



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

P.O. BOX 1817  
CORPUS CHRISTI, TEXAS 78403-1817

Art Worley Editor  
361-345-4425  
2561 Raintree Trail  
Ingleside, Texas 78362  
artleew@agates123.com

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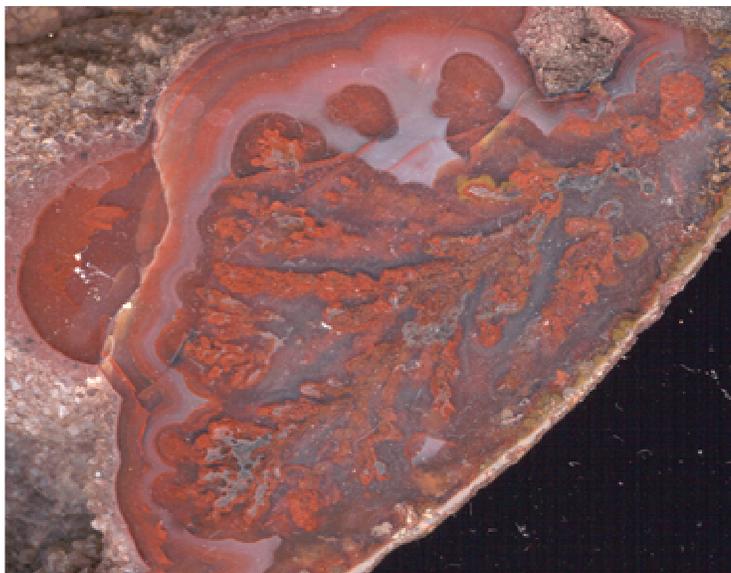
**Next Meetings**

Board Meeting  
2 February 2010  
Baptist Church  
6:00 PM– 9:00 PM

General meeting  
19 January 2010  
Watergarden Room  
Corpus Christi  
Museum of Science &  
History  
1900 No. chaparral  
Corpus Christi, Texas  
6:30 PM

**Membership Fees for 2010**

Membership dues for 2010 are due in January 2010  
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  
Sandra Hinkle , Membership chair lady



**Red Plume Agate**  
**Woodward Ranch Brewster County Texas**

**INSIDE**

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**We are on-line**

[www.gcgms.org](http://www.gcgms.org)

Thanks to Chris Davis of Spurfire and Owen Hopkins  
For getting us back up and running! Take a look.

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

The meeting was called to order 6:47pm on 1/5/10 at the Corpus Christi Main Library. Board members in attendance were Gene Schade, Jerrold Simpson, Linda Simpson, Dick Cline, Suzy Nick, Kevin Schleicher, Shanda Hinkle and Kyle Hinkle. Also attending were members Joe Grimes and Donna Grimes.

Membership Report – For 2010 we have 24 regular members, 3 junior members and 8 honorary members.

Minutes – Dick Cline moved to approve the December Board Meeting and Jerrold Simpson seconded the motion. The motion was approved.

Treasurer Report – Gene Schade gave the treasurer's report. Suzy Nick moved to approve the report as given and Jerrold Simpson seconded the motion. The motion was approved.

Shop Report – No one is showing up on Saturday for the last five times Dick has had the shop open. Two new members paid and are taking the cabochon class with Jerrold Simpson. There is a problem with the wax for the dap machine. Dick will bring some wax from home until it can be replaced.

Field Trip Report – There was no Field Trip Report because Mike McCraw was not in attendance.

Show Report – All the cases are done and ready for the show. We have 25 complete cases for displays. Linda Simpson has group that is funded by grant money and they would like to come to the show. They have 45 minute professional training sessions.

Some of the training is hands on and they give away things when speaking. They will be included in the show. Sign up sheets will be available at our January general meeting.

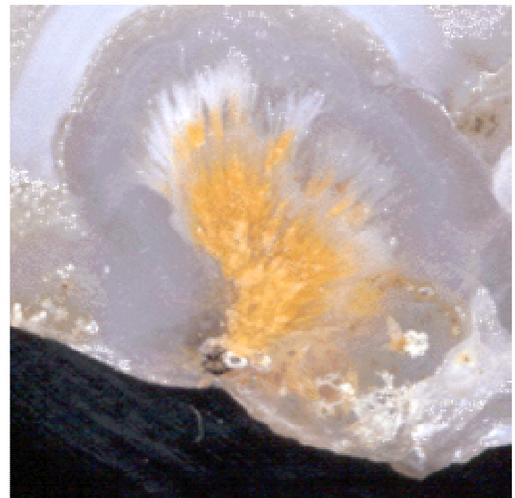
Education – Gene Schade said he mailed the scholarship cover letter and applications to the deans at the universities in Corpus Christi and in Kingsville. So far, there has been no response.

Federation – Linda Simpson said there was nothing new to report.

Old Business – The program for the January meeting will be Mark Villarreal if he's available and the February or March meeting will be Linda Simpson and Mike McCraw on Fossil Identification. Our attendance is very low for the general meetings and some options were explored to have more members attend the meetings.



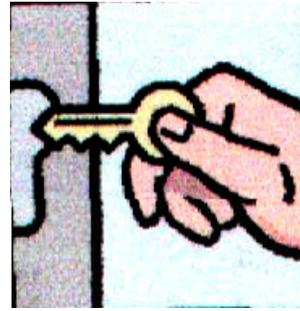
**Aragonite  
San Carlos  
Mexico**



**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



Those with keys to the Lapidary Shop are  
Mike McCraw—361-993-6425

Jerrold Simpson—361-851-8788

Cell - 361-877-3073

Hank Swan—361-993-9861/361-857-2405

Richard Cline—361-853-8084

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.



**The First Agate I Ever Found  
South Brewster County Texas**

## January Birthstone, Garnet

Compiled by Roger K. Pabian, Research Geologist, Emeritus  
School of Natural Resources, UNL

**Garnet** is a rather complex mineral that has a general chemical formula of  $R_3R_2(SiO_4)_3$ , where  $R_3$  is a **bivalent** (gives up two electrons) metal and  $R_2$  is a **trivalent** (gives up three electrons) metal when forming a chemical bond. The metal  $R_3$  may be Calcium ( $Ca^{++}$ ), Magnesium ( $Mg^{++}$ ), ferrous Iron ( $Fe^{++}$ ), or Manganese ( $Mn^{++}$ ), and the metal  $R_2$  may be Aluminum ( $Al^{+++}$ ), ferric iron ( $Fe^{+++}$ ), or Chromium ( $Cr^{+++}$ ). With so much substitution possible, the single garnet crystal may include a hodge-podge of elements, and garnets may be a multitude of colors; natural garnets are known in every color but blue.

Garnet crystallizes in the **isometric** system; the crystals have three axes that are all equal length and are perpendicular to one another. Garnet favors the **dodecahedral** (12 faces) crystal habit, but another common habit is a **trapezohedron** (24 faces). The dodecahedral crystal can be modified by the trapezohedron producing many smaller crystal faces. **Hexoctahedral** (48 faces) crystals are sometimes observed as are many other modifications of the basic isometric crystal plan. Garnet may also be found in **massive** forms and this was the foundation of a large abrasive industry in the United States. Much of the garnet abrasive has been replaced by manufactured silicon carbide but garnet paper is still available.

Because of the variation in chemical composition, bonds between some ions are stronger than those between other ions and the **hardness** may vary from about 6 ½ to 7 ½ on the MOHS scale, and the **specific gravity (S. G.)** (weight of the stone compared to the weight of an equal volume of water) may vary from about 3.5 to 4.3. The luster of garnets ranges from vitreous to resinous to subadamantine. Colors can be red, brown, yellow, orange, white, green, or black or shades in between.

Because garnet crystallizes in the isometric system, it is **isotropic** (has only one refractive index); that is, a beam of light passing through a garnet travels at the same velocity regardless of the direction of travel. The **refractive index** of a substance is defined as the velocity of light traveling through air divided by the velocity of light traveling through a substance and is given by the formula:

$$R. I. = V_{air} / V_{substance}$$

The refractive index of garnet can vary somewhat. These variations are helpful in determining the varieties of garnet but there can be some overlapping so other phenomena must be taken into account when working with garnet.

**Pyrope**, a magnesium-aluminum garnet is probably the most common gem variety. It is usually a dark red to black and is usually transparent only in fairly small stones. Much of the garnet of antiquity was probably pyrope and fine stones came from Czechoslovakia. Many tiny stones were drilled and the Czechs developed very fine beadwork with these. Its' R.I. ranges from about 1.72 to 1.75 and its' S.G. ranges from about 3.6 to 3.9 and is usually about 3.8. Pyrope may contain needle-like inclusions.

**Almandite** may be deep red or brownish red. Magnesium has replaced ferrous iron and ferric iron has replaced aluminum. The S.G. ranges from about 3.9 to 4.2 and is normally about 4.05. The refractive index is normally around 1.79 and varies only slightly above or below this parameter. Almandite may have enough **silk (oriented needle like crystal inclusions)** to produce **asteriated (starred)** stones of normally 4 rays. Other inclusions are zircon crystals that are frequently surrounded by dark haloes that are caused by damage from sub-atomic particles emitted by radioactivity in the zircon. Star garnets have been reported from only India and Idaho, the latter source being the more prolific. To produce the best stars, the lapidary should use one of the dodecahedral crystal faces as the base of the cabochon.

**Rhodolite** garnets are rose red to purple and in composition are about 2 parts pyrope to one part almandite. Rhodolites often contain snowflake like inclusions and some stones have numerous snow flake-like inclusions that produce the appearance of an "internal blizzard."

**Spessartite** is a manganese-aluminum garnet. It is usually brownish to red but some sources have yielded orange stones. It is not commonly seen in the gem trade and was almost unknown until the end of the 19th Century. Its' R.I. is about 1.81 and its' S.G. about 4.2. It may have wavy feather-like inclusions that are formed by minute liquid droplets.

**Grossular** garnet derives its' name from the color of the common gooseberry. A massive form of such color is often marketed under the name of *Oregon Jade* although the gem industry frowns upon such mislabeling. It is a calcium-aluminum garnet. Grossular garnets also come in shades of orange, red, and yellow.

Continued on Page 6

**FEBRUARY 2010:**

4-12--TUCSON, ARIZONA: Business to Business Gem Trade Show; Gem and Lapidary Wholesalers Inc.; Holiday Inn Palo Verde/Holidome, 4550 S. Palo Verde Rd. (I-10 at Palo Verde Rd.); daily 10-6, last day 10-3; contact Gem and Lapidary Wholesalers Inc., P.O. Box 98, Flora, MS 39071-0098, (601) 879-8832; e-mail: info@glwshows.com; Web site: glwshows.com

5-7--ROSEVILLE, CALIFORNIA: Show, "Gem Faire"; Gem Faire Inc.; Placer County Fairgrounds, 800 All America City Blvd.; Fri. 12-7, Sat. 10-6, Sun. 10-5; \$5 weekend pass; contact Yooy Nelson, (503) 252-8300; e-mail: info@gemfaire.com; Web site: www.gemfaire.com

5-8--TUCSON, ARIZONA: 9th annual show, "Westward Look Show 2010"; FineMineralShow; Westward Look Resort, 245 E. Ina Rd.; Fri. 10-6, Sat. 10-6, Sun. 10-6, Mon. 10-5; more than 25 of the world's top dealers, "Collector Day" Sat., featuring Will Larson's private collection, Sun. evening cocktail hour, mineral art gallery, and artist panel, including Eberhard Equit, Hildegard Konighofer, Susan Robinson and Wendell Wilson; contact Dave Waisman, P.O. Box 8543, Spokane, WA 99203; Web site: www.finemineralshow.com or www.westwardminerals.com

12-14--KIRKWOOD, MISSOURI: Show; Cabin Fever Productions; Kirkwood Community Center, 111 S. Geyer; Fri. 4-9, Sat. 10-6, Sun. 10-4; adults \$3, seniors and students \$2, children 12 and under free; jewelry, gems, rocks, minerals, fossils, attendance prizes; contact Melanie Vick, 1801 Barbary Way, Swansea, IL 62226, (618) 830-8471; e-mail: cabinfeverprod@aol.com; Web site: www.cabinfeverproductions@yolasite.com

12-14--PORTLAND, OREGON: Show, "We Rock"; Oregon Agate & Mineral Society; OMSI, 1945 S.E. Water Ave.; Fri. 10-5, Sat. 10-5, Sun. 10-5; contact Richard Hall, (360) 751-0699 or (360) 263-2599; e-mail: bernice-hall@mcleodusa.net

12-14--SANTA MONICA, CALIFORNIA: Show, "Gem Faire"; Gem Faire Inc.; Santa Monica Civic Auditorium, 1855 Main St.; Fri. 12-7, Sat. 10-6, Sun. 10-5; \$5 weekend pass; contact Yooy Nelson, (503) 252-8300; e-mail: info@gemfaire.com; Web site: www.gemfaire.com

12-21--INDIO, CALIFORNIA: Show, "Riverside County Fair & National Date Festival"; San Geronio Mineral & Gem Society; Gem & Mineral Bldg., Bldg. #1, 46-350 Arabia St.; 10-10 daily; adults \$8, seniors \$7, children \$6; contact Bert Grisham, (951) 849-1674; e-mail: bert67@verizon.net

13-14--OAK HARBOR, WASHINGTON: 45th annual show, "Sweetheart of Gems"; Whidbey Island Gem Club; Oak Harbor Senior Center, 51 S.E. Jerome St.; Sat. 9-5, Sun. 9-4; contact Keith Ludemann, (360) 675-1837; e-mail: rock9@whidbey.net

19-21--SANTA BARBARA, CALIFORNIA: Show, "Gem Faire"; Gem Faire Inc.; Earl Warren Showgrounds/Exhibit Hall, 3400 Calle Real; Fri. 12-7, Sat. 10-6, Sun. 10-5; \$5 weekend pass; contact Yooy Nelson, (503) 252-8300; e-mail: info@gemfaire.com; Web site: www.gemfaire.com

20--PHOENIX, ARIZONA: Annual show, "Family Fun Day at the Museum"; Maricopa Lapidary Society; 1502 W Washington St.; Sat. 10-4; free admission; dealers, demonstrations, kids' activities, gold panning, metal detecting; contact Laurette Kennedy, (602) 771-1611 or (602) 738-2552; e-mail: lkennedy11@aol.com

20--UPPER MARLBORO, MARYLAND: Show; Southern Maryland Rock & Mineral Club; The Show Place Arena, 14900 Pennsylvania Ave.; Sat. 10-4; ages 7 and up \$3, 6 and under free; vendors, exhibitors, minerals, fossils, gems, original jewelry designs, demonstrations, faceting, bead stringing, wire wrapping, gold panning, children's crafts, door prizes; contact Michael Patterson, 11000 Thrift Rd., Clinton, MD 20735, (301) 297-4575; e-mail: michael.patterson@pgparks.com; Web site: www.freewebs.com/smrmc/

20-21--ALBANY, NEW YORK: 17th annual James Campbell Memorial Gem, Mineral, and Fossil Show and Sale; New York State Academy of Mineralogy, Capital District Mineral Club; Museum, Empire State Plaza, Madison Ave., 4th floor; admission \$6 (includes flower show); Sat. 10-5, Sun. 10-5; more than 20 mineral and fossil dealers, guided museum tours, mineral and fossil identification; contact Michael Hawkins, (518) 486 2011;

Continued on Page 8

## Garnet Continued from Page 4

The term *hessonite* is applied to orange to yellow grossular; these stones have a syrupy or heat-wave effect and have rounded inclusions that resemble vitamin capsules. The S.G. of grossular ranges from about 3.58 to 3.73 and is normally around 3.61. Its' R.I. is in the range of 1.72 to 1.75, with the greens being in the lower range and the oranges in the higher range. *Tsavorite* (=Tsavorite) is an emerald green variety of grossular that has been known only since about 1970. It has been found only in Tanzania and derives its name from its source near Tsavo National Park.

**Andradite** is a calcium-iron garnet and it comes in shades of yellow, green, brown, and black. Its' S.G. is normally 3.84 to 3.85 and its' R.I. ranges from about 1.77 to 1.81, and is commonly about 1.79. **Demantoid** (diamond-like) is a Dutch term that is applied to transparent andradite that has a R.I. near 1.81 and has a very high **dispersion** (the ability of a stone to break white light up into its component colors). A fine demantoid may cast the appearance of a yellow or light green diamond. Demantoids are usually characterized by horse-tail like inclusions of the amphibole mineral, byssolite.

**Uvarovite** is a calcium-chromium garnet that shares the emerald-green distinction of Tsavorite. Uvarovite is usually found only as very tiny drusy crystals and pieces large enough for faceting are virtually unknown. With the increase in popularity of jewelry using small plates of drusy crystals, uvarovite that was formerly confined to the mineral collector's cabinets has found its niche in the gem world.

Garnets may be confused with spinel which has lower physical and optical properties and corundum which is doubly refractive. Glass has bubbles and swirl lines that are easily seen under magnification.

## References

- Ford, W.G., 1958. A Textbook of Mineralogy with an Extended Treatise on Crystallography and Physical Mineralogy. John Wiley & Sons, Inc., New York, 851 p.
- Gubelin, E.J., 1974. Internal World of Gemstones; Documents from Space and Time. Zurich, ABC Edition, 234 p.
- Hurlbut, C., 1963. Dana's Manual of Mineralogy, 17th Ed., John Wiley & sons, New York, 609 p.
- Rouse, J. D., 1986. Garnets. Butterworth's, London. 134 p.
- Schumann, W., 1977. Gemstones of the World. NAG Press, Ipswich, 256 p.
- Zeitner, J. C., 1996. Gem and Lapidary Materials. Geoscience Press, Inc., Tucson, Arizona, 347 p.

Garnet Crystal



Pendant is uvarovite, a rare bright-green garnet.



Almandine in metamorphic rock



**Geode From The ME Ranch  
Presidio County Texas**

## Ammonites

There is just something intrinsic about ammonites (and nautiloids) that is aesthetically pleasing to humans, and perhaps as well to our less sentient cousins in Kingdom Animalia. Could it be Phi, the Golden Number (= 1.61803...), ubiquitous in nature? Could the pleasure be the ammonite's Fibonacci spiral, observed in galaxies, the arrangement of leaves around a stem, and the shape of ammonite and nautiloid shells?

Or, is it the ammonite's shells, originally composed of aragonite, a carbonate mineral, which is unstable at standard temperature and pressure, and reverts to calcite over tens of millions of years. Actually, the shells inner surfaces had layers of nacre, or mother of pearl, an iridescent organic-inorganic composite (aragonite plates separated by proteins) secreted by the epithelial cells of some mollusk. During fossilization, the nacreous layer of some ammonites was chemically transformed into an iridescent material called ammolite, which is aragonite with varying mineral impurities that is considered to be an opal-like gemstone.

Whether it is the shape or the shell, or both, ammonite fossils possess an inherent beauty seemingly pleasing to everyone's eyes. Just as Fibonacci numbers are apparently ubiquitous in nature, so too are the ammonites, having left an extensive fossil record. From the time of their appearance, descending from nautiloids in the [Upper Silurian to Lower Devonian](#), to their extinction with the dinosaurs, ammonites left their shell remains across the globe. Ammonites cyclically declined and radiated through the many extinction events that punctuated the [Paleozoic](#) and [Mesozoic](#) Eras and were extremely prolific in the Mesozoic. Ammonites are also a favorite subject of the artistically inclined individual that may cut, polish and mount them in various ways. The specimens below were chosen more for beauty and diversity than to tell a tale of ammonite evolution. [Source http://www.fossilmuseum.net/](http://www.fossilmuseum.net/)



[Fire Opal Kosmoceras Ammonite](#)  
Jurassic Ulyanovsk, Russia



[Quenstedticeras sp. Ammonite](#)  
Jurassic Volga River, Russia



[Discoscaphites conradi Ammonite](#)  
Upper Cretaceous  
Fox Hills Formation  
South Dakota



[Cleoniceras besairei Fire Opal Ammonite](#)  
Middle Cretaceous Tulear,  
Madagascar



[Procheloniceras sp. aff. Albrechtiaustriacae](#)  
Lower Cretaceous Coastal Sa-



[Iridescent Kosmoceras Ammonite](#)  
Jurassic Ulyanovsk, Russia

**Coming Events Continued from Page 8**

e mail: mhawkins@mail.nysed.gov

20-21--ANTIOCH, CALIFORNIA: 51st annual show, "Treasures of the Earth 2010"; Antioch Lapidary Club; Contra Costa County Fairgrounds; Sat. 10-5, Sun. 10-5; adults \$3, active military with ID and spouse, Scouts in uniform, and kids 12 and under free; lapidary demonstrations, dealers, faceted stones, lapidary tools, findings, handmade jewelry, rocks, beads, supplies, opals, fossils, minerals; contact Ellen Bauer, (925) 458-2539; e-mail: ebauer\_lapidary@yahoo.com; Web site: <http://antiochlapidaryclub.tripod.com>

20-21--PLAINVIEW, TEXAS: 48th annual show; Hi Plains Gem & Mineral Society; Ollie Liner Center, south I-27; Sat. 10-6, Sun. 10-5; adults \$2, students \$1; dealers, demonstrators, grand prizes, silent auction, kids' wheel; contact Mildred Matlock, 701 Zephyr, Plainview, TX 79072, (806) 293-3476; e-mail: [jmmatlock@suddenlink.net](mailto:jmmatlock@suddenlink.net)

26-27--NORTHRIDGE, CALIFORNIA: Show, "GEMboree"; Del Air Rockhounds Club; United Methodist Church, 9650 Reseda Blvd.; Fri. 3-9:30, Sat. 10-5; free admission, children under 16 must be accompanied by an adult; gems, jewelry, beads, Girl and Boy Scout merit badges; contact Julia Marin, 18220 Marilla St., Northridge, CA 91325, (818) 886-7190; e-mail: [jomarin@dslextre.me](mailto:jomarin@dslextre.me); Web site: <http://delairrockhounds.blogspot.com>

26-28--COSTA MESA, CALIFORNIA: Show, "Gem Faire"; Gem Faire Inc.; OC Fair & Event Center/Bldg. 10, 88 Fair Dr.; Fri. 12-7, Sat. 10-6, Sun. 10-5; \$5 weekend pass; contact Yooy Nelson, (503) 252-8300; e-mail: [info@gemfaire.com](mailto:info@gemfaire.com); Web site: [www.gemfaire.com](http://www.gemfaire.com)

26-28--MELBOURNE, FLORIDA: Show; Frank Cox Productions; Melbourne Auditorium, 625 E. Hibiscus Blvd.; Fri. 10-5, Sat. 10-5, Sun. 10-5; gems, jewelry, beads; contact Frank Cox Productions, 755 S. Palm Ave. #203, Sarasota, FL 34236, (841) 954-0202; e-mail: [frankcox@comcast.net](mailto:frankcox@comcast.net); Web site: [www.frankcoxproductions.com](http://www.frankcoxproductions.com)

27--BARTOW, FLORIDA: 6th annual show; Imperial Bone Valley Gem, Mineral & Fossil Society; Stuart Center, Polk County Extension Service Bldg., 1702 US Hwy. 17 S; Sat. 9-5; free admission; silent auction, door prizes, children's sand pit, demonstrations, rocks, minerals, fossils, jewelry; contact Jim Reed, 5740 Hebron Ln., Lakeland, FL 33812, (863) 644-6665; e-mail: [rocks57@tampabay.rr.com](mailto:rocks57@tampabay.rr.com); Web site: [www.bonevalley.net](http://www.bonevalley.net)

27-28--BOISE, IDAHO: Annual show; Idaho Gem Club; Expo Idaho, 5610 Glenwood; Sat. 10-7, Sun. 10-5; contact Charlie Smith, (208) 628-4002

27-28--EVERETT, WASHINGTON: 57th annual show; Everett Rock & Gem Club; Washington National Guard Armory, 2730 Oakes Ave.; Sat. 10-6, Sun. 10-5; contact Fritz Mack, P.O. Box 1615, Everett, WA 98206, (425) 232-0809

27-28--JACKSON, MISSISSIPPI: 51st annual show; Mississippi Gem & Mineral Society; Mississippi State Fair Grounds/Trade Mart Bldg., 1207 Mississippi St.; Sat. 9-6, Sun. 10-5; adults \$5, students \$3; free demonstrations, door prizes, educational and hands-on booths, 24 dealers; contact Keith Peacock, 114 Quail Ridge Rd., Braxton, MS 39044, (601) 863-6535; e-mail: [kpcoc@aol.com](mailto:kpcoc@aol.com); Web site: [missgems.org](http://missgems.org)

27-28--ROSEVILLE, MINNESOTA: Show; Anoka County Gem & Mineral Club; Har Mar Mall, 2100 Snelling Ave; Sat. 10-6, Sun. 12-5; free admission; gems, minerals, jewelry, fossils, agates, collectibles; contact Martha Miss, 8445 Grange Blvd., Cottage Grove, MN 55016; e-mail: [rockbiz@cs.com](mailto:rockbiz@cs.com)

28--SPOKANE, WASHINGTON: Show, "Rings & Things BeadTour"; Rings & Things; Mirabeau Hotel Spokane Valley (Ballroom), 1100 N. Sullivan Rd.; Sun. 11-4; free admission; gemstones, bead strands, wholesale prices, findings, stringing supplies; contact Dave Robertson, P.O. Box 450, Spokane, WA 99210, (800) 366-2156; e-mail: [drobertson@rings-things.com](mailto:drobertson@rings-things.com); Web site: [www.rings-things.com/Show/city.php?city=Spokane](http://www.rings-things.com/Show/city.php?city=Spokane)

*Thanks to Texas Geology for the information below.*

"The Texas of today is the result of about six hundred million years of geologic history. *Paleontologists* are scientists able to reconstruct earth history by examining fossils found in layers of rocks from different periods of geologic history. It has been estimated there about about half a million different types of fossil remains in Texas.

A look at the fossil record of Texas shows clearly, the Texas of the past differs radically from the Texas of the present. Where people live and work, corals, trilobites, and numerous other fossils once lived in huge seas. Where there are only gently rolling hills, large mountains once stood.

In order to understand the ancestry of Texas fossils, it is necessary to study the geography and origin of the region which they were found. The geologic history of Texas, like the rest of the earth, is recorded primarily in marine sedimentary rocks. These rocks were formed from sediments of shallow seas which covered parts of the state at various times in the earth's history. By studying these rocks, geologists have established a geologic column for Texas. A geologic column refers to the total succession of rocks, from the oldest to the more recent, that are found on earth. The geologic column of Texas includes all rock divisions known to be present in the state. Geologists have determined that much of Texas is covered by rocks formed 65 to 135 million years ago during the Cretaceous period at the end of the Mesozoic Age. During this period, Texas was covered by an enlarged Gulf of Mexico.

In Texas, the Cretaceous Period has two divisions, known as the Lower Cretaceous and Upper Cretaceous. Lower Cretaceous rocks blanket the entire half of the state, while Upper Cretaceous rocks are found in a band from the Red River southward to San Antonio and westward to Big Bend National Park. Many formation names are applied to describe the complex picture of Texas' Cretaceous rocks. The Lower Cretaceous portion is divided into Washita, Fredricksburg, and Trinity groups. Upper Cretaceous rocks are assembled into Navarro, Taylor, Austin, and Eagle Ford groups."

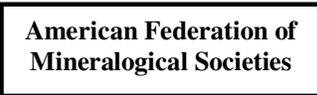
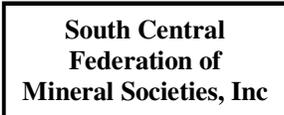
<http://www.uwgb.edu/DutchS/StateGeolMaps/TexasGMap.HTM>

My sincere appreciation to the following, that have helped me so much in understanding, identifying, and sharing, in the fascinating world of fossils; Lance Hall, Frank Holterhoff, Kelly Irwin, Earl Manning, Jimmy Matlock, and George Phillips.

<http://www.freewebs.com/fossilsoftexas/>



**GULF COAST GEM & MINERAL SOCIETY, INC.**  
**P.O. BOX 1817, CORPUS CHRISTI, TEXAS 78403-1817**

<b>MEMBER of</b>					
	<b>Meeting</b>	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.			
	<b>Membership Fees</b>	Individual \$15.00 Couples \$20.00 Junior (under 17) \$5.00			
	<b>2010 Officers</b>	President: Kevin Schleicher Vice President: Kyle Hinkle Past President: Suzy Nick		Secretary: Suzy Nick Treasurer: Gene Schade gene@casadeoro.net	
	<b>Board Appointees</b>	Membership: Sandra Hinkle Education: Owen Hopkins Librarian: Linda Simpson Audit: Gene Schade Show Chair: Jerrold Simpson		Show Publicity: Donna Grimes Shop coordinator: Richard Cline Field Trip Coordinator: Mike McCraw Dealer Chair: Jerrold Simpson	
<b>Standing Committies</b>	Shop coordinator: Richard Cline Field Trip Coordinator: Mike McCraw Federation Liaison: Linda Simpson Historiorn: Frances Marten Librarian Linda Simpson Communications: Suzy Nick Refreshment Hostess; Letty Rodriguez		Bulletin Editor; Art Worley Webmaster: Art Worley E-mail artleew@agates123.com Door Prizes; Gilbert Rodriguez		

**Slabs & Cabs**  
 Art Worley  
 2561 Raintree Trail  
 Ingleside, TX 78362

**Slabs & Cabs Awards**  
**Small Bulletins**

2003 4th place




PUBLICATION  
 2nd 2002                      2001 1st  
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