



Houston Gem & Mineral Society Houston, TX

Volume XLIV - No. 12 December 2013

The Miner—Collecting Smoky Quartz Crystals in the Sierra Nevada Mountain Range

by John Anderson Member of the Houston Gem and Mineral Society

The subject of this story from The Miner is about collecting Smoky Quartz crystals in the Sierra Nevada Mountain range in the State of California. As you know, the Sierra Nevada Mountains are composed of 99.99% granite. There I would be looking for smoky quartz crystals in a large pegmatite deposit located over 9,000 feet high in those mountains. That elevation is where the normal pine timberline trees stop growing. I was there in the summer, and during the night the temperature dropped almost 20 degrees. That was bad, but not as bad as the huge mosquitoes. The mosquitoes were so big that even a Texas mosquito would be jealous.



If you are familiar with the Sierra Nevada Mountain Range in the State of California, you know that there is not a more mineral-diverse area in the U.S. Everyone knows that gold was discovered at Sutter's Mill which is close to the Sierra Nevada range, so it was only natural that the Sierras were highly explored (and successfully) for gold by many. The Sierras are also home to the giant Sequoia redwoods, and there probably are very few minerals not found in this mountain range. This mountain range is very large, for it is 400 miles long and 70 miles wide. It has three National Parks and 20 Wilderness Areas. President Abraham Lincoln signed the Yosemite Valley Grant Act on June 30, 1864. The legislation gave California the Yosemite Valley and the nearby Mariposa Big

Continued on page 4

General Meeting Dates

by Clyde McMeans

December 14, 2013: HGMS Annual Holiday Party. Details to be announced.

December 24, 2013: NO meeting. Happy Holidays

January 28, 2014: To be announced

Contents

The Miner—Collecting Smoky Quartz Crystals	
in the Sierra Nevada Mountain Range	1
General Meeting Dates	1
Purpose of HGMS	3
Mining in the Rocks (Poem)	7
Rocking the Aggies	
60th Annual HGMS Show	9
A Tribute to Volunteers	10
Astronomy, Radioactive Minerals, and You	11
Mineral Section Programs	14
Make Your Slab Saw Blade Last Longer!	15
Board of Director's Meeting Minutes	17
Bench Tips	19
The Tool Days of Christmas	
AFMS President's Message	24
SCFMS President's Message	
Show Time 2013 & 2014	
Calendar	

Permission to use material originating in this newsletter is given freely providing that credit is given to the author and the source. Articles without a byline are considered to have been written by the editor.

Every article published in the BBG is edited for grammar and content. No flaming is E-mail the Editor and Webmaster at allowed.

Editor: Phyllis B. George 22407 Park Point Drive Katy, TX 77450-5852 Phone: (281) 395-3087 Copy is due for the January 2014 issue by Monday, December 9, 2013.

pgeorge4@comcast.net

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 \$40 for an adult membership, \$60 for a couple, \$75 for a family (including all children aged 5-18), \$25 for a youth membership (ages 5-18), and \$500 for an adult life membership. Advertising rates: \$70 for 2 months, ¹/₄ page; \$150 for 6 months, ¹/₄ page.

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

All meetings are held at the Clubhouse which is 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 Web site address is http://www.hgms.org.

Continued from page 1

Tree Grove "upon the express conditions that the premises shall be held for public use, resort, and recreation." But it was Teddy Roosevelt who made Yosemite Valley a National Park during his administration.

Before we get into our story, here is a short definition of what a pegmatite is. It is a very crystalline, intrusive igneous rock composed of interlocking crystals that can grow larger than 3 cm in size, even to a gigantic size. The composition of pegmatite is of quartz, feldspar, and mica. What sets pegmatite apart from the normal gra-



nitic type of rock is that the crystals are larger. Many believe that when the granite was forming, it took longer to cool, thus the crystal became bigger. Many other minerals can be found in a pegmatite—most likely helping in the formation of all the other gems found in pegmatite formations.

And now the story:

I was living in Highland Park (about seven miles from the City of Los Angeles, California) where a family down the street from me knew that I loved rocks and minerals. They told me they were going into the Sierra Nevada Mountains to an old gold mining claim that they inherited many years ago, and it had smoky quartz crystals. They were leaving that same day to go there to fish, and they asked, "Why don't you come up there in a week or so and collect some smoky quartz crystals at our mining claim"? They said it would be easy to find because all I would have to do was drive to a mountain packing company that was at Shaver Lake, talk to the packing outfitter, and see if he would take me up to the Dinky Lake Wilderness area by horseback. I talked to my wife Lee, and she was all for going to collect the smoky quartz. So a few weeks later, we drove to the Shaver Lake area and found the packer that they had told me about. The packer said for us to be at his packing station the next day at 7 a.m., and he would let us ride his horses back into the hill country to the Dinky Lake area since he was going there to pick up some fisherman who had been camping there for the past week. Dinky Lake was 25 miles by horseback from his packing station, and he said we would be riding up to over 9,000 feet. He told us that he would guide us to the Dinky Lake area and that he would pick us up and bring us back to Shaver Lake in three days when he would be returning from his back country wilderness packing trip. The packer actually took people on horseback with a pack horse for gear far into the wilderness area and would leave people for days or weeks at a time to fish for rainbow and possibly golden trout.

I guess my wife Lee had had more experience in riding horses or had a better horse, because she did not have any trouble with her mount. My whole body rebelled with pain for sitting so long in the saddle on a horse that tried its best to knock me off. The

horse was very successful in finding large boulders or low-hanging tree limbs that could scrape me off into the dirt. It was a real experience, needing to always keep my wits about me, continually looking for boulders or limbs that would do me in. For 25 miles it was a contest between the horse and me as to who saw a tree limb or boulder first. When the horse saw a big boulder, it would angle toward it almost nonchalantly, but I was aware, and I would either pull one of my legs up over the saddle horn or bend flat to the saddle to keep the tree limb from knocking me to the ground. We finally reached Dinky Lake just on the edge of where the trees stop growing due to the altitude. I got off the horse when the Packer said, "I will see you in three days at this time of day," then he continued his trip higher into the wilderness area.

The surrounding granite mountain looked like some giant had an ice cream scoop and had taken scoops out of the granite mountain here and there, each with clear cold water which naturally contained trout..

Lee had a pretty good sleeping bag, but mine was a mummy sleeping bag that did not have a lot of insulation. The food that we brought was little boxes of dry cereal and fruit. The rest of our meals would be trout for lunch and dinner. I brought my fly fishing rod to catch my meals with, some salmon eggs, angleworms, and a few spinners. We did not bring a tent because I was traveling very light, but I did bring with me some work gloves, a single jack sledge hammer, and a few very large chisels to help in my quest for some smoky quartz crystals. I found the smoky quartz crystals easily in the pegmatite granite rock. There were small deposits of smoky quartz crystals or any other types of stones that are to be found in pegmatite formations. I would place my chisel into a crack in the pegmatite, then hit the chisel with my trusty old single jack sledge hammer. That would drive the chisel into a cavity containing smoky quartz crystals that had (I believe) a coating of iron oxide.

As I said, the nights were extremely cold. When the sun went down, we would climb into our own sleeping bags wearing all the clothes that we had brought, but we were still extremely cold. We both had to keep our heads under the bag opening because the mosquitos were so mean and big, they would bite you. When I say "big," I heard two mosquitos talking one night when one asked the other, "Should we eat him here or take him home for our families' dinner?" They both started yelling, then one said, "Let's eat him here because he is too small to feed to our family."

One day I decided to remove some of the grime starting to accumulate on me due to the rat-hole type of digging I was doing. I thought a sponge bath in the lake would be just the ticket. I took off my boots and started to wade into the lake, but I had to actually fall backwards onto the shore—the water temperature was like nothing I had ever experienced. All I can say is, the water temperature was cold, cold, cold! I did not feel too badly when I noticed a small mound of snow just behind a rock where I was standing. By the way, I did take a sponge bath but without getting into the lake.

I had a funny thing happen when I arrived at the Dinky Lake Wilderness area. I met a fisherman who asked to see my fishing gear. I pulled out my fly rod with the salmon

eggs, angleworms, and a spinner that I was going to use for bait. I was proud of my fly rod because it was made out of split bamboo. He said that is a nice fishing rod, but what are those? He was pointing at my salmon eggs and worms. "Oh, this my bait," to which he replied, "No it is not, for we only use hand-tied flies here." I am so lucky that I actually brought a few flies. We camped around the Dinky Lake area, but the fishermen that we met all seemed to go to a few of the other lakes that were within a quarter of a mile. I asked why they did that, and I could not get a straight answer. I was not having any luck in catching anything for our meals, when the fisherman friend I met kept saying, "Don't worry, you will get some fish." All day long he kept saying that. It was starting to get late in the afternoon, and I was feeling badly that my evening meal was going to be dry cereal. He just kept saying, "Don't worry," as we walked back to the Dinky Lake camp area that consisted of two sleeping bags. At Dinky Lake, he pointed at what I would call a very small cove, and he said, "You walk out to the end of those rocks and cast your fly about 20 feet out from shore." I did that, and immediately we had our dinner and our lunch for the next day. My fisherman friend said you could always catch fish here, but they were not the bigger trout that he and his friends wanted to catch.

I never knew what happened to the Dinky Lake area concerning the smoky quartz crystals or the fishing, but at the same time that we were leaving on horseback to civilization, a Jeep came crashing through the wooded thicket. They said that it had taken them three days of extremely rough riding by Jeep to get to the Dinky Lake area from Lake Shaver. There were a few fisherman who just happened to be there also going back when one of the fisherman shouted out, "There goes the beauty of the area!" The Dinky Lake wilderness area was hard to get to, so it was a challenge to go there for its fishing or for finding smoky quartz. You only had two different ways to get there, and that was either by horseback or by hiking, thus making it a special place for the very few who arrived to witness the wilderness area in its beauty and having no sound louder than the wind or a bird chirping in the distance. Now I guess that special place has been taken.



Get last-minute news about club events by sending a note to Jim Kendall at kendal_ja@yahoo.com



Mining in the Rocks by Jackson Skubal, age 11

Pick at a rock, dig up a rock Searching for gems with eyes like a hawk Quartz here, and a bit of marble there Rocks, rocks, rocks are everywhere

Suddenly, I dug up a magnificent sapphire Its color was that of a dying fire The corundum had a star when it saw the light The crimson stone was a very pretty sight

I dug up a ruby, bright and red It was heavy as a weight of lead I found an emerald, clear as glass Standing out prettier than a peacock wrasse

I chipped out some mica, flat as paper It was rusted as green as a caper As I dug, something caught my eye A piece of topaz as clear as the sky

I noticed a shiny, black hue I had found a spot were diamonds grew I located a fossil, on a plate Sitting next to a piece of agate

The time came to return to our abode When my father said: "You've got quite a load!" I just smiled and got in the car To start the trip home, it would be very far

I stared at my rocks, I was proud of myself I could not wait to put them on the shelf

Rocking the Aggies by Neal Immega

Member of the Houston Gem & Mineral Society

We've been spreading the word about rocks in distant Aggieland, home of Texas A&M University. John Caldyne (HGMS President) and I had a Saturday afternoon gig in College Station, TX to give a program at the Ringer Library, south of College Station. We had a nice turnout of children—1st graders and younger—and their parents.

GRINDER: I brought along a Genie grinder, and John brought gemstones. Which was a bigger hit? Who doesn't LOVE grinding a rock and getting to take it home? I had lots of repeat business from people getting in line to do another rock or to work some more on the same one. I encouraged the kids to grind, sand, and polish just an edge, but some kept coming through the line to do the whole thing. I always take along a bucket of chips from our trim saws. People say that there is no difference between little boys and little girls, but I can tell you that girls will spend FOREVER picking through the chips to find just the right color. Boys are easier—they just pick the biggest one. Parents are always startled when they find out that a diamond wheel will grind a rock but not their skin. They sometimes need to let the kids experiment on their own but are charmed when I tell them that big people can grind rocks also. It was fun to tell the garents about the petrified wood locality just a mile from where we were doing the demonstrations!

GEMS: John's collection of gemstones and jewelry were the hit of the day with the girls and their mothers. Oooh! Sparkly things! Everyone loved pawing through his box of "gently used" jewelry and asking about the stones.

NEXT TIME: We could have used a wire wrapper to mount the grinding demo stones—then we would have closed the loop! This could be YOU. I hope you can join us doing demos. It is great fun and we received lots of positive feedback.



John showing how to make jewelry



Certificate! The library wanted us to know that we were appreciated.

60th Annual HGMS Show by Chris Peek 2013 Show Co-Chair

ur Diamond Anniversary Show featured nearly 3000 school children on Friday (much to Neal Immega's dismay). Kid's Day went off without a hitch, thanks to Scott Singleton, Nancy Fisher, and Elsa Kaplan White on the Education Committee. The Dino Dig seemed to completely run out of flats for the kids to smash on Friday—3000 kids will do that.

Some of our volunteer speakers like Neal and Inda Immega at the HMNS booth, George Wolf in the Paleo booth, and those manning the mineral booth were overwhelmed. They needed a breather a couple of times during the day, but they could not get a break. Thank goodness for Beverly Mace's cookies.

We were swamped with shoppers on both Saturday and Sunday. On Sunday, Clay Keifer and his group managed to host about 200 Scouts working toward their merit badge in geology. HGMS sponsored its first Earth Science Art Competition, and al-though we did not have as many entries as we would have liked, you have to start someplace. I hope that the Show Committee will want to continue the competition and allow it to grow.

Now on to the real point of this article, volunteering. The HGMS Show is one of the largest club shows in the nation, and it is put on by a few dedicated volunteers. Let me rephrase that: by far too few dedicated volunteers. We cannot improve the show without more volunteers. We cannot think about growing the show without more volunteers. We cannot improve and grow without you!

The time to commit to volunteer for the 2014 HGMS show is *now*. I joined HGMS 20 years ago, but it took me ten years before I volunteered at the show. And, I only volunteered because a committee member was called out of town for work at the last minute, and there was a need for someone to head up the ticket booth. In hindsight, this was not acceptable. If you love Earth Science and the Lapidary arts, you need to share that love with others. My wife, who still doesn't consider herself a rockhound, got stuck in the ticket booth one year with me, and the rest is history. You still won't see her in the shop, you'll very rarely see her at a meeting, but she's been on the Show Committee for about seven years and is always at the show.

Our club has about 500 members, but fewer than 10% are involved in the show. The actual committee has about a dozen members; another dozen or so show up on Thursday for set-up day, and a dozen (some of them the same people) stay around on Sunday to pack up the show. A few dozen others volunteer throughout the event. You may think, "Oh, they don't need my help." There is nothing further from the truth. Many of those who help with set-up and take down are our older members. They know what to do—if they had more help it would get done so much faster. It's time to get your hands dirty, or at least commit to getting your hands dirty next year.

Did you know that this year we had vendors helping to set up the show?

Chaotic2creations and Burtis Blue Turquoise, both new vendors to the show, spent most of Thursday morning helping with club setup. I thought they were club volunteers until that afternoon when I noticed they were setting up their own booths. Their help was greatly appreciated, but I we should have had more club members helping so that the vendors did not need to help.

So, what do YOU want to do? Being on the Show Committee or volunteering at the show is not hard work. Most "jobs" aren't very difficult, and you have a team to help you. It's okay to say, "I don't know" and to look to another to answer a question. We grow by trying new things. We improve by practice. We make the club better by jumping in. Now is the time to jump in. Michelle Marcel is the Show Chair for the 2014 show. Contact her after the holidays about getting involved with the 2014 Show Committee.

A Tribute to Volunteers

via the SCFMS Newsletter 11-12/2013 (Author unknown)

aluable is the work you do,

O utstanding is how you always come through.

L oyal, sincere, and full of good cheer,

U ntiring in your efforts throughout the year.

N otable are the contributions you make,

T rustworthy in every project you take.

E ager to reach your every goal,

E ffective in the way you fulfill your role.

R eady with a smile like a shining star,

S pecial and wonderful-that's what you are!

Astronomy, Radioactive Minerals, and You

by Terrell William "Terry " Proctor, J.D. Member of the Houston Gem & Mineral Society Curator Proctor Museum of Natural Science, Inc.

How old is the Universe? The Solar System? The Earth? Humans as a genus?

t depends upon whom you ask or where you seek an answer. Also, what does the Universe, including the Solar System, have to do with minerals found on Earth and with humans—you and me?

Complex questions like these will result in varying responses to those questions, depending upon where you search.

There are religious groups who believe that the Universe and all things therein, including the Earth, were created by God about 6,000 years ago. As a believer in both Christianity and in science, I do believe that God created the Universe. However, from science, I know that the Universe is hugely older than 6,000 years and its age is over 100,000 times 6,000 years. If the Universe was created or did come into being at some point in time, then there had to be a starting point. In this article, I will use the oftenused term "Big Bang" for that starting point. This term, depending upon your own religious beliefs or lack thereof, is intended here to just be terminology and is not argumentative concerning its meaning. Because this article has to be of limited length, it is not my intention in this article to go into Biblical or theological discussion as to the Creation of the Universe.

How do we know the age of the Universe and the Earth?

During the life of **Isaac Newton, most Christians** believed that the Universe was a few thousand years old. They also believed that the Earth was created in six Earth days. At that time, human history and the history of the cosmos seemed to be the same and not controversial. Newton, along with church leaders, made calculations based on their study of Bible passages and announced as fact that the age of the Earth was approximately 6,000 years old. There was not total agreement on the exact age, but there was agreement that the creation was of a recent age. At that time there were other philosophies and cultures on Earth who believed the Earth and Universe to be much older. Some of these thought the Universe and Earth were perhaps eternal, but most Europeans believed the Universe was created recently1.

One scientific source tells us that the Universe was created or came into being about 13,750,000,000 years ago, +/- 0.11 billion years. The NASA Web site says "Until recently, astronomers estimated that the Big Bang occurred between 12 and 14 billion years ago. To put this in perspective, the Solar System is thought to be 4.5 billion years old, and humans have existed as a genus for only a few million years." Astronomers estimate the age of the Universe in two ways: 1) by looking for the oldest stars, and 2) by measuring the rate of expansion of the Universe and extrapolating back to the Big Bang—just as crime detectives can trace the origin of a bullet from the holes in a wall."

Some other scientists say that the Earth is 4.6 billion years old. Also, some scientists say that the Universe is somewhere from 10 to 20 billion years old. Scientists have known about what is known as "background radiation" (*commonly known as the Cosmic Microwave Background*) since the early 60s. The discovery was an accident by two men named Penzias and Wilson, who worked at the Bell Labs. When they were working on precision equipment, they detected an unexplainable interference. People figured out that this wasn't just a local disturbance, but was the still-existing noise of the creation of the Universe. The Nobel Prize was given for this discovery. This had been predicted by a man named George Gamow who wrote that there should be an observable background radiation if the Big Bang theory was correct3.

So we have some people who prefer to call the Universe the Creation, and some who prefer to call it the Big Bang, and that is all right—it happened. There should be no derogatory implication in either name-it is addressing an occurrence. The belief in the age of this occurrence is what vastly differs among some human beings. Most religions and religious and non-religious people throughout the Earth concur that the Earth and the Universe are very old. Some religions and religious people contend that all things, at least on Earth, are in the range of 6,000 years old and that the Earth did not exist before then. Most folks worldwide have no problem in believing that from the first small Cambrian creatures, to huge dinosaurs, to modern very intelligent humans to be here on Earth took more than 6,000 Earth years. Those things took much less time than did the creation of the Solar System and the Universe. Those of us who have excavated fossils and those who deal scientifically with "half-life" of radioactive minerals know that life and minerals have been around for a very long time. Astronomers who look through telescopes at light coming to Earth from Light Years away are able to detect the chemical and mineral make up of many bodies in the Universe. They also know that it took far longer than 6,000 years for the light from other suns and galaxies to reach Earth with time measured in Light Years.

A Light Year is a unit of distance equal to the distance that light traveling at 186,282 miles per second, in empty space, will travel in an Earth year. In one light-year, light travels approximately 5,880,000,000,000 miles or 9,460,000,000,000 kilometers. For instance, light can travel about seven (7) times around the Earth. The star nearest to us is 4.3 light-years away. The Milky Way is our own galaxy, and it is about 150,000 light years across. Andromeda, a popular nearby Galaxy to the Milky Way, is 2.3 million light-years away. 4

There should be no conflict between science and religion. We take religion on faith and do not expect to find proof of what we believe. Science takes nothing on faith but requires proof of everything claimed to be a scientific fact. Religion continues to believe some basic things about life, and challenges to that faith do not change it. Science expects constant challenges and everything taken as proof at any given time is—and should be—constantly challenged to continue to achieve better understanding.

But not everything remains constant even in religious understanding. At one time, the earth was considered to be the center of the Universe. I know of no religion today that

professes to believe that the earth is the center of the Universe—or is the center of the Galaxy—or that the Sun revolves around the Earth. The fact is that religions that at one time may have believed this are no less credible today for having had those beliefs in the past. Some people were put to death, I understand, for believing that the Earth was round and not flat as was the standard of belief at one time.

The manner of arriving at the age of the Universe might seem to be impossible for humans to know or learn. We are but one of a number of planets revolving around one star out of billions of stars in one galaxy, of billions of galaxies in the Universe. Some today even speculate that there are either other Universes or that there has been more than one Big Bang. It might seem that any attempt to determine the age of the Universe could only be a guess. However, that is not the case.

In the middle 19th century, some geologists discovered that time was far deeper than had previously been imagined. These geologists determined how mountain ranges erode and rivers then carry the sediments down to the sea as an example of what happens over long periods of time. This process happens very slowly, and therefore it was determined that this took millions of years to cause the creation of the very great layers of shale and sandstone. Geologists also found several other processes that must have taken millions of years to occur, such as the creation of limestone layers from things that died in the sea and other water. For all science could tell, the Earth and the starry Universe were eternal. Controversy went on for decades, but by the end of the nineteenth century, all scientists who had studied the evidence were convinced that the age of the Earth must be at least many tens of millions of years. Biblical fundamentalists continued to vehemently deny it all. But mainstream Christian theologians showed how the words of their Bible could be reconciled with the facts of geology5.

In my article, "Showing Your Age," published in the November 2001 Backbender's Gazette, I pointed out some of the various radioactive minerals, each of which had a different "Half Life" period. I also mentioned other tests which allow scientists to tell very precisely—within a small range of error—the age of various things on Earth and in the Universe. For those who may not be familiar with the term "half-life," this means that a quantity of radioactive mineral will in a given period of time be converted to half that amount of radioactive material and the other half is converted to the decayed product. Then in the next half-life period the same thing happens—half is still radioactive and the other half changes to the decayed product. This goes on until the amount of radioactive mineral is so small that it can no longer be usefully measured. Since these radioactive minerals have such varying lengths of half-life periods, they can be tested against each other to authenticate their half-life period. Over time, scientists (including geologists) have found more and more such minerals, and the half-life periods of various minerals have confirmed other half-lives, so it has been learned that these are very accurate in telling the geological time periods.

As a result, for instance, during the life of any living thing, it takes in Carbon 14. Upon death of the living thing the Carbon 14, which is a beta-emitter, releases the beta particle, then the nucleus of the carbon-14 gains another proton and turns into a stable

isotope of Nitrogen 14. Carbon-14 has a half-life of 5,730 years +/- 40 years.

So how do these radioactive minerals help us measure the age of things? Because the Creator made radioactive minerals with a set half-life, anything which has taken in a radioactive material during life will not take in any more after death, and the mineral will commence the process of decaying. With the half-life period of that mineral, we can compare the remaining amount of radioactive material to the accumulated decayed product, thus determining how long the radioactive mineral in the living thing has been decaying. An exception could occur during the process of petrification or mineralization of some formerly living thing that happened to be buried in an area containing a radioactive substance that would transfer into the dead object.

Voila!! Radioactive minerals give us a means to tell the age of things and hence the age of a formation, the ages of the Earth, the Solar System, the Galaxy, and the Universe.

(Footnotes)

1 Center for History of Physics, a Division of the American Institute of Physics http://www.aip.org/history/curie/age-of-earth.htm

2 NASA "Universe 101" "How Old Is The Universe" http://map.gsfc.nasa.gov/Universe/uni_age.html

3 Cornell University http://curious.astro.cornell.edu/question.php?number=45

4 The Infrared Processing and Analysis Center (IPAC) is located on the campus of the California Institute of Technology, Pasadena, Calif. http://coolcosmos.ipac.caltech.edu/ask/297-What-is-a-light-year

5 Supra footnote #1

Mineral Section Programs by Paul Brandes

anuary 1, 2014: No Meeting (New Year's Day)

January 15, 2014—The Tucson Experience: For collectors, the Tucson Gem and Mineral Show in February and the many other smaller shows before and after are the pinnacle of mineral connoisseurs from all corners of the globe. Tim and Holly Smith, seasoned veterans of the Tucson shows, have graciously agreed to give a presentation on what it's like to peruse the many vendors at this, the largest gathering of its kind in the world. Listen to them share their stories and enjoy photographs from the many shows they have attended over the years. For those of you who have never experienced Tucson first-hand, this is an excellent opportunity to learn about what the Tucson experience is all about. This promises to be a very informative and fun presentation! Refreshments will be provided.

February 5, 2014—What's Hot in Tucson, 2013: Come get in the mood for the Tucson shows by viewing the DVD summary of last year's show. Narrated by Dave

Wilber and Bob Jones, this DVD brings you the Tucson experience without the travel or expenses. For those who saw last year's DVD, you know the quality of this program is quite impressive. Refreshments will be provided.

February 19, 2014—DVD of attendees' choice: Due to the participation of many Mineral Section members in Tucson, those not able to attend can chose a DVD from the Library to view (the tentative choice is to continue with another part of the 2012 "What's Hot in Tucson") or attendees can discuss their possible collecting plans for the spring/summer. Refreshments will be provided.

Editor's Note: After Art Smith passed away, the Mineral Section held an auction during which a number of items from Art's collection were sold. The \$5,000 proceeds were pledged to continuing Art's long tradition of donating to the Rocks & Minerals magazine \$1,000 annually to pay for the upcoming year's continuation of the Connoisseur's Choice column and its full-color page of minerals in each issue. The letter on page 16 is the thank-you letter received by the HGMS Mineral Section for this year's donation.

Make Your Slab Saw Blade Last Longer!

by Richard Peterson from Timpanogos Gem and Mineral Society of Provo, Utah (TGMS 10/2012) via Rockhound Ramblings 11/2013

- 1. Turn your saw blade 180 degrees every time you change your cutting solution. This reverses your cutting surface on the saw blade exposing new diamond and will keep your blade cutting truer.
- 2. If your blade has a tendency to climb the rock when you are cutting, it is either dull or feeding into the rock too fast, or your oil is very dirty. Dirty oil will sometimes make your blade do funny things!
- 3. Your blade may be worn out if it has no kerf (which is the small raised surface on the outside edge of your blade.)
- 4. If your blade has a kerf and still doesn't cut well
 - a. Try cutting an old Carborundum stone or wheel or -
 - b. Cut through a brick a couple of times. This wears the metal away from the diamonds. (I personally like the brick best.)
- 5. If your oil is clean and you have sharpened the blade and it still climbs the rock, check your feed or the hardness of the rock.

THE BACKBENDER'S GAZETTE



Editor-in-Chief Marie Huizing • 5341 Thrasher Drive • Cincinnati, OH 45247 • Phone/fax 513/574-7142 • rocksandminerals@fuse.net

September 20, 2013

Members Houston Gem & Mineral Society 10805 Brooklet Houston, TX 77099

Dear friends,

We were at the Denver Show with a subscription booth when your most welcome check for \$1,000 arrived at the editorial office.

With the show now behind us, I'm making my way through accumulated emails, phone messages, and postal mail, plus playing catch-up with looming deadlines.

Of prime importance, however, is thanking you for your generous check to add to the Color Fund. It was most kind of you and will ensure the continuation of the Connoisseur's Choice column with its beautiful full-page, four-color mineral photographs for all issues in the coming year.

The Houston Gem & Mineral Society will be acknowledged for its contribution in both the editor's column and in the Connoisseur's column, as well as in our annual list of donors published in the March/April issue, and, of course, we will note that the donation is in memory of Arthur E. Smith.

It is fitting that Art's contributions to the earth sciences live on in such donations as well as in his collection at Wheaton College. Although a soft-spoken and unassuming man, his impact continues to be felt and will be for years to come.

Again, thank you so much.

With best regards,

MALL

Marie Huizing Editor-in-Chief Rocks & Minerals

Published by Taylor & Francis • 325 Chestnut Street • Philadelphia, Pennsylvania 19106 • www. taylorandfrancis.com

Board of Director's Meeting Minutes

November 5, 2013 by Michele Marsel HGMS Secretary

\checkmark	President – John Caldyne	\checkmark	Beading Rep – Jillynn Hailes
\checkmark	1 st Vice President – Clyde McMeans	\checkmark	Faceting Rep – Gary Tober
\checkmark	2 nd Vice President – Beverly Mace	\checkmark	Lapidary Rep – Phyllis George
\checkmark	Treasurer – Rodney Linehan	\checkmark	Mineral Rep – Pete Stassi
\checkmark	Secretary – Michele Marsel	\checkmark	Paleontology Rep – Mike Dawkins
\checkmark	Past President – Charlie Fredregill		Day Light Rep – Mary Ann Mitscherling
			Archeology Rep – Garth Clark

The meeting was called to order at 7:30 p.m. with a quorum of nine members present.

Previous Month Board Minutes: Pete Stassi moved and Clyde McMeans seconded that the minutes of the October 2013 Board Meeting be accepted as published in the November 2013 BBG. The motion passed unanimously.

Treasurer's Report: Rodney Linehan e-mailed financials including a copy of the 990 Tax Return to all Board members in advance of the meeting. There were no questions on the 990 return, and Rodney will file it by the November 15 deadline.

Office, Committee, and Section Reports

Archeology Section: No report.

Beading Section: Most attendees were able to complete their project during the last meeting. Earrings are the next project—see Upcoming Programs on the HGMS Web site for details. The Section is looking for participants to help at the upcoming Show.

Day Light Section: The upcoming meeting will focus on making segmented bracelets and learning about patinas.

Education Committee: No report.

Faceting Section: No meeting was held in October, and there is no meeting planned for November.

Lapidary Section: Ed Clay presented a program on cold connections. He demonstrated standard and tube rivets. About 12 attended including one new member. The November meeting will be a show and tell of Show purchases.

Mineral Section: All student boxes for the Show were completed. There will be no meeting in the first week of November due to the Show. We will be working at the clubhouse preparing for the show. The next meeting is scheduled for November 20.

Outreach Committee: John Caldyne reported he has one more college trip planned.

Paleo Section: Diane Sisson brought in from Post Oak creek, Sherman a bucket of gravel and sand. Everyone sifted through for micro fossils. Held field trip to CXI quarry 10/26/2013 in Midlothian—23 attended. Diane found a nice mosasaur tooth and several shark's teeth, and others found teeth and pyrite.

Publicity Committee: Beverly Mace brought in a copy of a nice article that was submitted by Show Chair Theresa Peek and printed in the Southwest Village News; it gave details on both the Club in general and on our upcoming Show.

Show Committee: Everyone is working out the final details as we prepare to load the Show truck. We are still having issues with getting our volunteers to sign up in advance and with not getting enough volunteers in general.

Youth Section: Youth members finished their Show competition cabochons, and some made earrings at the last meeting. The Section holiday party will be held during the December 7 meeting, and no meeting will be held on the 3rd Saturday of December.

BBG Editor and Webmaster: All upcoming programs (where available) have been updated on the Web site. Phyllis will be out of town the 2nd weekend of December, so the BBG deadline for the BBG January 2014 issue is moved up to Monday, December 9, 2013.

Old Business

Club Renovations: John Caldyne took an action item to check with James Burrell on suggested contractors or club members to do this work. No update.

Education Chair: A club member indicated a strong interest in filling this position. John Caldyne will contact her to confirm her willingness to serve.

Safety: James Burrell will assume the task of planning for a camera monitoring system.

Club Data Backups: Jim Kendall recommended using an external drive as our data is small. It was noted that our club equipment inventory needs to be updated and stored on the backup drive as well. The goal is for all data to exist in at least two places. Data to be backed up includes library inventories, equipment inventories, membership data, financial data, Board minutes, BBG files, and Show records.

New Business

2014 Slate as presented by the Nominating Committee at the October 22, 2013 General Meeting:

President	Ray Kizer
1 st Vice President	Paul Brandes
2 nd Vice President	Beverly Mace
Secretary	Nancy English
Treasurer	Rodney Linehan

- 2013 Holiday Party and Auction on December 14: We need someone to coordinate this by identifying the timing for the activities and by sending reminders out through the Club e-mail blast. Items to be covered include:
- Food—the Club purchases the meats, and we will need volunteers to cook the turkeys. Neal Immega has cooked the brisket in the past. We will also need some coordination on member-provided items.
- Decorations—Beverly Mace said she will take of decorations again this year.
- Auction items, auctioneer, etc. We need an e-mail blast calling for donations.
- Michele Marsel will send e-mails asking for assistance after the Show.

Adjourn: Rodney Linehan moved to adjourn the meeting, and Gary Tober seconded. The motion passed unanimously, and the meeting was adjourned at 8:25 p.m.

Bench Tips

by Brad Smith More Bench Tips by Brad Smith are at facebook.com/BenchTips/ or search for "Bench Tips for Jewelry Making" on Amazon.com

arking Your Tools It makes sense to mark your tools if you ever lend them to friends or take them out to classes or workshops. Question is how to mark them permanently. For metal tools, I use a very small ball bur running fast in the Dremel or Foredom to "engrave" my initials. Other times I'll form the initials with a number of hits with a center punch.

But for hammer handles and other wooden tools, the country boy in me came back and thought "Why not make a branding iron?" If you'd like to try one, all you need is a little scrap copper or nickel about 22–24 gauge, a piece of heavy brass or copper for a base, about 6 inches of metal rod, and a piece of wood for the handle.

I formed my initials from a couple 4 mm strips of sheet nickel. The "S" was one piece, but the "B" was three pieces soldered together with hard solder. (Remember to form the letters backwards). I then soldered the letters with medium solder onto a piece of 1/ 8 inch thick brass bar to act as a heat sink. Finally, I soldered a piece of 1/8 round rod on the back of the brass bar as a shaft to join to a wooden handle.





Prips Flux

Many of us have experienced a firestain (or firescale) on sterling pieces, a purplish cloud most visible when viewing the piece with reflected light from a piece of white paper. Firestain is the formation of a copper oxide below the surface of the metal. Getting rid of it is hard. I avoid it by applying a coat of Prips flux before each soldering. The mixture is named after Jack Prip who taught jewelry at the University of Rochester. Ingredients are 3 parts boric acid and 2 parts borax. Borax provides protection at the lower temperatures, and boric acid provides it at the higher temperatures. Weigh out the ingredients, mix thoroughly, and grind to a fine dust. To use, add a heaping tablespoon to a few ounces of denatured alcohol. Store in a wide-mouth, well-sealed bottle. Borax can be found at jewelry supply companies or as 40 Mule Team washing soap in some markets. Boric acid can be found at jewelry supply companies or in local stores as roach killer. Read the labels to be sure of the purity.

Filling a Hole

Sometimes while constructing a piece or finishing a casting, I will find a hole or dimple that should be filled. Everyone who has tried flowing a little more solder into one of these defects knows that it rarely works. Silver solder doesn't seem to fill small holes unless you give it some help. Here's how I do it. For a roundish hole, I use a drill a little larger than the hole to make the cavity round. Then I fill the hole with a short length of silver wire and solder it in. Either choose a drill that is a good fit for the wire, or sand a slight taper on the end of the wire so it fits into the drilled hole. Then add a little solder around the wire. To fill a dimple, I place solder into the cavity, add a scrap of silver big enough to cover the dimple, and solder. After pickling, file and sand off the excess metal and polish smooth.

Touching Up Around a Bezel

Pumice wheels are good for touching up a bezel after you've set the stone. The hardness is about 6 on the Moh's scale—less hard than quartz—so it shouldn't scratch any of your agates or jaspers. However, I'd avoid or be really careful about using pumice near the softer stones like turquoise, amber, howelite, etc. If you're unsure about the hardness of your wheels, test them on a piece of glass. Glass is about 5½ on the Mohs scale—softer than quartz. So if the wheel doesn't harm glass, it's safe for use on the quartzes and harder stones. My preference is the one-inch diameter wheels.

Bench Tips Holiday Special

If you find these monthly tips useful, then think how nice it'd be to have the full bench tips reference guide for your shop or as a present for a jewelry friend. Between now and Thanksgiving, I'm offering a Holiday Special that includes a free bonus pack of jewelry articles with every copy purchased.

"Bench Tips for Jewelry Making" contains 101 of the most popular and useful bench tips organized into ten main problem areas. It's filled with close-up photos and has a detailed index to help find the solution you need by key word.

Get your copy by going directly to my printer at http://CreateSpace.com/3976439

Upon ordering the book, you will receive a confirmation email. This is your proof of purchase. Forward a copy of this to me at <benchtips@yahoo.com> to receive your free bonus pack.

The articles include:

- 1. Cuttlebone Casting Get wonderful textures quickly and easily
- 2. Bezel Basics Hints for making a perfect bezel every time
- Make Your Own Wax Pen You'll love this \$20 electric wax tool
- 4. Depletion Gilding An easy way to avoid tarnish on your pieces
- 5. Setting Up A Home Shop Tool tips and safety considerations
- 6. Building a Jewelry Web Site Develop a plan to save money





The Tool Days of Christmas by Pat Baker from Gem Cutters News 12/2012 n the first day of Christmas my true love sent to me: An Ultra Tec Faceting Machine On the second day of Christmas my true love sent to me: Two Cotton Gloves and an Ultra Tec Faceting Machine On the third day of Christmas my true love sent to me: Three French Hammers Two Cotton Gloves and an Ultra Tec Faceting Machine On the fourth day of Christmas my true love sent to me: Four Cutting Burrs Three French Hammers Two Cotton Gloves and an Ultra Tec Faceting Machine On the fifth day of Christmas my true love sent to me: Five Gold Ingots Four Cutting Burrs Three French Hammers Two Cotton Gloves and an Ultra Tec Faceting Machine On the sixth day of Christmas my true love sent to me: Six Sheets of Copper Five Gold Ingots Four Cutting Burrs Three French Hammers Two Cotton Gloves and an Ultra Tec Faceting Machine On the seventh day of Christmas my true love sent to me: Seven Slabs for Trimming Six Sheets of Copper Five Gold Ingots Four Cutting Burrs Three French Hammers Two Cotton Gloves and an Ultra Tec Faceting Machine On the eighth day of Christmas my true love sent Eight Stones for Setting

Seven Slabs for Trimming

Six Sheets of Copper Five Gold Ingots Four Cutting Burrs Three French Hammers Two Cotton Gloves and an Ultra Tec Faceting Machine

On the ninth day of Christmas my true love sen Nine Kinds of Pliers Eight Stones for Setting Seven Slabs for Trimming Six Sheets of Copper Five Gold Ingots Four Cutting Burrs Three French Hammers Two Cotton Gloves and an Ultra Tec Faceting Machine



On the tenth day of Christmas my true love sent to me: Ten Kilns for Fusing Nine Kinds of Pliers Eight Stones for Setting Seven Slabs for Trimming Six Sheets of Copper Five Gold Ingots Four Cutting Burrs Three French Hammers Two Cotton Gloves and an Ultra Tec Faceting Machine

On the eleventh day of Christmas my true love sent to me:

Eleven Rods of Sterling Ten Kilns for Fusing Nine Kinds of Pliers Eight Stones for Setting Seven Slabs for Trimming Six Sheets of Copper Five Gold Ingots Four Cutting Burrs Three French Hammers Two Cotton Gloves and an Ultra Tec Faceting Machine

On the twelfth day of Christmas my true love sent to me: Twelve Dremels Drilling Eleven Rods of Sterling Ten Kilns for Fusing Nine Kinds of Pliers Eight Stones for Setting Seven Slabs for Trimming Six Sheets of Copper Five Gold Ingots Four Cutting Burrs Three French Hammers Two Cotton Gloves and an Ultra Tec Faceting Machin



AFMS President's Message

by Richard Jaeger from AFMS Newsletter 11/2013

From My Desk to Yours

arlene Gunsolus, Karen Boger, and all the members of the Jacksonville Gem & Mineral Society are to be congratulated on the job they did hosting the AFMS/SFMS Show in September. The meetings, banquets, and the show itself were well done and enjoyable. The thing that stood out the most to me was the hospitality that was extended to those of us attending from around the country.

I am excited about the coming year for the AFMS and very pleased to be working with an outstanding group of officers and committee chairs. I have communicated with each of them and respect their ability and their dedication to the betterment of our hobby. The same goes for the officers who will serving our regional federations. As rockhounds, we come from all parts of the country and many different backgrounds, but we have a love for our hobby, a respect for one another, and a desire to improve our clubs and strengthen our federations.

Now, a little bit about myself. I have been a member of the Tulsa Rock and Mineral Society for 54 years, having joined as a junior in November of 1959. I earned a BS in Geology from the University of Oklahoma and a MS in Geology from the University of Colorado and worked as a petroleum geologist in Houston, TX before the army decided they needed me more than Texaco did.

After the army, I became a high school science teacher in the Tulsa Public Schools, retiring in 2000. I taught mostly courses in biology and physics, but did get to teach geology for thirteen years. Paleontology is my main area of interest, and I have a rather extensive fossil collection. I also enjoy collecting minerals, rocks, and cutting material, but appreciate all phases of our hobby. But I must admit I haven't done any lapidary work in over 30 years. My wife Linda shares my interest in our hobby and has been the AFMS Bulletin Editors Advisory chair for several years. We have three grown sons currently living in Longmont, CO; Nashville, TN; and Houston, TX.

Once again, I feel honored to be serving as your AFMS President this year and am very much looking forward to it and hoping to attend as many of the regional federation

shows as possible. I will be sharing my thoughts with you on a number of aspects of our hobby and federation in future messages. Please feel free to contact me with your concerns and suggestions.

Richard

SCFMS President's Message THE NASH RAMBLER by John D. Nash

A Salute to Our Veterans

eterans Day: On the 11th of this month we celebrated Veterans Day in our great country. It was a celebration to honor America's veterans for their patriotism, love of country, and willingness to serve and sacrifice for the common good. Our men and women fought wars brave and true, Returned home honoring the red, white and blue. Thanks to our veterans for your service.

The Nashes and the James have been on the road. We drove to Jacksonville, Florida for the Annual Meeting of the AFMS held September 18 through the 22nd. Ann serves as the Third Regional Vice-President of the AFMS and I, as the President of the SCFMS, am a member of the Board of Directors. The meetings were held at the Jacksonville Marriott which was very convenient.

We were invited to see the stars and enjoy a picnic on the beach at Hanna Park. The picnic was great and Ann even found shark teeth on the beach, but the star gazing event was canceled because of rains earlier in the day.

The Jacksonville Gem & Mineral Society's 25th Show and Sale opened at Friday noon. I never miss an opportunity to go to a rock show—I do my best rockhounding there. The people at the show and meetings were all really friendly and helpful. It was also nice to meet the folks from the Federation with whom we had previously corresponded.

We had a great safe trip of over 1600 miles and were really thankful for "OnStar" even though sometimes she had to "recalculate." I did learn some new words and gestures from a guy on the freeway there in Jacksonville—I think he thought I was going to join him in his front seat. I'm sure you have all heard—Whatever happens in Las Vegas stays in Las Vegas—well the same thing applies in Jacksonville.

Did you realize that this December marks the 70th birthday of the South Central Federation of Mineral Societies? The Federation did not begin with this name but rather the name "**The State Mineral Society of Texas**." The organizational meeting was held in San Angelo in December of 1943. If you refer to the Web site for SCFMS, you can trace all the developments through the years. You can logon to the Web site at www.scfms.net. You may even want to download the Constitution and our annual directory.

I hope to see you and be able to visit with you at the next show we attend.

John D Nash

Show Time 2013 & 2014

December 6-8	El Paso, TX	El Pasdo Mineral & Gem Society El Maida Auditorium; 6331 Alabama Jeannette Carrillo, (877) 533-7153 gemcenter@aol.com
December 7-8	Round Rock, TX	Fossil FestPaleontological Society of Austin Old Settlers Association Headquarters 3300 Palm Valley Blvd. Hwy. 79 & Harrell Pkwy. showchair@austinpaleo.org www.austinpaleo.org/fest
	Sh	ow Time 2014
January 11	Arlington, TX	Arlington Gem & Mineral Club Annual Faceting Swap Meet AGMC Clubhouse, 1408 Gibbons Rd. Jack Spinks (214) 335-9452 e-mail: jlspinks@sbcglobal.net
January 18-19	Fredericksburg, T	XFredericksburg Rockhounds Pioneer Pavilion, Lady Bird Johnson Park Hwy. 16S; gedeonjim1@gmail.com
March 1-2	Robstown, TX	Gulf Coast Gem & Mineral Society Richard M. Borchard Regional Fairgrounds 1213 Terry Shamsie Blvd. www.gcgms.org
March 8-9	Pasadena, TX	Clear Lake Gem & Mineral Society' Pasadena Convention Center 7902 Fairmont Pkwy sara_chelette@sbcglobalnet.com www.clgms.org
April 25-27	Houston, TX	Fine Mineral ShowsAnnual Show Embassy Suites Hotel, 2911 Sage Rd. Near The Galleria-Houston. e-mail: dave@finemineralshow.com www.FineMineralShow.com
April 26-27	Lubbock, TX	Lubbock Gem & Mineral Society Lubbock Memorial Civic Center 1501 Mac Davis Lane E-mail: walt@lubbockgemandmineral.org Web site: www.lubbockgemandmineral.org

2013			December			2013
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 10–4 Shop Open	2	3 7:30 Board Meeting	4 7:30 Mineral Section	5 7:30 Archeology Section Hanukkah Ends	6	7 10–5 Shop Open 10–12 Youth Section Party
8 10–4 Shop Open	9 1:00 Day Light Section	10 7:30 Show Committee	11 7:00 Faceting Section Party 10-3 Shop Open	12	13	14 10–5 Shop Open HGMS Holiday Party
15 10–4 Shop Open	16 NO Lapidary Section	17 <mark>NO</mark> Paleo Section	18 NO Mineral Section Party to be announced 10-3 Shop open	19	20	21 10–5 Shop Open 10–12 NO Youth Section 1:30 Beading Section
22 10–4 Shop Open	23	24 <mark>NO</mark> General Meeting	25 Christmas Day	26	27	28 10–5 Shop Open
29 10–4 Shop Open	30	31 New Year's Eve				
2014	2014 January 2014					
Sun	Mon	Tuo	Wed	Thu	Eri	Sat
-		IUC	weu		ГП	Vat
			1 7:30 NO Mineral Section New Year's Day	2 7:30 Archeology Section	3	4 10–5 Shop Open 10–12 Youth Section
5 10–4 Shop Open	6	7 7:30 Board Meeting	Time17:30 NOMineral SectionNew Year's Day87:00Faceting Section10-3 Shop Open	2 7:30 Archeology Section	3 10	4 10–5 Shop Open 10–12 Youth Section 11 10–5 Shop Open
5 10–4 Shop Open 12 10–4 Shop Open	6 13 1:00 Day Light Section	7 7:30 Board Meeting 14 7:30 Show Committee	Vecu17:30 NOMineral SectionNew Year's Day87:00Faceting Section10-3 Shop Open157:30Mineral Section10-3 Shop open	2 7:30 Archeology Section 9	3 10 17	4 10–5 Shop Open 10–12 Youth Section 11 10–5 Shop Open 18 10–5 Shop Open 10-12 Youth Section 1:30 Beading Section
5 10–4 Shop Open 12 10–4 Shop Open 19 10–4 Shop Open	6 13 1:00 Day Light Section 20 7:30 Lapidary Section	7 7:30 Board Meeting 14 7:30 Show Committee 21 7:30 Paleo Section	Vecu17:30 NOMineral SectionNew Year's Day87:00Faceting Section10-3 Shop Open157:30Mineral Section10-3 Shop open2222	2 7:30 Archeology Section 9 16 23	3 10 17 24	4 10–5 Shop Open 10–12 Youth Section 11 10–5 Shop Open 18 10–5 Shop Open 10-12 Youth Section 1:30 Beading Section 25 10–5 Shop Open



<u>Houston Gem & Mineral Society</u>

Houston, Texas 77099 10805 BROOKLET (281) 530-0942



SCFMS







1998 - 2nd (Large) 2004 - 3rd (Large) 2007 - 1st (Large) 2010 - 2nd (Large) 2012 - 3rd (Large) 2013 - 3rd (Large)

DATED MATERIAL - PLEASE DO NOT DELAY !

1998 - 1st (Large) 2000 - 1st (Large) 2003 - 1st (Large) 2005 - 1st (Large) 2006 - 1st (Large) 2007 - 1st (Large) 2007 - 1st (Large) 2008 - 1st (Large) 2008 - 1st (Large) 2010 - 1st (Large) 2013 - 1st (Large) 2013 - 1st (Large) 2013 - 1st (Large) 2013 - 1st (Large)

AFMS

BELLAIRE, TX 77401 ORGANIZATION U.S. POSTAGE **NON-PROFIT** PAID

PERMIT NO. 303