



SLABS & CABS
OFFICIAL BULLETIN OF THE
GULF COAST GEM & MINERAL SOCIETY

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Number 9

Sept 2011

Next Meetings

Board Meeting
4 Oct 2011
At the Shop
6:00 PM– 9:00 PM

General meeting
20 Sept 2011
At the Museum of
Science & History
1900 North Chaparral
Corpus Christi, Texas
6:30 PM

Membership Fees for 2012

Membership dues for 2012 are due in January 2012
We have 4 types of memberships and they are as follows:
Single \$ 15.00
Spousal \$ 20.00
Junior \$ 5.00

This is for any member from the age of 6-17 years Of age
Honorary, Does Not Pay Dues

If Dues are Not Paid by the time of the Show you will

Forfeit Your Membership

Sandra Hinkle , Membership Chairlady

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Laguna Agate
Mexico

**6 September Board Meeting Minutes of the
Gulf Coast Gem & Mineral Society**

Did not receive a copy of the Board meeting minutes



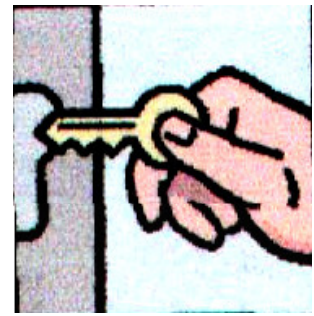
**Agate
Usan Angus Scotland**

GCGMS Lapidary Shop Rules

1. The lapidary shop equipment may not be used by anyone who has not signed a liability waiver.
2. Shop equipment use flat fee is \$2.00 per hour. Sign in on arrival. Pay Supervisor and sign out before leaving the shop.
3. "Open shop" hours are to be used only by those who have taken the cabochon class or have shown proficiency on the equipment.
4. All children under the age of 17 must be accompanied by an adult trained on the use of the equipment.
5. Supervisor must inspect rock "set-up" prior to anyone starting slab saw.
6. Long hair should be tied back, loose sleeve should be secured, and safety procedures followed.
7. Safety glasses are recommended and are the responsibility of the individual. Some are furnished by the GCGMS, or you may bring your own.
8. The last person to use a piece of equipment before the shop closes is responsible for cleaning that piece of equipment and the work area. This may include tabletop, sponges, aprons, catch trays, etc.
9. Shop Supervisor is the final authority on shop rules and usage.

Revised May 2009

Any Articles, Minutes are other items not received by Thursday Morning 9:00 am After the Board Meeting. Will Not Be Published in That Months Newsletter.



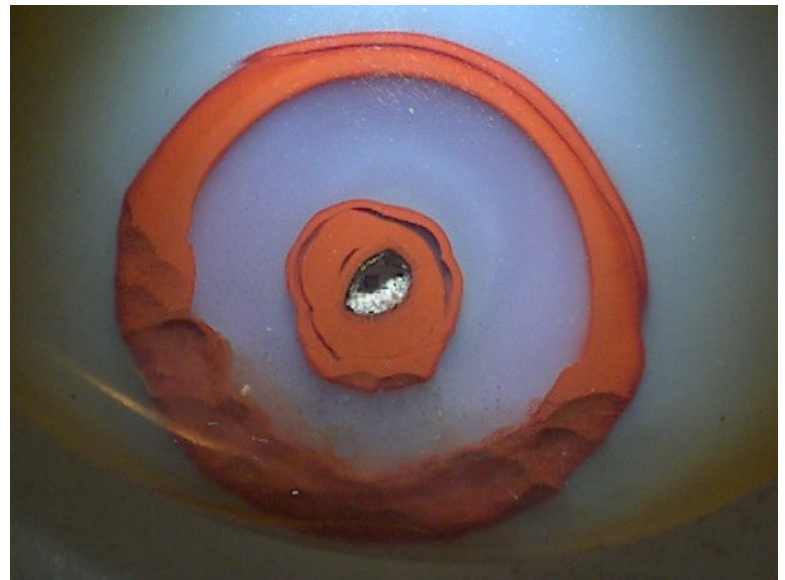
Those with keys to the Lapidary Shop are

Mark Wolbrink 361-991-2495 Shop Supervisor
 Jerrold Simpson—361-851-8788
 Cell - 361-877-3073
 Hank Swan—361-993-9861/361-857-2405

Please call one of these when you would like to use the shop. They will not all be available at the same time, and once in a while none of them will be available. Most of the time at least one of them should be able to work out a time and date the shop could be open for you. Remember the club has a lot of good equipment to use. Several different classes are being conducted on Monday evening from 6:00 PM to 9:00 PM. The shop is open during these times for use of the equipment even if you are not involved in a class. Shop is also open Saturday 9:00 Until Noon.



**Brown & Black Plume Agate
 Woodward Ranch
 Brewster County
 Texas**



**Bulls eye Agate
 Walker Ranch
 Brewster County
 Texas**

Traditional Birthstones - Sapphire - Tourmaline (September)

If you were born in the month of September, sapphire is your birthstone. Sapphire is a variety of corundum or aluminum oxide and Al_2O_3 gives its chemical formula---that is, two parts of Aluminum to three parts of Oxygen. The axes are arranged in a hexagonal crystal, a crystal with four axes, three of which are of equal length and intersect at 60 degree angles, and one of which is unequal in length to the others and intersects the others at a right angle.

Sapphire's companion variety of corundum is ruby. Rubies are red to orange-red to purplish red. If corundum is pink, the United States Federal Trade Commission requires that the stone be sold as a sapphire. In the United States "pink rubies" are eliminated from the gem trade by legal definition. In the simplest terms, corundum that is any color other than red is a sapphire. Except for color, all of the other physical and optical properties of sapphire are identical to those of ruby and you are referred to the ruby page for these data.

Supply and demand has dictated that cornflower blue sapphires are the most expensive. These stones are rare and the finest examples come from Kashmir, a mountainous area in northern India on the Pakistan border. Geographic isolation, political instability and high demand all combines to make these stones very expensive.

Sapphires have been found in many other places in the world but few have attained the desirability of the Kashmir stones. In the United States, the Yogo Gulch area in Montana has historically produced some fine sapphires but few of these attain the size of the fine Kashmir gems. Labor and mining costs have been very high in the United States and the Yogo Gulch mines have generally not been profitable for the operators.

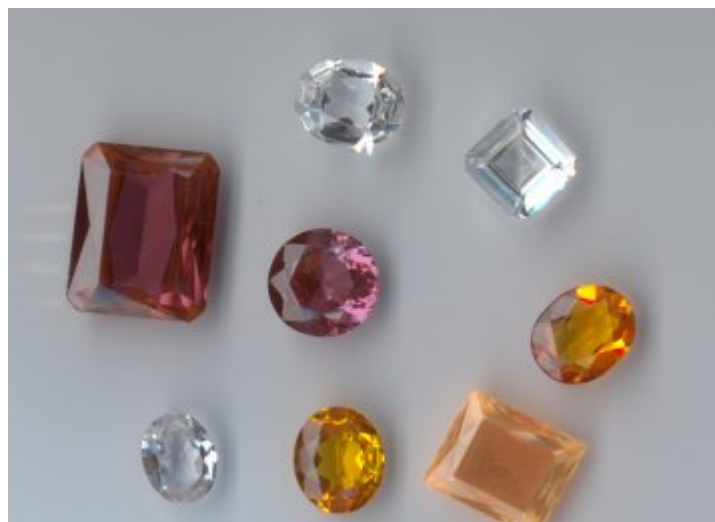
Fee localities are areas where one can pay a set fee for the privilege to extract gems and minerals from mines or claims that are owned by a second party. There are several such fee locality sapphire mines in Montana that have been profitable for both the mine owners and the prospectors who have chosen to pay the fee. The prospector pays a set fee for the right to extract a given weight or volume of sapphire bearing rock or gravel. The fee locality operators allow only the use of hand tools such as picks, shovels, crowbars, gads and wedges. The miner extracts the sapphire bearing rock with the larger tools. This material is sieved through a series of screens that allow the miner to separate and discard the extremely large cobbles as well as the very fine grained sand, silt and clay. The volume the miner pays for is actually only that that is in the size range that will produce the most useable stones. The sieved residue is placed in buckets and toward the end of the day the miners return to the base camp where the operators have electric shake tables that wash the gravel and concentrate the particles with high specific gravity toward the bottom of a pan. A half-ton of gravel may actually yield only a few pounds of sapphire bearing concentrate. When the concentrate is collected in the pan, the pan is removed from the shaker and is dumped over quickly on a flat table. The largest sapphires will normally be on the top of the pile or what was earlier the bottom

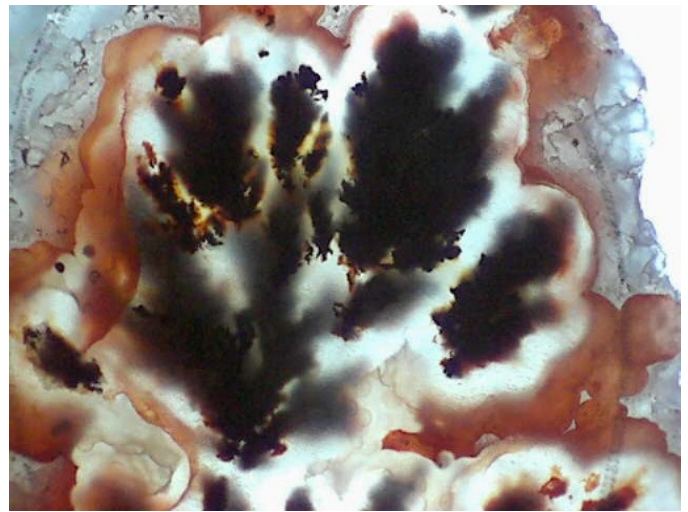
In addition to sapphire being found in Montana, some stones have also been produced from mines in North Carolina where several fee localities exist. Alluvial gravel that covers much of the North American mid-continent has also produced an occasional sapphire for the lucky prospector. In the Old World sapphire has been found in alluvial gravel in Burma and Sri Lanka. Many of the colorless stones from Sri Lanka can be enhanced by heat treatment. There are many other localities of lesser importance throughout the world that have produced sapphires.

Johnson and Coeval (1998, p. 293, 294), citing F. L. Southland and M. I. Garland stated that corundum formed in two distinct geochemical environments. (1) Alkali basalt where partial melting of the lithosphere over rising plumes of the earth's mantle can lead to eruptions of gem bearing lava. (2) Sapphires from Montana formed in crustal metamorphic sources on the basis of low Gallium contents. Sapphire form in rocks that geologists call undersaturated, or rocks that have no free quartz. Spinel is another gem that forms in undersaturated rocks. Spinel may come in many of the same colors as sapphire and in earlier times many stones that were called sapphire or ruby included both corundum and spinel. Modern gem testing procedures can easily separate the two different minerals.

The colors of sapphires and rubies are controlled by trace elements that are included in the crystal lattice in amounts usually not exceeding about three percent. Some of these are listed in the table below:

- Chromium Oxide, Cr_2O_3 ---**ruby**
- Titanium Oxide, TiO_2 and Ferrous Iron Oxide, Fe_2O_3 ----**blue**
- Ferrous Iron Oxide---**yellow**
- Chromium Oxide, Ferrous Iron Oxide---**orange**
- Ferric Iron Oxide, Fe_3O_4 and Titanium Oxide---**green**
- Chromium Oxide, Ferrous Iron Oxide, Titanium Oxide---**purple**





**Brown & Black Plume Agate
Woodward Ranch
Brewster County
Texas**



**Worm Agate
Woodward Ranch
Brewster County
Texas**



**Sapphire
Facetted — Natural Crystals— Manmade Boulds**



Coming Events

September 2011

23-25 SANTA FE, NM: Palace of the Governors Annual Show, New Mexico History Museum; Palace of the Governors courtyard, 113 Lincoln Ave; Fri 9-7, Sat & Sun 9-4:30; FREE; dealers, specimens, talks, demonstrations, contact Inessa Williams, 113 Lincoln Avenue, Santa Fe, NM 87501, (505) 476-5106; email: inessa.williams@state.nm.us; Website: www.nmhistorymuseum.org

24-25 RICHARDSON, TX: Bead Market Wholesale & Retail Show; Richardson Civic Center, 411 W Arapaho; Sat 10-5, Sun 10-4; FREE; gemstones, glass beads, lampwork, vintage beads & buttons, Swarovski Elements, crystals, pearls, bone beads, jewelry, books, tools; contact Rebekah Wills, (903) 240-7198; email: rebekah@thebeadmarket.net; Website: www.thebeadmarket.net

October 2011

1-2 JACKSONVILLE, AR: Central Arkansas GMGS 39th Annual Show; Jacksonville Civic Center, 5 Municipal Drive; Sat & Sun 9-5; FREE; more than 20 dealers, demonstrations, exhibits, door prizes, Kids. Dig, geode cracking, Rock Spin, mineral identification, grand prize; contact Lenora Murray, 218 Old Hwy 11S, Hazen, AR 72064, (870) 255-3679; email: lenoramur@aol.com; Website: centralarrockhound.org

8-9 FT WORTH, TX: LMRA Stone Steppers Annual Show; Lockheed Martin Recreation Association, 3400 Bryant Irvin Road; Sat & Sun 9-6; FREE; rocks, gems, minerals, flinters, prospecting equipment, GPAA, jewelry, pottery, stained glass, children.s activities; contact Steve Shearin, 860 Stafford Station Drive, Saginaw, TX 76131, (817) 733-5368; e-mail: steve.l.shearin@lmco.com

8-9 TEMPLE, TX: Tri-City G&M Society Annual Show; Mayborn Convention Center, 3303 N 3rd Street; Sat 9-6, Sun 10-5; adults \$3; silent auctions, raffles, door prizes, grand prize, demonstrations, dealers, rough, slabs, cabs, faceted gems, equipment, finished jewelry; contact Chip Burnette, 2630 Polk Street, Killeen, TX 76543, (254) 630-3573; email: burnette@aceweb.com

13-15 MT IDA, AR: 25th Annual World Champion Quartz Crystal Digging Contest; Mt Ida Area CofC; Montgomery County Fairgrounds, Fairgrounds Road; Thu thru Sat 9-3; adults \$80 (\$95 after Oct 1); dig quartz crystals, keep all you find, meet other miners, maybe win a prize; contact Maureen Walther, Mt Ida Area Chamber of Commerce, Mt Ida, AR 71957, (870) 867-2723; email: director@mountidachamber.com; Website: www.mountidachamber.com

14-16 MT IDA, AR: .Quartz, Quiltz & Craftz Festival.; Mt Ida Area CofC; Montgomery County Fairgrounds, Fairgrounds Road; Thur thru Sat 9-6, Sun 10-4; FREE; dealers, minerals, jewelry, quartz crystals, quilts, crafts, kid.s digging contest Sat; cont; Maureen Walther, Mt Ida Area C of C, Mount Ida, AR 71957, (807) 867-2723; email: director@mountidachamber.com; Website: www.mountidachamber.com

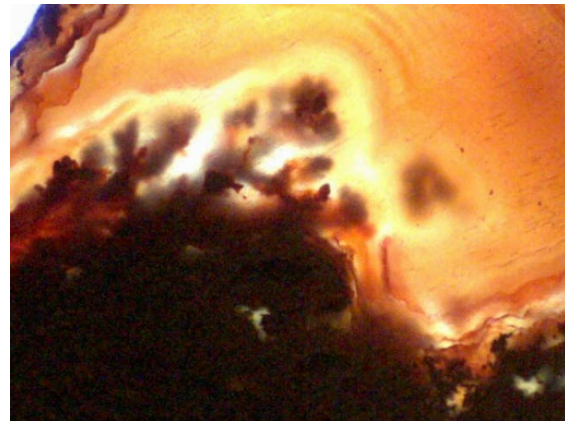
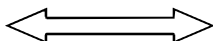
21-23 AUSTIN, TX: .Gold. Annual Show AGMS; Palmer Events Center, 900 Barton Springs Road; Fri 9-5, Sat 10-6, Sun 10-5; adults \$5, Srs (60/over) \$4, students (13-18) \$1, children (6-12) 50 cents; 30 + dealers, jewelry, beads, gemstones, mineral specimens, crystals, fossils, spheres, lapidary equip, exhibits, Rock Food. table, touch table, fluorescent minerals, member collections, silent auction, demonstrations, faceting, fossil cleaning, polymer clay, .Youth Education Day. Friday, Gem Mine, Wheel of Fortune, Jewelry Making, door & grand prize; contact Susan Postlethwait, 6719 Burnet Lane, Austin, TX 78757, (512) 458-9546; email: showchariman@austingemandmineral.org; Web site: www.gemcapers.com

November 2011

11-13 PASCAGOULA, MS: Mississippi Gulf Coast Gem & Mineral Society Annual Show, Magnolia State Gem, Mineral & Jewelry Show; Jackson County Fairgrounds, 2902 Short Cut Road; Fri 10-6, Sat 9-6, Sun 10-5; adults \$3, children 12 & under free; door prizes, raffle, 20 dealers, gold panning and sluicing; contact James Darnell, 7121 Oakhurst Drive, Ocean Springs, MS 39564, (228) 875-2310



Red Plume Agate
Walker Ranch
Brewster County
Texas



What is a fossil?

Simply put, a fossil is the remains or evidence of any creature or plant that once lived on the Earth.

Now let's look at the long answer.

There are quite a few fossil classification systems in use today, but my favorite is the one used by Peter Larson and Kristin Donnan in their book, *Bones Rock!* They group them into two categories:

Type I-the remains of the dead animal or plant or the imprint left from the remains.

Type I includes:

bones

teeth

skin impressions

hair

the hardened shell of an ancient invertebrate (an animal without a backbone) like a trilobite or an ammonite, or the **impression of an animal or plant**, even if the actual parts are missing.

So now you have one short and one long answer to the question: "What is a Fossil?" Let's build on that.

Type II- Something that was made by the animal while it was living that has hardened into stone. These are called **trace fossils**.

Type II includes:

footprints

burrows

coprolite or animal poop



Coprolite



Footprint

Type I fossils can be the actual thing that it once was, like a piece of bone or hair or feather. More often the bone material is replaced by different minerals contained in the liquid of the sediments that buried it. What was once bone is now some sort of crystal.

This process also takes place with shells, exoskeletons and wood. If the spaces in the bone are filled with liquid minerals which later harden it is called **permineralization**.

Sometimes the organic material is dissolved by the mineral-laden

water. The process happens so slowly that each cell is dissolved and replaced by a particular liquid mineral before it hardens. This is called **petrification**. In petrification, every detail down to the cellular level is duplicated in the minerals.

Type I can also be **molds or casts** of the original animal or plant part. If the original organism decays, leaving an imprint and an empty space, it is called an exterior mold or simply a mold. If a space in the structure is filled with minerals and then the original animal or plant part dissolves, it is called a cast.

The question: "What is a fossil?" has a simple answer. But as you can see it can be more complicated than that. The What Is A Fossil Crossword Puzzle can be a challenge for elementary children. There are new vocabulary words that may be unfamiliar. However even children as young as 8, 9, and 10 can be successful. All it takes is some familiarity with the concepts and words. This puzzle makes a good follow up activity after an introductory lesson on what a fossil is. I will give students an opportunity to think about and use the new information.

Given the resources secondary students should be able to research the answers themselves. The answers to this crossword puzzle are on our web pages: [What Is A Fossil?](#) and [How Are Fossils Formed?](#)

There are many good books on this subject. If you are interested in presenting this to your students you probably already have some of them. If you have internet access at your school the links above should provide all that they need. Alternately you could print these pages to have available.

Fossil collecting

is a way to connect with the past. There's something mysterious and powerful about holding a 400-million-year-old creature in the palm of your hand. We connect to the vast time span of life on earth. We feel its magnitude and the greatness of creation. Our thoughts are inspired and imagination leaps into action.

Folks have countless reasons for fossil collecting:
a love of modern nature and a desire to know and understand how it came to be

a love of history

a love of the Earth and the mystery of its creation

a desire to inspire a child to learning and to share your passion for geology and earth science.

Even wanting a hobby, one that will keep you in good physical shape while exercising your mind, is a great reason for becoming a fossil collector.

Plus, **FOSSILS ARE COOL!**

So, got your reason? Let's get started!

BEGINNING

It's easy to get started: just keep your eyes open the next time you walk along a dry creek bed or along a washed out ravine. Depending on your location, you might spot the remains of an ancient creature.

Don't want to leave your fossil finding to "Lady Luck?" Pick up a rock-hounding book for your locale. The authors of rock-hounding books let you in on lots of tips for success. They also let you know where you can hunt, how to ask permission of landowners and places to avoid.

Rock-hounding is fun! You can take a picnic and your kids! Make a day of walking and searching, getting to know one another. It's like shell hunting on an ancient sea...one that no longer has the lapping waters, but all the evidence of their presence is left behind.

Tips

One of the best tips we got from a rock-hounding book had to do with safety. There were helpful reminders of appropriate clothing (especially the part about sturdy walking or climbing boots) and supplies. (Like a first aid kit for scrapes from slipping on the rocks! Nothing serious, but it makes an 'owey' go away faster!)

Don't forget to take your camera! Nothing beats the thrill of the find! You'll want to have at least a few pictures in the field to document the location and the moment.

Fossil Hunting Sites and Resources In The USA

For Fossil Hunting Sites and Resources In The USA there are so many resources on the internet. The problem is finding them when you are preparing for a trip. On this page we will list by state resources we have tried and found to be valuable.

Arizona

[All Things Ancient in Arizona](#)This is a great resource for fossil hunting.

California

[Collecting Fossils in California](#)

Colorado

[Peak to Peak](#)This site is geared more toward general rock hounding than fossils but it is very comprehensive for Colorado Rocks

Colorado

[Peak to Peak](#)This site is geared more toward general rock hounding than fossils but it is very comprehensive for Colorado Rocks

Indiana

[Fossils From Indiana](#)This is a great resource for midwest fossil hunters!

Iowa

[Fossil Collecting Sites Rockford, Iowa](#)

[Fossil Gorge](#)

Kansas

[Kansas Geological Survey-Fossil Page](#)

Ohio

[Ohio Geological Survey](#)

The Perils of Fossil Collecting

An Indiana Disaster

When **fossil collecting**, road cuts can hold many treasures for fossil hunters. But **fossil hunters BEWARE!** Those cuts hold something more: varmints that will hang on to your skin long after you've taken your fossil treasures home.

We're new at this fossil-hunting thing. Oh, we found our share of relics when we were kids and young adults, but as bona fide rock hounds, we are novices. We learned the varmint lesson the hard way this summer.

On a tip from a friend on a great place to find crinoids, we excitedly scrambled over a road cut in southern Indiana, paying no heed to the telltale signs that should have made us take care. In the excitement of fossil collecting, we ignored the water that was seeping from the cut...never thinking that the plants were anything more than a mild impediment to our rock hounding.

By the next morning, our armpits and waists were dotted with quarter-inch red bumps. Surprisingly, the **chiggers** hadn't cared much for our ankles! My husband, who grew up in the west, had never experienced the intense itching of those little critters. Days after we arrived home and still itching, he scoured the internet for preventions and cures.

I should have known better. I grew up in southern Ohio; chiggers

were part of everyday summer life. I also should have thought about the poison ivy that was lurking there. Be the third day after we arrived home, my entire face was swollen and red...and the itching was nearly unbearable. The poison seemed to spread for weeks. It was a full 2 months before the last of the nasty red patches were gone.

So when fossil collecting take heed! Cover your body COMPLETELY when you go out in the field. Along with your rock hammer, carry some **powdered sulphur** to rub around your ankles, waist, wrists and armpits. My mother never went out to the garden without first dowsing herself in that **natural chigger-repellent**.

Make sure you have access to a hot shower and use special cleansers for removing the urushiol (poison ivy sap or oil) that causes the watery blisters.

A little consciousness about the plants and animals that shared the road cut would have made our excursion...or the return from it, a whole lot more enjoyable!

We did find lots of crinoid fossils, but they were **not** what we remember most about this fossil collecting trip!

Fossil Hunting on Baculite Mesa

Baculite Mesa near Pueblo, Colorado is just the place for easy finding of the remains of ancient sea life. The fossil-loaded location was easy to find, easy to get to, and, most importantly, easy for picking up lots of marine fossils. Being novice rock-hounders, a spot where the fossils reveal themselves with little effort inspires us to keep up the search.

The **baculite** is a now-extinct sea creature that lived in many areas around the world during the late Cretaceous Period. It was a mollusk belonging to the class Cephalopoda and had tentacles that grew out of its head. (cephalo: "head" + poda: "feet") This **ammonite** had the typical curled shell in its early life. When it grew older the shell straightened out.

During the Cretaceous Period, the western US was covered by an inland sea commonly referred to as the **Pierre Seaway**. The rock layer formed from this period is known as the **Pierre Shale**. Baculite Mesa has a nice layer of this grey to tan shale exposed all around it.

After a 2-hour drive and a lunch stop, we arrived at the mesa around 1...just getting to our destination in the heat of the day. Not the best planning, so we took along water for both drinking and spritz-ing. And we wore white, long-sleeved shirts to give some protection.

We called the posted phone number and asked permission to hunt. We learned from the owner, who drove out to meet us, that he'd lived on the land for many years and that the mesa had been generous with its supply of baculites washed out after every rain. After a brief chat about the best places to hunt, we started the climb to the layer of Pierre Shale.

It wasn't more than a minute or two into our walk when Doug spotted his first baculite laying in the wash alongside the road! The guide book had said the baculites were easy to find, but this was amazing!

The exposed shale was broken into billions of tiny shards that piled up on the steep, soft sides of the mesa. Walking was a bit slippery and cactus dotted the slopes, so we took care with every step. We silently thanked our host who had recommended we change to long pants and sturdier shoes! We climbed to the top of the mesa and began to work our way down, gravity helping us manage through the shale.

Once our eyes adjusted to the terrain, we saw baculites EVERYWHERE! The slender white sections of the conical shells were scattered throughout the site. Most of these were casts of the original shell and didn't bear the glossy markings of the original, but for beginners like us, this was an exhilarating find. After an hour or two, our buckets were filled with baculites and clams. One particularly great find was a clam whose 1-inch sides were splayed open like a butterfly. The bumps and ridges were perfectly preserved, with a bit of the original sheen still present.

Our water supply dwindled and the heat intensified, so we stowed our buckets of booty and headed for the artesian spring near our truck. Revived, we loaded our gear, called to thank our host for a successful day and were off to the next hunting ground. Baculite Mesa had been a success!

If You Go: Take I-25 to the Route 50 (Canon City) exit and turn east. Travel less than 5 miles to Baculite Mesa Road and turn left (north). After a short drive, you'll arrive at a gate with a stop sign and posted phone number.

Remember this is private property and you need to get permission to be on the owner's land.

The owner of Baculite Mesa would appreciate a phone call or email at least 48 hours before the expected trip to his land. He is a kind and very accomodating man, but would appreciate the courtesy:

baculitemesa@aol.com

719-546-1418

GULF COAST GEM & MINERAL SOCIETY, INC.
P.O. Box 60781 Corpus Christi, TX 78466

MEMBER of

American Federation of
Mineralogical Societies



South Central
Federation of
Mineral Societies, Inc



Meeting

Held the third Tuesday of each month at 6:30 pm at the museum of Science & History
1900 North Chaparral September through May, and at the Lapidary Shop 3933 Timon Blvd.,
Corpus Christi TX for June through August.

Membership Fees

Individual \$15.00 Couples \$20.00 Junior (under17) \$5.00

2011 Officers

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Treasurer: Gene Schade
gene@casadeoro.net

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Field Trip Coordinator: John Anderson
Dealer Chair: Jerrold Simpson

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Historiorn: Frances Marten
Librarian Linda Simpson
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Bulletin Editor; Art Worley
Webmaster: Art Worley
E-mail artleew@agates123.com
Door Prizes; Gilbert Rodriguez
Refreshment Hostess; Letty Rodriguez

Slabs & Cabs

Art Worley
2561 Raintree Trail
Ingleside, TX 78362

Slabs & Cabs Awards



Small Bulletins 4th place

PUBLICATION
2nd 2002 2001 1st
2001-4th place AFMS
2000 9th place SCFMS
1999-8th place SCFMS
1999- 9th place (new editor) AFMS

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