)

<b>President:</b>	Deb Radomski, 430 E. Idaho St., Rapid City, SD 57701.....	343-7850
<b>Vice President:</b>	Roger Vesely, 4800 Summerset Dr., Rapid City, SD 57701.....	341-6299
<b>Secretary:</b>	Hazel Williams, 2415 Judy Ave., Rapid City, SD 57702.....	399-2670
<b>Treasurer:</b>	Rita Hanson, 2569 Ambush Ranch Rd., Rapid City, SD 57703.....	348-3916
<b>Show Co-Chair:</b>	Jamie Brezina, 1701 5 <sup>th</sup> St., Rapid City, SD 57701.....	415-6283
<b>Show Support:</b>	Donald Rathert, 2701 Mystic Mt. Rd., Rapid City, SD 57702.....	348-8948
<b>Silent Auction Chair:</b>	Linda Shivers, 11809 Eastridge Hill Dr, Black Hawk, SD 57718.....	716-4047
<b>Silent Auction Asst-Chair:</b>	Mickey Snook, 201 Patton St., Rapid City, SD 57701.....	791-1953
<b>BRC SD Rep:</b>	Donald Rathert, 2701 Mystic Mt. Rd., Rapid City, SD 57702.....	348-8948
<b>BHRMUC Rep:</b>	Donald Rathert, 2701 Mystic Mt. Rd., Rapid City, SD 57702.....	348-8948
<b>RMFS SD Dir.:</b>	Donald Rathert, 2701 Mystic Mt. Rd., Rapid City, SD 57702.....	348-8948
<b>RMFMS SD Reps:</b>	Donald Rathert, 2701 Mystic Mt. Rd., Rapid City, SD 57702.....	348-8948
<b>Field Trip Chair:</b>	Steve Shivers, 11809 Eastridge Hill Dr, Black Hawk, SD 57718.....	716-4047
<b>Field Trip Asst-Chairs:</b>	Jan Baumeister and Calvin Luke	
<b>1 yr. Board Member:</b>	Jamie Brezina, 1701 5 <sup>th</sup> St., Rapid City, SD 57701.....	415-6283
<b>2 yr. Board Member:</b>	Ellen Tilley, 21653 Piedmont Meadows Rd., Piedmont, SD 57769.....	787-4659
<b>3 yr. Board Member:</b>	Dale Joebgen, 14974 Back Country Trail, Rapid City, SD 57703.....	393-2011
<b>Newsletter Editor:</b>	Deb Radomski, 430 E. Idaho St., Rapid City, SD 57701.....	343-7850
<b>Historian</b>	Donald Rathert, 2701 Mystic Mt. Rd., Rapid City, SD 57702.....	348-8948
<b>Publicity Co-Chair:</b>	Mickey Snook, 201 Patton St., Rapid City, SD 57701.....	791-1953
<b>Publicity Co-Chair:</b>	Calvin Luke, 220 E. St. Joseph #2., Rapid City, SD 57701.....	593-1711
<b>Librarian:</b>	Steven Evans, P.O. Box 1123, Rapid City, SD 57709.....	484-5712

**Club Address:** 2701 Mystic Mt. Rd., Rapid City, SD 57702

**Meetings:** Second Friday of each month, 7:30 p.m., Minneluzahan Senior Center, 315 N. 4<sup>th</sup> St., Rapid City

**Dues:** Family - \$15, Single - \$10, Payable by cash, check, or money order. Senior Citizens free membership (does not include bulletin)

**The purpose of our club is to promote interest and education in geology, mineralogy, paleontology, archaeology, and lapidary, to sponsor and provide means of coordination the work efforts of groups and individuals interested in these science fields.**

**THE 29<sup>TH</sup> ANNUAL GEM & MINERAL SHOW IS JUNE 27<sup>TH</sup> AND 28<sup>TH</sup>  
(Set-up Friday, June 26<sup>th</sup>)**

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Editor: Deb Radomski  
430 E. Idaho St.  
Rapid City, SD 57701  
[sashaNren@peoplepc.com](mailto:sashaNren@peoplepc.com)

Affiliated with AFMS and RMFMS

Club Mailing Address:  
2701 Mystic Mt. Rd., Rapid City, SD 57702

**Material in this newsletter may be used if proper credit is given.  
Material for this newsletter must be given to the editor by the  
25<sup>th</sup> of the month preceding that issue.**

