The BACKBENDER'S GAZETTE

The Newsletter of the Houston Gem & Mineral Society Houston, TX

Volume XXXVI - No. 8 August 2005

President's Message

July, 2005
by Norman Lenz
HGMS President, 2004-2005

Fellow HGMS Members,

The hot summer days in South Texas have arrived. Most of us curtail our outside activities such as jogging, picnics, fishing, and fieldtrips when the temperature approaches or exceeds 100 degrees F. However, the clubhouse has good air conditioning. It is a "cool" place to spend Saturday working in the shop, studying in the library, working on jewelry or faceting projects in the classrooms, or just socializing.

The Houston Gem & Mineral Society has many resources including the clubhouse, but perhaps our most valuable resource is the knowledge of our members and their willingness to share their skills with others. Don't forget to check the schedule of

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General Meeting Presentations for June and July

by Scott Singleton
1st Vice President

Leslie Wood from the Bureau of Economic Geology in Austin will give a presentation on "The Landscape of Mars and Possible Evidence of Liquid Water." Leslie is a geomorphologist and became interested in features on the surface of Mars resembling deltas. She will show photos from the large collection sent back by the Global Surveyor, Rover Pathfinder, Rover Opportunity, Rover Spirit, and Europe's Mars Express. One of Leslie's students has a grant to study mud volcanoes on Mars and she will show preliminary results of that investigation. This is sure to be another presentation not to be missed!

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Copy is due for the September issue by Thursday, August 4, 2005. Yes, it's early but necessary. (When the 8th falls on Saturday,I create the BBG that same weekend. When the 8th fall on Sunday, I create the BBG the following weekend.)

Purpose of HGMS

The objectives of this Society are to promote the advancement of the knowledge and practice of the arts and sciences associated with the collecting of rocks, minerals, fossils, artifacts, and their identification and classification; the general lapidary art; the collecting and identification of gemstones; the designing and execution of jewelry or metalcraft; and to provide the opportunity to obtain, exchange, and exhibit specimens and rough or finished materials.

Membership dues are $30 for an adult membership, $40 for a couple, $50 for a family (including all children aged 5-18), and $8 for a youth membership (ages 5-18). Contact Beverly Mace (281) 347-3646 for additional information. Advertising rates: $70 for 2 months, ¼ page; $150 for 6 months, ¼ page.

MEMBER: American Federation of Mineralogical Societies & South Central Federation of Mineral Societies.

All meetings are held at the Clubhouse located at 10805 Brooklet near the intersection of Highway 59 (Southwest Freeway) and Sam Houston Parkway (Beltway 8). See the calendar inside the back page for when the different Sections meet. The General Meeting is the fourth Tuesday of each month at 7:30. The HGMS Internet address is **http://www.hgms.org**.

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classes. It takes several members signing up to schedule a class. The facilities and instructors are available. If you have an idea, a project, or want to learn about some of the many facets of the gem and mineral hobby from collecting, to identifying, to faceting, cabbing, polishing, metal work, or enameling, we probably have the resources to help.

We are always looking for skilled help for Clubhouse maintenance. Dave Hawkins, Tom Wright, Neal Immega, Tony Lucci, Rick Sheehy, Wayne Barnett, Gary Anderson, and many others have spent countless hours repairing plumbing, electrical wiring, floors, grinders, saws, torches, and the other equipment required to conduct the business of HGMS. If you have experience, skills, tools, or any combination, we would love to have your assistance. Projects currently in progress, being evaluated, or waiting for skilled workers are:

- Plumbing the ice maker for the new refrigerator
- Repair or replacement of the HGMS sign on the exterior of the building
- Adding electrical conduit for the exterior lighting around the Clubhouse
- Replacement of the carpet in the primary meeting room
- Repair or replacement of the cabinets in the kitchen

Can you help with any of the above maintenance items? If so, give me a call. I would love to discuss it with you.

If you have a question, ask it! If you have a suggestion, make it! If you have a talent, share it!

Dreaming of Mineral Localities from Houston to New Hamphsire

by Art Smith
Member of the Houston Gem & Mineral Society

On June 23 we started the long 2,012-mile drive from Houston to our summer cottage in Wakefield, New Hampshire. It's a long drive, and to pass the time I would think of the mineral localities we would be passing near, the minerals they produced, and what minerals I have or had seen from those locations. Here are my thoughts as we drove along:

We left Houston in the morning via U.S. Route 59, the only noninterstate highway on the trip. East Texas is not noted for its mineral specimens, but iron was mined in several areas in the late 19th century and some mining continued into the 20th century. The ores were goethite and siderite, and both minerals occurred in several interesting forms. They should have made at least some good specimens though I have never seen any. However the pictures in the old publications of the iron deposits support my idea. A green mineral, probably an iron phosphate and possibly dufrenite or kidwellite has also been reported. Another deep purple iron phosphate, vivianite, has also been found, and I have a specimen from Charles Montgomery's collection that he bought from East Texas Minerals at the Austin Show some years ago. It is crystalline and about 4 by 5 inches across. It is unfortunate that only a very few of the iron mine minerals were ever preserved.

At Texarkana we hit Interstate 30 which leads northeast to Little Rock. After passing through the coastal plain, it skirts the eastern edge of the Ouachita Mountains. The Arkansas mercury deposits are on their southern-most ridge in a one-mile wide band trending west to east. Red cinnabar disseminated in a sandstone that is hard enough to be called a quartzite are the most common specimens that are not microscopic. The red color is attractive, but most of the mining occurred between 1932 and 1946, with a small-scale operation by Verdis Cox in the mid 1960s. Specimens are not common though digging on some dumps can be rewarding. The quartz veins do contain some bright clear quartz crystals that may have red cinnabar inclusions or gray metallic stibnite needles. Microscopic rare minerals also are not common or abundant but can make a rewarding collecting experience for the micromineral collector. Calomel, generally white and also a mercury mineral, fluoresces a deep orange under short wave radiation but may be difficult to detect without a short wave ultraviolet light.

Further northeast at Malvern, Arkansas the Interstate passes near the eastern termination of Paleozoic rocks of the Ouachita Mountains that dip under the sedimentary Mesozoic coastal plain rocks. Magnet Cove is composed of Mesozoic igneous rocks intruded into Paleozoic sedimentary rocks. They are referred to as an intrusive ring and form a circular depression surrounded by syenite ridges. All the rocks of Magnet Cove are characterized by little or no quartz, much titanium, and a lot of unusual minerals. The center of the Cove has igneous rocks that weather more than those of the outer edges, so it is an eroded low area.

I have specialized in Magnet Cove minerals for many years, but most of the classic collecting sites now are not available to mineral collectors. So I have concentrated on the microminerals and in new locations within the Magnet Cove complex, and so several minerals not previously reported have been identified the last ten years. The classic Magnet Cove specimens were found loose in the soil, so the peak of collecting was before the turn of the 19th century. Many of the good specimens ended up in Europe, particularly in Germany because they visited and contacted the local residents, specifically William J. and Hodge Kimzey, brothers, who dominated the mineral sales at that time: large rutile paramorphs after brookite and sixling and eightling twins, plus brookite, anatase, magnetite, eudialyte, vesuvianite, perovskite, and monticellite.

Further west in the Ouachita Mountains are the many quartz deposits, wavellite deposits, and iron phosphate mineral deposits. I have collected at many through the years, and except for the quartz deposits and the Dug Hill wavellite deposit, the others are now worked out or are not available for collecting.

In the Rock area is Granite Mountain which is composed of syenite. There are several quarries that exploit this rock for road construction and roofing granules. In the late 1970s and into the 1980s we found large cavities in the syenite with good-sized crystals: natrolite, apophyllite, analcite, orthoclase, and aegirine crystals plus a host of rare microminerals. However in recent years the collecting has been mostly for microminerals. Eggletonite was discovered by former Club member and Mineral Section chairperson Cecil Cosse. It was written up as a new mineral in 1984.

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John D. Carnes—In Memoriam

by Frances Arrighi

John D. Carnes was born 5 June 1915 in Jacksonville, Texas and died 17 June, 2005. John's father was in the construction business and apparently had other business interests as well. John had considerable knowledge of construction which he learned from home.
At one time in his life he was a professional photographer and shot aerial photographs until he tangled with a propeller. During his long, boring convalescence he asked his father to bring him a watch (I assume a man's pocket watch). He took the watch apart and put it back together again.

After this John went to work for the UT Medical School in Galveston in the laboratory of C.M. Pomerat, who could be called one of the fathers of tissue culture. Also working in this laboratory was a recent Ph.D. graduate from UT Austin by the name of T.C. Hsu. The first buildings of the MS Anderson Cancer Center had just been completed, and Dr. Lee Clark was hiring staff. Dr. Hsu applied and was accepted, and John Carnes moved to MD Anderson with Dr. Hsu. Their laboratory was first called The Section of Cytology, and after reorganization became The Section of Cell Biology. This is the same laboratory where I worked at MD Anderson. The laboratory performed numerous cell studies using time lapse photography. John designed some of the equipment used in these studies. He also developed our film and made prints.

During the late 1960s, the 1970s, and the early 1980s, the lab was rather large. We had over 30 people including staff, postdoctoral fellows, students, technicians, and two secretaries. The scientific interests moved from time lapse studies to the areas of cytogenetics and molecular biology. With this change in scientific interests, the photography needs also changed. We now mainly used a camera setup that was attached to a microscope. This was before the era of photomicroscopes.

With such a large staff we took many photographs which John developed and printed. These were for chromosome analyses. Later there were also photographs of the migration of gel electrophoresis. John designed and made a "black box" for us. This box was light tight and was used for drying a special type of film, call stripping film. This doesn't sound like much, but it was.

John made many ancillary components for our equipment. John was extremely versatile. When I had car trouble or the air conditioner was not functioning, I called John to see if his diagnosis checked with the service people.

John and Eutha were longtime members of HGMS—in the vicinity of 50

years. He was a member before the club broke up into sections. John was interested in both faceted stones and cabochons, and traveled to Brazil to purchase rough. He sold his faceted stones to a store on the West Coast. He told me that this one store would take all the stones he could facet. His workshop was small but very well equipped.

In later years his health did not permit him to attend many of the meetings.

I will miss John.

John D. Carnes—In Memoriam

by Duncan Elliott,
John's next door neighbor and Executor of his Estate:

Over the last 10-15 years, John and I became very close and essentially developed a mentor/apprentice relationship—with him being the mentor of course. John taught me how to facet, create and repair jewelry, build custom lapidary tools, and grade and value gemstones. I only wish I could have had 10–20 more years with him. The last projects we worked on included cutting stones with optically magnified facets (we had just purchased all of the equipment) and creating photomicrographs of inclusions in gemstones to learn more about the stone's genesis.

About seven years ago, my wife and I bought the house next door so we could help both him and Eutha through their golden years. Unfortunately they never had any children, and both had become estranged from remaining family members. I believe we somewhat filled that void. Eutha passed away last October and John of course in June. He had been in the hospital for two weeks, and we were with him when he died. John and Eutha were married 65 years.

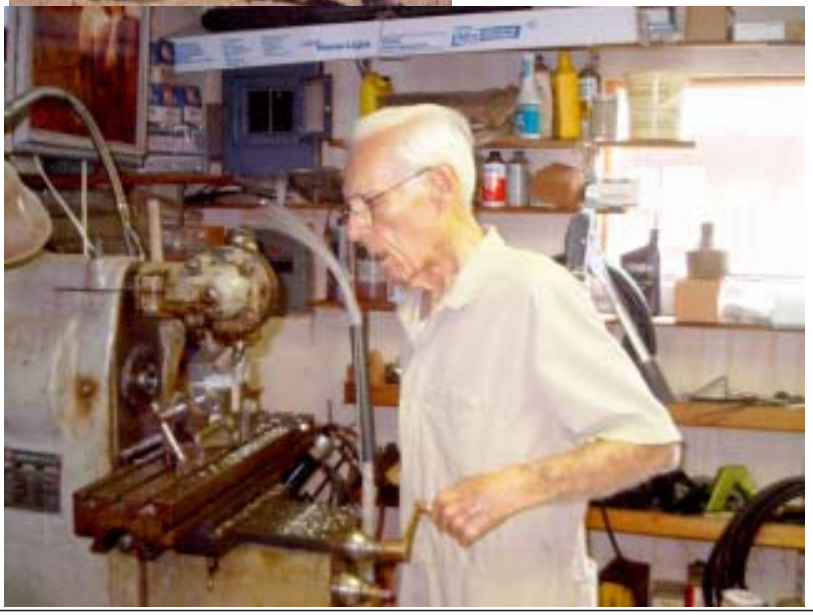
John had very specific wishes about what to do with the proceeds I receive from things that are sold. Most will go into an educational trust we set up to benefit needy children when they reach college level. I thought this was so awesome. John was really something special.

As John's executor, I will be selling some of his faceting rough (he had a tremendous amount), tourmaline and other mineral specimens, and certain pieces of equipment in the near future. I've been invited to bring items for sale to the Faceting Section meeting August 10, so I'll be bringing faceting rough and a few mineral specimens at that time. Anyone interested should contact me at delliott1@houston.rr.com for information.

Editor's note: See next page for photographs of John. The first two were provided by Mr. Elliott; Wayne Barnett provided the third.

Top two photos supplied by Duncan Elliott. Photo directly below taken in West Texas by Mr. Elliott during a collecting trip.

Bottom photo by Wayne Barnett taken one year ago of John in his shop.



Dreaming of Mineral Localities... *continued from page 5*

Just northeast of Little Rock we get on Interstate 40 and travel east crossing the Mississippi at Memphis. When you approach Nashville, the rocks are tilted because of the large Nashville dome. Some small deposits of galena, sphalerite, calcite, barite, and fluorite have been collected on the surface. However, core drilling by many companies on the flanks of the dome have discovered larger subsurface deposits with spectacular crystals in cavities.

Unfortunately the only deposits exploited were the Elmwood and Gordonville deposits in Smith County near Carthage, Tennessee east of Nashville. These deposits were mined for almost 30 years and now probably are depleted. They were both zinc mines but were very marginally profitable, and mining continued mostly because they had a small amount of the element germanium in the zinc ore. The specimens of golden to amber scalenohedral calcite crystals, purple cubic fluorite with color zoning, lustrous dark brown sphalerite crystals, and large white to yellowish spheres and hemispheres of barite are world famous. Galena, cerussite and gypsum are also present but more rare.

In December of 1984 I took a buying trip with Dalton and Consie Prince to a miner's house near Elmwood, Tennessee. They bought a whole room full of choice specimens that were laid out on the floor, and I had my pick of those which I later purchased from them. We flew there by way of Nashville and had the specimens shipped. It was an experience that I will never forget seeing so many top quality mineral specimens in one batch. Although I did not get to go into the mines, we did drive by them and I took some pictures of the surface workings.

At Knoxville, Tennessee the Interstate 40 goes northeast, and just northwest of the highway near the town of Mascot were some zinc mines where I went underground during a spring field trip in 1956. The ore was pale yellow sphalerite occurring as blotches in a grayish dolomite. We saw no crystals but I heard they rarely found any, and there were no other minerals present. There was no galena, so there was a special use for this sphalerite in the manufacture of batteries. However we were told that the mines were so marginal at that time that if there was no demand for the waste dolomite as railroad ballast, the mines would shut down. As I remember, the dolomite was so massive and hard that there was no need for any timbering in the mine even though some of the step-shaped excavation areas were quite large. I suppose that the mines have not operated for many years, but I do not know.

Continuing northeast, Interstate 40 goes east and we merged into Interstate 81 which maintains the northeast direction and goes into southwest Virginia at Bristol. I have never collected in southwest Virginia, but the Interstate is west of the Blue Ridge parkway which winds its way along the ridge top in the same direction as Interstate 81. I did that route the fall of 1963 while I was in the Army and stationed in Washington, D.C. We did not do any mineral collecting, but I associate the spinel with Galax, and the Vesuvius area had several localities. Wytheville is the source of some small, one-cm, doubly terminated elongate quartz crystals with black inclusions that are in my collection. One of the other geologists that I worked with in the Army was from

Meadows of Dan, and he claimed there were numerous quartz crystal deposits around his town, and indeed I found a U.S. Geological Survey bulletin describing them. Though I was invited there for a visit and collecting, it never came to pass and he never brought any crystals to Washington. My friend had all the real country talk and expressions. What I remember most was that he called a bag a poke but there were many more.

Interstate 81 continued northeast through Virginia, then Maryland, West Virginia, and the Amish country of Pennsylvania before I cut east of Interstate 84 at Scranton which is in the middle of the Pennsylvania coal country. I never found any minerals of interest in these areas but never had the opportunity to do any extensive looking. Interstate 84 crosses the Pocono Mountains before crossing into New York at Port Jervis close to the New Jersey border.

To the south, probably less than 30 miles are the now abandoned zinc mines of Franklin and Sterling Hill. Both have excellent museums, and there are two mineral shows a year at Franklin. The Sterling Hill was the last mine to close and then be purchased by the Hauck brothers, Dick and Robert. They turned it into a nonprofit corporation and restored much of the surface workings with an underground tour. The fluorescent minerals at both locations are spectacular, and there are many collectors in the area who specialize in minerals from these mines. I grew up about 50 miles further south and east and first visited Franklin in 1955 on Christmas vacation. The mine there had recently been closed, but the geologist gave me some nice ore samples that were very fluorescent. As a further note, one of our former Club members and Treasurer, Dudley Rainey, worked there briefly in the late 1940s before he was interested in minerals—but he did collect his wife there, and she was a miner's daughter.

Before crossing the Hudson River, we turned north on the New York Thruway to Saugerties to visit my brother. Nearby at Ellenville are some old lead mines known for quartz crystals, but I have never visited them. However I did check out some used book shops, but now that the area is known for its antiques, the pickings have become quite slim and I found nothing of interest.

The rest of the trip was east on the Massachusetts Turnpike, and although we passed close to some collecting locations and mines in the Berkshire, I am not familiar with them. We came close to the Atlantic before turning north into New Hampshire, but my mind there was on lobster, clam chowder, and haddock. After I have my fill of them, there no doubt will be some mineral collecting.

Second Enameling Class Beginning Soon—Sign Up Now

by Mary Ann Mitscherling

Learn and practice enameling techniques at the beginning or intermediate level. The Beginning Enameling course introduces the student to fundamental techniques used in vitreous enameling (the firing of glass on metal). The student learns the basics of metal preparation, enamel selection, and application. The enameled pieces created in this class will be kiln fired. Students will learn proper kiln management. Torch fired enamels will not be addressed in this course. Prior jewelry fabrication experience is helpful, but not required.

The Intermediate Enameling course moves the student on to cloisonné technique. The cloisonné student will make two enamel pieces that can be bezel set into a mounting in the same manner as a cabochon. Completion of the beginning enameling course is a prerequisite for the cloisonné course.

Six Sundays, 1–4 p.m., $180. Class is limited to 6 students and will meet on the following Sundays: July 31, August 7, August 21, August 28, September 11, and September 18.

Day Light Section

by Frances Arrighi

Sixteen members attended the 13 June, 2005 meeting of the Day Light Section. We melted fine silver and added copper in the proportion to attain the alloy for reticulation. We poured the melted metal into ingot molds. The resulting pellet was then rolled to 20 or 22 gauge. We heated the rolled sheet to annealing temperature 10 times, and quenched it after each heat. This removes the surface copper. Professor Link feels it is better to scrub the sheet after each pickle treatment. He believes one does not lose much of the silver, and this treatment removes copper. The reticulation step(s) will be completed at a July meeting.

Professor Link cannot meet with us July 11, but he can meet with us July 18. Therefore, **we will meet twice in July—July 11 and July 18**. We will complete the reticulation process on July 18 under the supervision of Professor Link.

On July 11, we will make a different alloy of copper and silver. The proportions of copper and silver for this alloy are 75% copper and 25% silver. The melted alloy will be poured into an ingot mold, and the resulting ingot will be a beautiful grey-yellow. This process is known as Shibuichi and is of Japanese origin. The copper needs to be of high purity.

One has to be very careful when melting copper. The silver needs to be melted first, and then a few grains of copper are added. When the copper is melted, more copper is added. The process continues until all the copper is added and melted.

In August we will make another alloy—gold and copper. This will be discussed in the next issue of the BBG.

August Faceting Section

by Paula Rutledge
Faceting Board Representative

Wednesday, August 10 at 7:30 we will have a special guest. Mr. Duncan Elliott, executor of the late John Carnes' estate, will be bringing some mineral specimens and a variety of faceting rough for sale. Longtime club member John Carnes recently passed away. He was well known for his collection of excellent mineral specimens. Some of these will be available for purchase. Since Mr. Elliott will not be bringing the entire collection (too large), he has offered to arrange appointments at a later time for those who wish to see and purchase some of the rest of the collection.

The meeting officially starts at 7:30. The clubhouse will be open at 6:30 for socializing and hotdogs. Please use the back door.

The original plan for this meeting was a Hot Dog Party night and an open faceting machine night. If you have ever wanted to try your hand at faceting a gemstone, tonight is the night to come and try. We will have the faceting machines out and set up, and people will show you how it is done.

Hot dogs will be available, and faceting machines will be set up. Rough and specimens will be available for sale. This will be truly a special meeting. Everyone is invited.

Lapidary Show Competition Stones Announced!

The competition stones for the September 2005 Show are as follows:

Novice: Agate, 30 x 40 mm

Advanced: Jade of any color, teardrop shape
1 x 2 dimensions from 10 x 20 mm to 20x40 mm

Paleontology Section Report

by Rick Rexroad, Chairperson
June 21, 2005 Meeting

Glen Kuban began his presentation on trace fossils with a photo of his "marriage on the rocks." Glen has extensively studied the dinosaur footprints at Dinosaur Valley State Park near Glen Rose, Texas, and he met his future wife there while leading a field trip to view the footprints. One thing led to another, and the Kuban's nuptials subsequently took place "on the rocks" of the Paluxy Formation at Dinosaur Valley State Park. To prove that following dinosaur tracks can be a "family affair," Glen's next photo showed his sister and brother-in-law on location at late Jurassic dinosaur tracks in Virginia, near Washington D.C.

Trace fossils include tracks, trails, burrows, bite marks, and coprolites. The distinguishing feature of trace fossils is that they are made by an animal while the animal is alive, as opposed to postmortem whole-body fossils.

Byrd (1938) was the first scientist to study the dinosaur tracks at Glen Rose, Texas. Many of the tracks first catalogued by Byrd were transported to the American Museum of Natural History in New York City. Amherst College in New England contains an excellent assemblage of footprints collected locally in the early 1800s by Edward Hitchcock.

A track at Dinosaur Valley State Park that has been a source of controversy is one that has a shape that superficially resembles a human footprint. Various observers have used this track to suggest that dinosaurs and early humans lived contemporaneously. Recent work by Glen and others indicates that this controversial footprint was the

result of partial filling of an elongated dinosaur footprint, probably formed primarily as a heel track only. Other recent track-related work has identified footprints of Acrocanthosaurus sp., a running dinosaur that apparently had a 10-meter stride while running at up to 30 mph. Another recent finding, based on the absence of tail tracks associated with footprints, is that large sauropods (such as brontosaurus) carried their tail rather than dragging it along behind them.

Other proximal locales with well-preserved prehistoric reptilian footprints include the Lake Grapevine site north of Dallas, Permian red beds at a state park near San Angelo, Permian tracks near Las Cruces, New Mexico, and dinosaur footprints at Georgetown, New Mexico.

Glen agreed to lead an HGMS trip to Dinosaur Valley State Park in early August. Stay tuned for more specific details to be announced. We thank Glen for his June 21, 2005 HGMS presentation and are looking forward to visiting this important paleontologic locality with Glen.

Glen also showed slides of Cretaceous dinosaur footprints discovered in Maryland by Ray Stanford. As it happens, I embarked on a vacation to Maryland a few days later, and met Mr. Stanford on July 1 at his home near College Park, Maryland, as described below.

A Visit with "The Discoverer of Cretaceous Dinosaur Footprints in Maryland"

Ray Stanford is a retired physicist who lived in Texas (Corpus Christi and San Antonio) for many years. He and his sons accumulated a substantial collection of Texas arrowheads before Ray and his wife relocated to Maryland. He found his first dinosaur track in Maryland (the first such discovery) in 1994. Ray soon developed a passion for collecting dinosaur tracks from the narrow (1 to 2 miles wide) Cretaceous outcrop belt extending from northern Delaware, generally parallel to and west of the western shore of the Chesapeake Bay, through the DC area into northern Virginia. Ray is now recognized as one of the most important dinosaur track researchers in America. He is currently co-authoring publications with a professor at Johns Hopkins University.

Ray's collection of dinosaur tracks takes up the living room of his modest Victorian bungalow. Included within his spectacular collection of Maryland Cretaceous dinosaur-related trace fossils are:

- Tracks showing dinosaur skin and claw impressions.
- A dinosaur trace fossil in which the impressions of feathers are preserved.
- A slab in which footprints of an adult, juvenile, and new-born dinosaur of the same species, all walking in the same direction (a family affair?), are preserved.
- Tracks of a new-born sauropod (the smallest dinosaur footprints ever discovered).
- Two different forms of coprolites (vegetarian and carnivorous?).
- Coprolites in which dinosaur tracks are preserved.
- A 68-pound coprolite specimen.
- Footprint of an early raccoon-like mammal that was digging through mud to get to a shred of buried dinosaur skin.

Ray's collection also includes a fossilized pterosaur from China in which feathers and original claw material are preserved.

Ray's wife works for NASA and is involved in the Hubbard Telescope Project. Her interests are focused on meteorites and tektites. Included within her world class collection are:

- A meteorite consisting of lunar rock that was dislodged from the surface of the moon as a result of a lunar meteor impact
- A similarly formed Martian meteorite
- A 4.6-billion-year-old meteorite (100 million years older than the earth itself) that solidified early during the formation of the solar system.

My visit with Ray Stanford was a most memorable experience. If you're planning on visiting the Washington D.C. area, you may wish to contact HGMS member Glen Kuban for assistance in arranging a visit with Ray and his wife to view their incredible collection of arrowheads, dinosaur-related fossils, and meteorites and tektites.

Upcoming Paleontology Section Presentation

J**uly 19, 2005: Preservation and Color of Petrified Wood.** Scott Singleton will be giving a presentation entitled "Preservation and the Color in Petrified Wood." This presentation will first define the various terms involved in petrification, then will illustrate the process by which wood becomes stone. What conditions are necessary for wood preservation? Is the wood replaced by minerals or encased by minerals? Does the process stop after it becomes a fossil?

The second part of the presentation deals with the color present in fossils, including petrified wood and bone. Why is color present? What do the different colors mean? Handouts will be given describing the color key for different minerals so that the audience can go home ready to identify different mineral constituents based on fossil colors.

Finally, the audience will be given an opportunity to practice their newly found knowledge of fossil color identification by random sampling of specimens from the Zuhl Collection at HMNS, courtesy of the Zuhl CD, published by the HGMS Paleontology Section.

In Our Library

by Art Smith, Librarian

While in New England I have been looking for new books for our library, but so far I've not found much of interest. Gene Bears of Sanford, Maine donated three publications of the Idaho Geological Survey to us. I think we may have one. The one of most interest is on Idaho's tungsten deposits.

I have not located any new collecting books on this area yet, but I hope to go to the Oxford County Mineral Show next weekend. I should find anything available there or at Perhams Mineral Store on the way up to Bethel, Maine where the show is.

I have been to the White Mountain National Forest collecting area at Moat Mountain

and it is still open, but collecting is not easy. I got some small smoky quartz and feldspar specimens which are now being cleaned to remove any iron stains. The only thing unusual collected was a microspecimen of reddish danalite, but unfortunately it is damaged since it is more fragile and softer that the quartz and feldspar.

If the soda supply in the frig gets low, there are extras in the second room of the library. I will add to that supply the end of July, and hopefully that will last until I get back in September from New Hampshire.

New Computer and New Books for Paleo Library

by Paula Rutledge
Paleo Librarian

I am pleased to announce that the new Dell computer has arrived, and it is in place in the Paleo Library. The beautiful black computer and monitor are ready for you to use! The books are cataloged on Excel, as before. (And we will continue to list the library holdings on the HGMS Web site.)

Currently, I am processing another 50 or so book and map donations from Mr. Paul Heinrich of LSU. He has generously donated many guidebooks and maps from his many years of schooling, fieldtrips, and collecting. The majority of his donations are about Texas localities. This time he donated many detailed quadrangle maps. He also donated two books concerning Florida fossils: *The Neogene of Florida and Adjacent Regions* (FGS, 1993) and *The Plio-Pleistocene Stratigraphy and Paleontology of Southern Florida* (FGS, 1992). These books and maps are available for club members to check out.

Paleo Book Sale

by Paula Rutledge
Paleo Librarian

The Paleontology Library will be selling off our duplicate fossil books to make more room in the Paleo Library. Books will be priced and set out on tables for sale before the Tuesday, July 19 Paleo Section meeting. Bring money! Take home books!

Tips & Hints

by Don Ashbury
via The Breccia 2/02 and The Rockcollector 3/02

Is it a CZ or diamond? If the stone is loose, turn it upside down on its table and slide it over a thin black line on a piece of paper. When looking straight down through a CZ, you will see a circle in the center of the stone. A diamond won't do this.

Is it citrine or topaz? Clean the stone, then, using a toothpick, put a drop of water on the table of the stone. The water will form a high bubble on real topaz. On quartz, the water flattens out.

If you are cutting a star stone and are looking for the star, white Karo syrup works better than anything. A single drop on the stone, under a strong light, will show you where the star is.

And.... it was late one night when I ran out of the chemical ($23.00 per gallon wholesale) that I use in the ultrasonic bath to remove the investment from fresh castings. Believing something else had to work, I tried everything around the shop. If it weren't for the fact that I like cider vinegar on my sardines, I never would have found out that vinegar not only works, but it works better than the stuff I had. It also leaves gold castings almost shiny, and it's a lot less expensive.

Third Annual Show Committee Party

(Photos by Matt Phillips)

The Show Committee held its annual party on Sunday, June 26 at the home of Scott and Eileen Singleton. It was attended by about 25–30 HGMS club members. It was a potluck affair with a wonderful variety of dishes and desserts. Special thanks go to Rick Sheehy for providing brisket and to Matt Dillon for providing rotisserie chicken. As is tradition, the highlight of the evening was the door prize—full-round slabs of palm from the Show Committee field trip to McMullen County.

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Dinosaur World Presents a Prehistoric Journey
June 14, 2005 Press Release

Dinosaur World, Inc. of San Antonio, home of "Dinosaur George" Blasing, announces the Houston premiere of a new exhibit of over seventy-five fossil replicas to be shown September 23 through 25 at the Houston Gem and Mineral Society Show at the Humble Convention Center.

The exhibit, entitled, "A Prehistoric Journey," showcases skeletons, skulls, teeth, bones, spikes, and claws from a variety of prehistoric creatures and spans millions of years across earth's early time periods to include specimens from the Triassic, Jurassic, Cretaceous, Eocene, Oligocene, Miocene, and Pleistocene eras.

Encompassing three main sections—"Air and Sea," "Dinosaurs," and "Mammals"—the fossil replica collection features a skull from "Stan," the T. rex (one of the largest ever found) facing off with an equally impressive Triceratops skull, a Pteranodon with a 23-foot wing span, a femur from a rare and monstrous sauropod, a prehistoric sea turtle, ancient killer bird, Smilodon and Cave Bear skulls, swimming reptiles, raptors, and juvenile T. rex skeletons.

Dinosaur George and his team of Dinosaur World paleontology experts will be on hand to provide visitors detailed information about the fossils in the exhibit and to offer them a unique interactive learning experience. The exhibit tent will be open from 9 a.m. to 6 p.m. each day of the show, and admission is included in the show's general admission price.

Dinosaur World is a science and nature company that produces educational DVDs and a series of comic-style "Adventure Books" and provides exhibits and lectures nationwide to schools, universities, and special events.

The Show Committee Wants YOU!

by Elizabeth Sheehy
HGMS Show Publicity Committee

Whether you're a new HGMS member or a seasoned veteran, the Show Publicity Committee needs your energy and ideas.

The Show Publicity Committee exists solely to promote our annual Gem, Jewelry, Mineral, and Fossil Show. This annual event is the largest single community outreach activity by HGMS, and we work to bring as many people in the door as possible to see club demonstrations; have their gems, minerals, fossils, and rocks identified; enjoy our special exhibits; and leave with lots of purchases from the retail and swap/buy areas. Ultimately, we hope to attract new HGMS members from among guests who enjoy their show experience.

We're in the home stretch in our preparations for the 2005 show on September 23–25, and you're invited to help us get the word out to as many students, parents, teachers, kids, and future HGMS members as possible. We need help visiting Humble-area merchants to post fliers. We also need help contacting media outlets with publicity packets, organizing the postcard-labeling party and Show Auction & Pizza Party, and completing many other fun and rewarding activities. Won't you help us make this year's event the best ever?

A fellow HGMS member soon will contact you about volunteer opportunities at this year's show. Please sign up—and show up—to help make this year's show a success. Your participation is important, and opportunities to help before and during the show are plentiful.

For more information about participating in Show Publicity Committee activities, contact Elizabeth Sheehy at esheehy@houston.rr.com or 713-668-7756.

Editor's note: Yonis Lone Eagle, former president of Chaparral Rockhounds (Roswell, New Mexico) is a true rockhound. He and other members renewed the famous yearly gathering of rockhounds at Apache Creek, New Mexico…Last year in the spring, he was called to active duty with the Army Reserve.

Rock Hunting in an Iraqi Combat Zone

(Rockhounding at its Extreme)
Part 2 of ??? — March 2005
by Yonis E. Lone Eagle
from Rollin' Rock Club newsletter 5/05
via Midland Gem & Mineral Newsletter 5/05

Howdy, fellow "Hunters of Nature's Wonders." (Another name for Rockhounds). Well, it has been a very interesting first three months over here just outside Tikrit, Iraq. Located on the west bank of the Tigris river, Tikrit is located up along highway 1 northwest of Baghdad, about 1/3 the distance between Baghdad and

President &
Field Trip Scout
Yonis E. Lone Eagle
Uncredited photo from
www.chaparralrockhounds.com

Mosul. It is the hometown of the former dictator, Saddam Hussein. The population here is about 75,000.

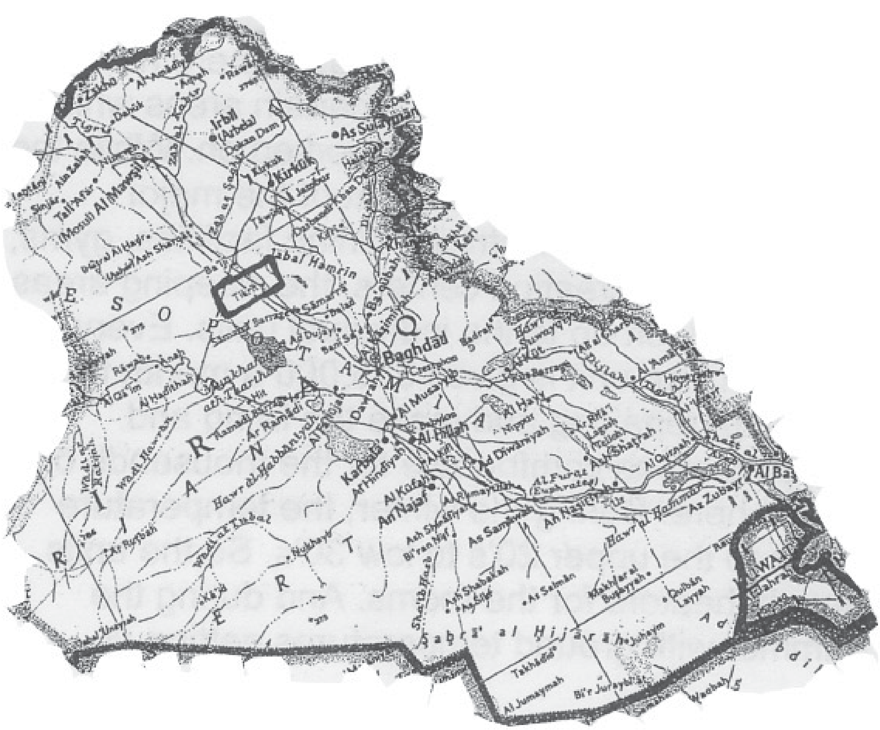
The thirty-two-bed hospital where I work is located on FOB (Forward Operation Base) Speicher (pronounced Spiker), one of the many U.S. military base camps here in Iraq. FOB Speicher is a former Iraqi Air Force base. It is located just northwest of the town of Tikrit. The barracks we are living in once housed the students of the Iraqi Air Force Academy. After the initial invasion, locals looted and ransacked the base stealing anything and everything that they could sell for money: light fixtures, sinks, air conditioners, toilets, heaters, motors, scrap metal, etc. If you could sell it for money, they took it. So when the U.S. forces returned to set up an FOB here, there was not much left to work with. About 80% of the buildings were in major disrepair with bullet holes, bomb damage, no electricity or running water. Our troops had their work cut out for them to make this place functional as well as livable. One of the first things they had to do was to clear out all the tons of unexploded ordinance in the area.

Now, eighteen months later, there are major improvements in certain areas while other areas are still being worked on. While the military has taken care of most of the major elements: roads, electricity, dining facilities, gyms, and morale recreation centers, the sleeping areas are left up to the individual units. Every battalion size unit is given $25,000 a month to use for fixing, repairing, and making the living and sleeping areas comfortable for the thousands of troops here. During the winter, the temperature drops to the upper 20s to low 30s. So the units bought heaters for the rooms. And during the summer with ground temperatures getting up around 130+ degrees, air conditioners were bought. And to keep the troops entertained, satellite TVs were bought so they could watch their favorite sports and movies. We have a BX (Base Exchange) here on the FOB along with Pizza Hut, Subway, Burger King, a beauty salon and spa, barber shop, alterations/cleaners, a photo lab, and a bazaar and gift shop. Other facilities include a gym, three great dining facilities, a post theater, a recreation hall, and use of the old stadium. All the basics of a small military base.

With all the ongoing construction and troop movements, there is a very large amount of DUST created on all the back and side roads on the FOB. And lately, it's been the rainy season here in Iraq. From late January to early March, it rains every couple of days. So all the DUST turns to MUD. To combat this dust and mud problem, the US

Army Corps of Engineers and KBR contractors have brought in TONS upon TONS upon TONS of well-tumbled river rock to cover the dirt roads and pathways around the FOB.

The day I arrived here at FOB Speicher, we had a briefing by our company commander on the local situation. One thing he said was that no one would be leaving the FOB. If I could not leave the FOB, how could I look for rocks? The FOB is a very flat and desolate place. When I look around, all I see is lots of dust, sand, and miscellaneous leaverite limestone. All the river rock I saw reminded me of the river rock back home in the Texas Hill Country along the Guadalupe River, basic limestone. Not until I noticed some color did I take a closer look. All the rocks were very dirty and dusty, too much to lick or spit. Heck, I pulled out my canteen to rinse them off, and to my surprise, I have struck the Mother Lode of all collecting sites. What a place to have a field trip! And this brings us to the “Rock” portion of this report. But first a little background on the source of the rocks, the Tigris River.



The Tigris River starts her journey in the Taurus Mountains of southeast Turkey. It flows 1165 miles southeasterly into Iraq after briefly forming the extreme eastern portion of the border between Syria and Turkey. Once in Iraq, the Tigris zigzags slowly to the southeast, and its valley flattens and widens. There are at least five major tribu-

taries that flow into the Tigris in Iraq. They are the Adhem, the Diyaleh, the Great Zab (Zab Ala), the Lesser Zab (Zab Asfal), and the Zakko or eastern Tigris. But only two of them, the Great Zab and the Lesser Zab flow into the Tigris above Tikrit. As a result of these two major tributaries and the melting snows from the Taurus Mountains in Turkey and the Elburz Mountains in far western Iran, the Tigris is more subject to major flooding than the Euphrates River. This produces a large amount of erosion from several locations, thus, the wide variety of rocks.

To date I have found and identified igneous, sedimentary, and metamorphic rocks to include different agates, conglomerates, fossils, possibly jade, jaspers, lavas, limestones, petrified woods, quartzes, and quartzites. They have a very wide range of colors, from blacks to grays to whites, from greens, yellows, oranges, reds, maroons, purples to combinations of two or more colors in unique and unusual patterns. Some of the unusual rocks I have found include Astronomy Rocks, Diseased Rocks and Finger Rocks.* Some of the unique ones I have found went through tremendous tectonic forces to create the beautiful and colorful artistic designs in them.

With the question of where they came from, one would have to explore the rivers to the north with southeastern Turkey, extreme western Iran, or extreme northern Iraq to choose from. But due to the geography and geology of Iraq and the border areas, I strongly suspect that at least 90% of the rocks washed down from Turkey. The other 10% probably came from extreme northern Iraq with maybe a trace from extreme western Iran.

So far, I've collected well over fifty pounds that 1 could easily place into over a half dozen categories. I have to limit myself, because at this rate, I'll be one very overweight soldier returning home.

Back on the 18th of January, I found my first fossil near the helipad of our hospital, multiple gastropods in a dark gray matrix. I took a S.W.A.G (Scientific Wild-A** Guess) as to how old it is, and I'm guessing about 150 million years old. And then on the 4th of February I found my second fossil, some fusulinids in a tan matrix of different shapes and sizes. They range in size from about 1/16 of an inch to about 1/4 of an inch. Some long and skinny, some short and fat. Being an index fossil, they are at least 245 million years old. Being well formed, I suspect they are around 275 million years old. And then recently on the 2nd of March, I found a baby trilobite in a light tan matrix. It is 3/4 of an inch long and a shape I have never seen before. With an average of one fossil per month and their scarcity, they must have traveled a very long distance.

Over these last three months, I've picked up several nicknames from my fellow soldiers. Sergeant Rock Pockets, because the pants we wear have large cargo pockets on the sides and that's where I carry my rocks. I'm also called the Rock Man, the Rock Doctor, Sergeant Rock, and probably my favorite, the Rock Warrior because if we are ever attacked, I have plenty of rocks in my pockets to throw at the enemy.

So far, there are about a dozen other soldiers who have gotten hooked on collecting the many different rocks around the FOB here. I guess they saw me with my head

down looking at the ground and picking up some rocks. They asked what the heck I was doing. And I explained to them. Now a day doesn't go by without someone stopping by and asking me about a rock they found. But to all Rockhound Cheechakos, one must explain the difference between keeperites and leaverites.

Well folks, until next time. Happy Hunting and Safe Collecting.

*And by the way, for y'all folks who are wonderin' what the heck are Astronomy Rocks, Diseased Rocks, and Finger Rocks...well, I have to have something to write about in my next report. And I will also be reporting on my trip down to the Persian Gulf country of Qatar and the rocks and fossils I found down there.

Making an Easy "Play Clay" Bracelet

by Lillie Carta
MGMS member
from Midland Gem & Mineral Society Newsletter 4/05

This is an easy project for kids with adult supervision. The adult might want to make one of the bracelets beforehand for the kids to see what the finished product will look like.

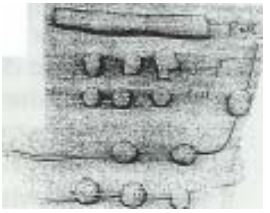
"Play Clay" Recipe

2½ cups salt
1¾ cups water
1½ cups cornstarch

Heat 2½ cups of salt and 1 cup of water until just boiling. Then mix 1½ cups of cornstarch with ¾ cup of water. Add this to the salt and water mixture. Stir until it is thick. If necessary, add more water or cornstarch for consistency. Stir until it is thick. Cool and store in the refrigerator.

Making the Beads from This Clay—Equipment Needed:

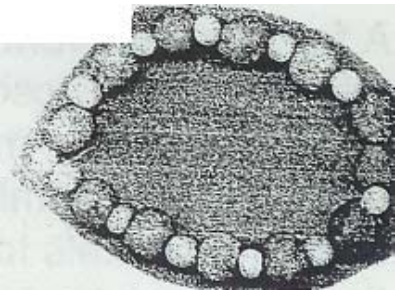
Golf ball for size comparison
Knife
Oven or microwave oven
Small wire
Thread or string
Needle



Pinch off enough clay to make a ball about the size of a golf ball. Then pinch off enough clay to make a round snake the size you want your beads (large and small) to be. Cut the clay the size you want your beads, then roll the clay in your hands until it is round.

If you want to cook the beads in the oven until they are really hard, put a small wire through the beads before cooking them. When the beads are very hard, take the wire out and string the beads on thread or a string.

If you cook the beads in the microwave oven, put the thread through the beads with needle and thread before cooking. Cook until beads are very hard. Leave the beads white, or color them with food coloring. You may color the dough before forming the dough into golf-ball size balls.



Source: Betty-Anne's Helpful Household Hints, Vol. 1 by Betty-Anne Hastings with Mary-Beth Conners, 1983, Ventura Books.

AFMS Junior Activities

Having Fun!
Take Your Kids Surfing on the Web!
by Jim Brace-Thompson, AFMS Jr. Activities Chair
from AFMS Newsletter 6-7-8/2005

Kids have always been hard-wired, metaphorically, for learning, but with the advent of the Internet, today's kids are literally wired-to-learn. If given a research assignment in school when I was a kid, my first stop was the library. But my kids run immediately to the Internet and Google. They play video games, they chat with friends via instant-messaging, they write their papers on the computer, and they surf the Web for both school topics and personal interest items. To help youth leaders capitalize on this now natural proclivity of today's kids and teens, I've recently concluded a four-part series for the CFMS Newsletter that provided annotated listings of Web sites organized around various aspects of the rock-hounding hobby:

Fossils
Minerals & Earth Resources
Lapidary Arts
Museums

The following gives abbreviated highlights from those four articles:

Fossils

<www.isgs.uiuc.edu/dinos/>

This site is maintained by Russell "Dino Russ" Jacobson, an associate geologist at the Illinois State Geological Survey and a "certified dinomaniac." It collects info on dinosaur digs, exhibits, societies, publications, dinosaur artwork, and more. A truly wonderful site and easy to navigate!

<www.paleoportal.org>

The Paleontological Portal (produced by the University of California Museum of Paleontology, the PaleoSociety, the Society of Vertebrate Paleontologists, and the U.S. Geological Survey [USGS]) is a central entry point to paleontology resources for audiences of all levels. Topics for exploration include Exploring Time & Space, the Fossil Gallery, Famous Flora & Fauna, Careers, Resources, Collections, and Calendar.

Minerals & Earth Resources

<www.usgs.gov>

Go to the "Education" section on this, the official Web site of the USGS. They have a nice link to the "Earth Science Information Center" where experts will answer kids' earth science questions via the USGS education Web site.

<www.mii.org> and **<www.womeninmining.org>**

The Web sites of the Mineral Information Institute and the Women in Mining organization provide a wealth of info and resources on minerals, uses of minerals in everyday life, and careers in the earth sciences. Both also offer links to other interesting earth science sites.

<www.theimage.com>

This site allows you to wander through a Mineral Gallery of gorgeous gemstones to learn about the chemical properties of nearly 200 different types of minerals.

Lapidary Arts

<www.rockhounds.com>

Brought on-line in 1995, "Bob's Rock Shop" is the Internet's first 'Zine (or on-line magazine) for rockhounds. This noncommercial site teamed with Rock & Gem magazine to provide a first-class resource on topical information for hobbyists. It includes excellent reference lists of books on all aspects of lapidary arts.

<Socrates.berkeley.edu/~eps2/>

Together with Hanna Cook-Wallace (a professional gemologist with a jewelry studio in Madison, Wisconsin), Jill Banfield of the UC-Berkeley Department of Earth & Planetary Science provides lessons on Gems & Gem Materials from an on-line course she offers. This is a terrific site, packed with useful lapidary info.

<www.tradeshop.com/gems/>

These pages provide a comprehensive introduction to gemology and the lapidary arts for the general public and are a handy resource for the jewelry trade.

Museums

<www.lib.washington.edu/sla/natmus.html>

Rated a "Top Site" by Education Index, here you'll find direct links to local and regional museums, large and small museums, and university collections across the U.S. and around the world. One of the most comprehensive collections of museum links I've seen!

<Paleo.cc/kpaleo/museums.htm>

"Kuban's Guide to Natural History Museums on the Web" features annotated links to the larger, more famous museums and virtual museums that feature displays of fossils, paleontology, and related subjects.

<www.amnh.org/education/resources/>
On-line activities and resources are available through the American Museum of Natu-

ral History in New York City. Lessons are written for elementary through high school levels (and divided by grade levels) in five areas including Earth Sciences, Paleontology, and Astronomy. You'll find 17 lessons on minerals, six on meteorites, and more than 25 on various aspects of paleontology.

If you would like to receive the full listing of sites or all four of my CFMS columns, feel free to email or call (jbraceth@adelphia.net; 805/659-3577). These sites scratch just the surface of what's out there. You can make this into a fun activity for your juniors by encouraging them to surf the Web themselves for interesting sites related to our hobby and having them share and report on what they find with their fellow members at your next meeting. Let's capitalize on the tools today's kids use for learning while—as always—having fun!

Paleo Bill News—Senate Bill S-263

by Dee Holland and Shirley Leeson
from AFMS Newsletter 6-7-8/05

The Paleo Resources Bill is still floating around in the Senate. If you've not done so, it is imperative that you and your club members write to your Senators and Representatives expressing your views on:

a) the effort to fast track the legislation without debate
b) the legislation itself

If we remain silent on this legislation, all of us will lose our right to collect. Although this bill deals with fossils, other collecting possibilities may be threatened next.

One important note: in the last AFMS Newsletter, Jon Spunaugle gave an incorrect bill number in his "Truth and Some Consequences" article. The correct number for the bill is S-263.

Here is a good sample letter that might serve as a guideline for your own letter to your legislators.

Honorable _____

United States House of Representatives (or Senate)

_____

Washington, DC

Dear Congressman _____:

As one of your most loyal and long-time supporters, and a resident of Congressional District Number 24 of California, I am writing to ask for your help to defeat **Senate Bill S-263**, **a supposed Paleontological Resources Preservation Act**. It has already

passed through committee without amendment for action on the floor of the U.S. Senate.

As a Registered Geologist and amateur gem and mineral collector, I can attest that S-263 is a very bad piece of legislation, and I ask that you do what you can to block passage of this Bill by a No vote or by any other means available to you. There are many good reasons why this poorly-conceived legislation is a detriment to this country and its citizens, and they boil down to this:

1. This bill masquerades as protecting fossils and academic inquiry. IT DOES NOT. To the contrary, it inhibits knowledge and inquiry. The majority of what is known about fossils has been gathered by commercial and amateur collectors, and most museum collections are the result of non-commercial or amateur finds.

2. The Secretary of the Interior asked that academic, amateur, and commercial fossil collectors be consulted in the preparation of potential legislation regarding fossil resources on public lands. To my knowledge, the commercial collectors were not consulted, input from amateurs was not solicited, and there was never an opportunity for any to testify.

3. This legislation is the product of a few academics alone, in concert with a small group of managers from the Bureau of Land Management (BLM) and the U.S. Forest Service. Such collegiate and government personnel have, through aggressive tactics, pushed their own skewed agenda—an agenda that is not good for the true science of paleontology and would be a tragic mistake if enacted.

This Bill (S-263) must be stopped or at the very least scrapped as it serves neither the resource nor the public. I believe that I can speak for all amateur collectors, and ask that our rights as citizens not be infringed upon, nor should we live under the fear of being arrested simply because we picked up a bone, shell, or fossil of some sort.

Please do what you can to shut down and eliminate Senate Bill 263.

Best regards,

AFMS Convention

Meet Us in St. Louis
by Barbara Sky
from AFMS Newsletter, 6-7-8/2005

Last month we told you about the field trip opportunities that have been organized to enhance your convention experience. You can download all the forms, hotel and camping information, and events schedule from our Web site http://convention.stlearthsci.org. Now we want to remind you to make those hotel or campground reservations and to send in your request for show tickets and meals no later than July 15. If you plan on having an exhibit at the show, whether competitive or noncompetitive, the deadline for submitting your application form

is June 1. Fill out and send in those forms and make those reservations now before you forget! We'd love to fill the hall with your displays so that the general public as well as our "rockhound" community can see all the wonderful work you do or get a glimpse at a portion of your mineral or fossil collection. We can't guarantee the weather for August in St. Louis, but we can guarantee you a wonderful experience.

St. Louis has lots to do and see (the Arch, our world-class zoo, the Budweiser Brewery, numerous parks, the St. Louis Cardinals baseball team to name just a few). And we're only a few miles away from the Lewis & Clark exhibition marking the spot where the famous duo began their voyage up the Missouri and into unknown territory. So mark August 16–21 on your calendar and "Meet Us In St. Louis." The AFMS meetings are Tuesday, August 16 (Rules) and Wednesday August 17 (AFMS and Scholarship). The show is open on Friday, Saturday, and Sunday August 19-21. We hope to see you there.

AFMS Raffle Update

Hurry, Hurry, Hurry! Step Right Up Folks!
Two More Beauties Added to 2005 Raffle Offerings!
by Joy Bourne, AFMS Endowment Chair
from AFMS Newsletter 6-7-8/2005

This will be your last chance to see the latest prizes in the AFMS Newsletter. As you know, there will be no newsletter in July or in August. But you will still be able to view all prizes being offered, complete with descriptions of them on the AFMS Web site, http://www.amfed.org/endow2005.htm, right up until we leave for St. Louis in mid-August! If you still have not purchased your tickets, NOW IS THE TIME!

Of the two latest acquisitions, one was a special surprise. We knew Bural LaRue was making a special piece of jewelry for us, but were absolutely delighted to discover that Anna Christiansen was also sending one of her special creations to add to the treasure chest. Here are the newest additions:

Prize #12. Yet another exquisite Chinese Freshwater pearl pendant from AFMS 2nd Vice President, Pat, and CFMS Secretary, Bural LaRue, who also gave us last year's beauty! If possible this one is even more beautiful than the first. Set in a 14k gold lost wax casting created by Bural and hung on an 18" 14k gold chain, the pendant measures 40 mm x 9 mm. This gorgeous piece of jewelry was created by Bural, who is a master craftsman and regular instructor at Camp Paradise at Zyzyx, the CFMS's annual Earth Science retreat. Its market value is $295. (CFMS)

Prize #13. A simply gorgeous electric-blue Swarovski bead bracelet. Seven inches long and 3/8 inch wide, the bracelet is formed of a woven triple strand of tiny round and 4mm bi-pyramidal crystals with a sterling silver clasp. The bracelet, donated by

John and Anna Christiansen of the Mother Lode Mineral Society, Oakdale, CA, was created by Anna, who is an instructor in wire art jewelry at Camp Paradise. She also serves as the registrar for that same program, as CFMS Bulletin Aids Chair, and is a talented maker of outstanding jewelry. Value $95. (CFMS)

It is possible that we will be receiving two or three more gifts. Watch the Web site for pictures of them, too. All prizes shown will be placed in the drawing pool, and all tickets sold will be eligible to win!

Of course, you know that we are all winners when we support the EFMLS Endowment Fund, but you could also be one of the raffle winners, as well. Contact your region's AFMS Endowment Fund representative for your chance to be one of the prize winners in the 2005 drawing. Tickets can also be ordered directly from the chair until August 1. Send your ticket request, together with your check payable to "AFMS Endowment Fund" to:

Joy Bourne, Chair
AFMS Endowment Fund
RR #1, Box 159A
Towanda, PA 18848-9739

Tickets are priced at $5.00 each, or five tickets for $20.00. You do not need to be present at the drawing in St Louis to win. We will ship unclaimed prizes to holders of the winning tickets immediately after the drawing, and winners' names will be published in the AFMS Newsletter in October. Good Luck!

AFMS Safety First—Safety Rules for Field Trips

by Bill Klose, AFMS Safety Chair
from AFMS Newsletter 6-7-8/2005

Field trip season is upon us, and we need to pause and review appropriate safety rules. Field trip leaders need to review these rules before every field trip.

1. Never go on a field trip alone. Have someone along who can help or can summon help if necessary. Make sure someone knows where you have gone and when you will return. Carry a cell phone with a spare battery to expedite your communications. Call someone if you are going to change your routine or are going to be late. Should you leave a field trip early, notify the person in charge.

2. Should there be children on the field trip, have them within sight or talking distance at all times. A child could not only become lost, but could encounter a snake, scorpion, etc., or have an accident of some sort.

3. Do not collect directly above or below other people or below unstable rock piles, cliff walls, or overhangs where there may be danger of falling rock.

4. Park so that all cars can get out. Do not block the roadway. Do not drive cars, SUVs, or RVs such as 4-wheelers across fields. Doing so can damage property, set grass fires with catalytic converters, or damage the vehicle. Do not drive across or walk on newly-planted or cultivated fields without special permission.

5. Have your vehicle in proper working order with appropriate emergency equipment and supplies as outlined in last month's Safety First article.

6. Make sure that all fires are completely out, and wet down the ashes with water. Stir to make sure there are no buried embers, and then smother completely with dirt. Adhere to local fire regulations and warnings.

7. Break all matches and shred all cigarettes before discarding, and be careful about where they are disposed of. Take them with you rather than leaving them as litter.

8. Do not throw rocks or engage in "horse play," and do not allow children to do so.

9. Do not overexert or stay too long in the direct sunlight or heat. Take a rest in the shade from time to time, and drink plenty of electrolyte-replacing fluids such as sports drinks. Properly wear appropriate safety equipment, sunscreen, and clothing.

10. Avoid old mine tunnels. Never go into a mine alone. Carry a flashlight and a candle with you. Carbon dioxide or other gases such as methane may be present. There may even be a lack of oxygen. Mines are also havens for snakes, scorpions, spiders, rodents, and their feces which can carry disease. Mines may contain uncovered shafts and pits. Be extremely cautious around abandoned buildings. You may stumble into old deep wells or cesspools not properly covered.

11. Respect property rights and signs. Obtain permission to enter property if owned by private individuals or corporations. Attend company safety briefings required by MOSHA and sign releases. Pay attention to and practice the companies' safety policies. Adhere to government regulations and restrictions if collecting on public lands or parks. Pay any collecting fees required, and do not exceed collecting limits where established.

12. Inquire if there are any dangerous animals on the property. Close all gates that you open.

13. Refill any holes you dig so people or animals will not fall in. Do not dump dirt or other debris into streams.

14. Respect another's diggings. If a person has left for lunch or for any other reason with the intent of returning and has left a pick, coat, or definite marker, find another spot.

15. Leave any place in good condition. Don't leave paper, cans, and other litter lying around to mar the beauty of the place, and to tell others that you have been there. Take your litter with you; do not bury it.

16. Never eat wild berries or anything else unless you are absolutely sure they are safe. Carry bottled water or other drinks, and do not drink from streams or wells that have not been tested recently.

17. Be able to recognize poison ivy, poison oak, etc. Should there be any doubt, don't touch.

18. Always be alert for snakes, scorpions, ticks, spiders, rodent infestations, etc. Be very careful where you place your hands and feet.

19. Bring and properly use the appropriate well maintained and inspected tools. Don't expect others to provide tools for you.

20. Use proper lifting and carrying techniques to bring home your finds. Do not overload your vehicle.

Many of these safety rules are covered in greater detail in the AFMS Safety Manual and on the AFMS Web site. Have a safe fieldtrip season in 2005.

Upcoming Regional Federation Shows

by Mary Trammell, AFMS Show Coordinator
from AFMS Newsletter, 6-7-8/2005

- **Northwest, August 5–7, 2005 Albany, Oregon**
- **Florida Midwest / AFMS, August 16–21, 2005 St. Louis, Missouri**
- **Southeast, November 12–14, 2005 Melbourne, Florida**
- **Eastern Federation, November 17–19, 2006 West Palm Beach**
- **South Central, December 2–4, 2005 Austin Texas**

Tips for Using Nova Wheels

(This is the black wheel on the Genie)
from ROKTOK 4/02, via The Roadrunner 5/02

Nova wheels should always be used with a sufficient amount of water spray. Using dry even for a few seconds results in rapid wear and damage.

Use sufficient pressure to cause the surface to depress slightly and conform to your stone. This eliminates flat spots caused by grinding and will cause fewer scratches. No excess pressure is needed to get the job done "quicker."

It is important to hold your stone so you do not allow the upper or leading edge to act as a plow and dislodge diamonds from the wheel. A proper chamfer on your stone prevents this from occurring.

To prolong the life of your Nova wheels, be certain to prepare your stone properly on the grinding wheels prior to sanding. Use the metal bond wheels to grind your stone to a final size and shape and to remove ALL sharp edges and points.

The diamonds in Nova wheels are firmly embedded in the resin bond and with proper use should not be dislodged to cause contamination in proceeding from one wheel to another. However they can become dislodged with the sharp edge of a stone, greatly decreasing the life of the wheel. You can prolong the life of a wheel with a little understanding. If you eliminate the sharp edges, you will save the wheels!

Clamping Thunder Eggs (Or Anything Else)

by Marta Strohl-Rowand <marta@mpsc839.org>
(From a posting 2/06/2002 on the AFMS Rockhounds List [with the permission of the writer] at http://groups.yahoo.com/group/RockhoundsList)
via Arrowhead News 3/02

You can cut anything from egg-size (1½ to 3 inches) all the way to big eggs (5 to 6 inches) and even bigger septarian nodules (6 to 14 inches) with a simple "jig," using a piece of "ripple molding" from the hardware store. It's the stuff used to edge doorways or windows, and it comes in all kinds of wood, shapes, and sizes. I'm very fond of the one that is 2 inches wide and has 4 even bumps (^^^^) in pine (cheap, soft, wood). Between the soft wood and the bumps, it grabs the egg firmly, regardless of the angle, and creates a flat interface with the clamp.

This technique also works well for very odd-shaped rough rock. It takes no time (unlike plaster or glued blocks). It doesn't mess-up the outside of the egg with "glop," and it takes less expertise than wedges.

Hints & Information from All Over

All via The Rockcollector 11/01

from Rocks & Gems via The Nugget 09/01

Extremophiles Produce Solid Gold. Simple microscopic organisms which thrive in extreme conditions turn dissolved gold into solid gold. While experimenting on the use of a similar microbe to clean up toxic water, University of Massachusetts professor Derek Lovely discovered the microbe's special power.

The **extremophiles inhale dissolved gold** and convert it into solid deposits. "They use dissolved metals like iron, uranium, and gold the same way we use oxygen," said Lovely.

Condensed from article in San Jose Mercury News 9/4/01 by Breccia, from Breccia 9/01 via The Pegmatite, 10/01

The thinner the pieces of **obsidian**, the more careful you need to be about cracking it. Use the most worn out 100 grit (8x3 inch) sanding belt to smooth out the stone and then go directly to cerium oxide on elk hide. Find a good worn out sanding belt that you would have thrown away because it wouldn't cut agate any more, and use it only for obsidian.

Original source unknown via The Nugget 09/01

There are **three ways to cut palm root,** and each gives a different effect. All palm roots seem to have a ring of agate around the eye and a colored center, so cutting down the center gives a striking wood grained effect but does not show the eye. Cutting

across the center brings out the round eye. Cutting diagonally across the roots produces an elliptical eye effect.

Original source unknown via The Nugget 09/01
Jasper is much more troublesome to polish than agate because many varieties are "earthy" and porous, and others contain hematite which is difficult to polish. If you are on a field trip, a good way to test for jasper is to wet it. If it absorbs the water and dries rapidly, throw it away. It will not polish. If it stays wet and does not dry right away, it contains a high amount of chalcedony and will take a good polish. Most jaspers polish well on leather with Linde A, but good results can be obtained with tin oxide on either leather or felt. Always remember that a fine sanding job is the secret of good polishing.

From T-Town Rockhound via The Nugget 09/01
Will That Glass Ever Turn Purple? If you just can't wait to find out, and don't have the time to leave your glass in the sunlight for a long time, just place it under a black light. If the glass fluoresces green, it will turn purple when exposed to the ultraviolet rays of the sun.

This color change is due to the small amount of manganese which is added to the melted ingredients of sand, soda, and lime to free them from the ever-present traces of iron which gives the glass the common aqua color.

from Lapidarian 3/01, via The Pegmatite, 10/01
Moonstone will cleave. Be sure to grind it on a smooth wheel. It polishes nicely on felt with cerium oxide.

From The Calgary Lapidary Journal 12/91 via The Nugget 09/01
To avoid the danger of **skinning your knuckles** or bruising your hand while attempting to split a rock, have your wife hold it.

ShowTime 2005

August 13-14	Baton Rouge, LA	Baton Rouge Gem & Mineral Society Frat. Order of Police, BR Lodge number 1 10777 Greenwell Springs Rd. Clara Broussard (225) 687-3864
August 19-21	Bossier City, LA	Ark-La-Tex Gem & Mineral Society Bossier Civic Center, 620 Benton Rd. Charlie Johns (318) 687-4929
August 27-28	Arlington, TX	Texas School of Earth Sciences (formerly Arlington Gem & Mineral Club) University of Texas, Arlington
September 3-4	Jasper, TX	Pine Country Gem & Mineral Society VFW Building 7 miles west of Jasper
September 17-18	Farmers Branch, TX	Pleasant Oaks Gem & Mineral Club Ellison Miles Geotechnology Institute 3939 Valley View Lane
September 23-25	Humble, TX	Houston Gem & Mineral Society Humble Civic Center 8233 Will Clayton Parkway
September 24-25	Denison, TX	Texoma Rockhounds Denison Senior Center, 531 Chestnut St.
October 1-2	Farmers Branch, TX	Pleasant Oaks Gem & Mineral Club Ellison Miles Geotechnology Institute 3939 Valley View Lane
October 1-2	Jacksonville, AK	Central Arkansas Gem, Mineral & Geology Soc Jacksonville Community Center Main Street, Hwy. 67/167 Exit 9 Ms.PatKissire (501) 821-2346
October 8-9	Temple, TX	Tri-City Gem & Mineral Society Mayborn Civic & Convention Center 3303 N. 3rd St.; Robert Coufal (254)773-9624
October 21-23	Victoria, TX	Victoria Gem & Mineral Society Victoria Community Center
October 21-23	Glen Rose, TX	Austin Paleontological Society Glen Rose Convention Center
December 2-4	Austin, TX	SCFMS Conv. and Austin G&M Society Show Palmer Events Center

2005		AUGUST				2005
Sun	**Mon**	**Tues**	**Wed**	**Thu**	**Fri**	**Sat**
	1	2 **7:30 Board Meeting**	3	4	5	6 **10-12 Youth Section 11-3 Shop Open**
7	8 **1:00 Day Light Section**	9 **7:30 Show Comm**	10 **7:30 Faceting Section**	11	12	13 **11-3 Shop Open**
14	15 **7:30 Lapidary Section**	16 **7:30 Paleo Section**	17	18	19	20 **10-12 Youth Section 11-3 Shop Open**
21	22	23 **7:30 General Meeting**	24	25	26	27 **11-3 Shop Open**
28	29	30	31			

2005		SEPTEMBER				2005
Sun	**Mon**	**Tues**	**Wed**	**Thu**	**Fri**	**Sat**
				1	2	3 **10-12 Youth Section 11-3 Shop Open**
4	5 **Labor Day**	6 **7:30 Board Meeting**	7 **7:30 Mineral Section**	8	9	10 **11-3 Shop Open**
11	12 **7:30 Day Light Section**	13 **7:30 Show Comm**	14 **7:30 Faceting Section**	15	16	17 **10-12 Youth Section 11-3 Shop Open**
18	19 **7:30 Lapidary Section**	20 **7:30 Paleo Section**	21 **7:30 Mineral Section**	22 **Show Setup day**	23 **HGMS Show Kids' Day**	24 **HGMS Show**
25 **HGMS Show**	26	27 **7:30 General Meeting**	28	29	30	

The BACKBENDER'S GAZETTE

The Newsletter of the Houston Gem & Mineral Society

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