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SLAB-GAB

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Member of: The South Central Federation of Mineral Societies &
The American Federation of Mineral Societies

Meetings—First Friday of Month

No meeting in July

P.O. Box 2804
Victoria, TX 77902

Purpose: To promote education and share our interest in the various earth sciences through the study of lapidary arts, mineralogy, and archaeology within the meaning of section 501 (c) (4) of the Internal Revenue Code of 1954 or the corresponding sections of future United States Internal Revenue Code.

The March meeting will be held Fri., March 4, at the Victoria Art League located at 905 S. Bridge, Victoria, TX. Fellowship-6:30, Competition Judging-6:45, Business Mtg.-7pm.

Precious Gems From the President

Hello VGMS Gems,

Our club continues to provide inspiration. Jay Allison exemplifies the interest of club membership to continue the effort to help and encourage our children to learn and understand about the earth. I know this first hand from Jay's giving of rocks for my son Joshua's recent 4th grade science project. Joshua's science project was about the porosity of rocks and why it is important to know about porosity. Jay not only selected samples of rocks from his collection that would exhibit varying porosity, he also shared how the rocks were formed and where they could be found. Of course Jay didn't stop at giving there; he also generously gave some other rocks for Joshua to study and enjoy outside of his project.

Thank you, Jay.

Thank you to all VGMS membership, you knowledgeable and creative people, for your giving. Your giving is appreciated whether it is inspired by a child's question or perhaps as simple as a shared observation.

Do you think of yourself as an educator? For yourself? For others? As a member of the Victoria Gem and Mineral Society, it is inevitable that you will find yourself in a learning situation and with an "educator" opportunity. Perspective. How you perceive your opportunity can make all the difference.

You joined the VGMS for a reason. Was it to learn? What is to teach? Thank you for cultivating empowerment, education, imagination. You never know what seed you might plant for the future.

Food for thought comes from C. S. Lewis when he said.....

"The task of the modern educator is not to cut down jungles, but to irrigate deserts."

With gratitude and respect,
Dave Winston Snell

Zoned Crystals: "Tree Rings" of the Mineral Kingdom

By Andy Weinzapfel

During my recent move from Colorado to Texas, I opened a time capsule of long-forgotten boxes of rocks and minerals in my garage and found some interesting curiosities--zoned corundum crystals.

About 20 years ago, passing through western Montana on a family vacation, a "going out of business" sign on a rock shop caught my attention. I stopped to look. After finding mostly average mineral specimens at average prices, I was about to leave. However, a jar of hexagonal grayish-red corundum crystals in the corner beckoned. I noticed several crystals were well zoned--that is, looking down the long "C" axis, a distinct pattern of multiple overlapping hexagons, like tree rings, could be discerned. I happily purchased the entire jar. Twenty years later, short work with my Diamond Genie produced a fine polish that accented their beauty considerably.

Corundum, aluminum oxide (Al_2O_3), has a Mohs hardness of 9, just below diamond. It occurs in quartzpoor, peraluminous (aluminum-rich) environments. Corundum forms barrel-shaped, stubby hexagonal crystals of variable color. Rubies and sapphire are the gem varieties of this mineral. Montana is known for its blue sapphires.

Crystals grow much like trees do, from the inside out. The presence of later multiple bands (zoning) indicate complex subtle changes have occurred in the parent magma, suggesting overall disequilibrium conditions. The more bands present, the more the magma has changed through time. In this regard, time is tricky business. Recent geochronology work suggests individual crystals have extremely variable magma residence times, ranging from about 10 years to 1 million years. The premise of crystal zone analysis is that information at crystal rims is the same in all crystals within a common environment. However, crystals gathered from different parts of a magma chamber may show different profiles regarding their growth history based on differing isotopic and trace element ratios. "Event tree" or "mixing phylogeny" analyses seek an understanding of the evolution of the parent magma through time, using information from zoned crystals as the primary evidence. This story cannot emerge from only conventional whole rock or single-crystal analyses. Perhaps some zoning may be due to hiatus (pauses) during growth, defects, or mineral inclusions rather than bulk chemical compositional changes.

A naturalist once told me that those who analyze tree rings do not just look at a raw wood cross section or core cut from a tree to determine its age and growth environment. As any woodworker knows, a fine polish accents the grain (rings) much better. The number of tree rings may be greatly underestimated if a microscope is not used. Likewise, polishing crystals brings out the zoning much better. When dealing with hard corundum, of course, diamond equipment is highly desirable to limit wheel wear. Electron microprobe work can perform chemical analyses on spots as small as one micron (one thousandth of a millimeter). This allows much more detail regarding the chemical changes and growth history of a zoned mineral.

Zoned crystals of some minerals are not particularly rare. They have most often been found in igneous intrusive (plutonic), igneous extrusive (volcanic), metamorphic rocks, and hydrothermal ore veins. Garnets, fluorite, quartz, tourmaline, plagioclase feldspar, vesuvianite, and corundum are some of the more typical minerals displaying zoning. While many minerals are zoned, their "rings" are often extremely subtle, requiring hand lens, microscope, or even microprobe to recognize and appreciate. Mineral specimens displaying obvious megascopic zoning make excellent displays. Zoned minerals could be a theme of interesting mineral displays. I am frankly puzzled that zoned crystals seem to be out of the mainstream of gem and mineral shows.

Bowen's Reaction Series predicts the order minerals precipitate out of a molten magma during gradual cooling. Specific minerals form at specific temperatures. As minerals are removed from the melt, composition of the magma changes, sometimes in dramatic ways. For example, the felsic (light-colored) Pikes Peak granite of the mountain which inspired "America the Beautiful" is thought to have evolved from mafic (dark-colored) gabbro. These are exceedingly different rocks! Bowen noted that calcium plagioclase feldspar (anorthite) crystallizes before sodium-rich feldspar (albite). Indeed, microprobe analyses of zoned plagioclase crystals show cores of high calcium and rims of high sodium.

References

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Lessing, P. and Standish, R., 1973, Zoned garnet from Crested Butte, Colorado: *American Mineralogist* V 58 P840-842

Wallace, G and Bergantz, G., 2003, The multiple personalities of zoned crystals: complex growth histories, the mixing phylogeny, and geochronology, with applications to the Lassen volcanic system: in *GSA Abstracts with programs*, v35

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From The Arlington Gem and Mineral Club, The Hound's Tale, Vol.59, Issue 1, January 2009



<http://www.irocks.com/render.html?species=Corundum&page=9>

Important Dates in January

4th- Patty Shay, birthday

28th- Bunny Toradt, birthday

Les Pagel will lead a beading workshop for the March activity. "Bead Spray Brooches" will be constructed. Les will have kits available for \$10 ea. for anyone wanting to participate. This is the activity that was originally scheduled for the February meeting, which was cancelled due to weather concerns.

Les would appreciate any help you could give with the school presentation on March 6th.

SUPER PICKLE

We've all made the mistake of putting some steel in the pickle pot. This can cause all your pieces to be coated with copper. Easiest way I've found to clean it off is to fill half a coffee cup with the pickle and put in an ounce or two of hydrogen peroxide from the drug store. Throw your pieces in and the coating is gone in about 10 minutes. When finished, pour the solution back into your pickle pot.

More BenchTips by Brad Smith are at:
groups.yahoo.com/group/BenchTips/

or

facebook.com/BenchTips

From Vice to Gneiss: How Rockhounding Changed My Life

By Anita D. Westlake

When I was 12 years old, I found a small, quartz crystal cluster on the 14 acre plot of land where I called home above the Chattahoochee River. It was an idyllic place, comprised of pine trees, ancient oaks and a shallow band of running water named Sope Creek. I always thought it was "Soap" creek, and assumed it had lots of bubbles in it. Little did I know then that not only did it have no bubbles (or pollution at the time), it was laced with garnets and kyanite. Almost 20 years later, I would meet and become good friends with a guy that used to collect rocks in my very own Sope Creek. **Lesson number 1:** Life has a way of making strange connections. Pay attention!

I was stirring up the soil at the base of an old pine tree with a knarled stick, when I accidentally uncovered the quartz cluster's tip. I begin digging in earnest and found the most remarkably shaped rock I had ever seen. Surely, it must be worth millions. Perhaps it was a diamond in the rough or a valuable space-age mineral that NASA would pay a handsome sum to own. I waited all day for my father to come home from work and rejoice with me in my valuable treasure. When I showed him the cluster, he calmly said "It's quartz. It has no value. It is used in radios and watch movements." I stopped listening after "It has no value." How could my brilliant father make such a statement? Even if it had no intrinsic value, it had value as an extremely cool looking rock that came straight from the ground with natural points and smooth sides. I'm pretty sure this was when I decided that my father, even though he belonged to the esteemed Mensa Society, did not know what he was talking about.

Had I known at the age of 12 that a rock club existed near me in Atlanta, Georgia, and members valued such rocks as much as I did, who knows where I might be today? I'm sure I would be a geologist, or science teacher. But I didn't know that there were people like me who thought the things nature wrought were beyond beauty and comprehension. The quartz cluster was soon forgotten in the day to day business of living.

Six years later, when I turned 18, I got a job as a bartender. I spent my days sleeping, and my nights making drinks for the crazy, the disenfranchised, the lonely and the occasional "normal" person who just wanted to relax a bit before going home to life's chaos. I probably heard more things than a naïve, 18-year-old girl should have heard. Almost every night after work I would go out with the waiters and waitresses of our restaurant and blow off a little steam. Since I couldn't drink at work, I would try out the night's concoctions at a local bar with my buddies. We would drink and dance until the wee hours of the morning. Rocks and minerals were long buried in the locked recesses of my youth.

Another 6 years would go by before I accepted a "real" job at a university library. It was high time I settled into a routine, and landing a library job certainly put a choke collar on my unfettered vices. It was there that I became friends with a woman who also liked rocks. She introduced me to a member of the Georgia Mineral Society who worked in the same building I did. We got to talking, I brought some of my rocks in to work to show him, and the rest, as they say, is history. He recommended me to the Georgia Mineral Society, my husband and I were accepted, and so began a journey of new friends, new discoveries, and a different way of looking at the world. **Lesson 2:** Go with the flow and see where you end up.

Our first field trip with the club was to "The Hackney Farm" where we would collect staurolite, the official state mineral of Georgia. I had no idea what to expect. I brought a backpack full of tools, lunch and baggies. I hoisted the well-packed bag over my shoulders and began what I thought would be an arduous march through field and fen, when I realized we were already at the collecting site! I watched as others began digging and sifting and sorting. I didn't know a soul in the club, and thought I should just watch and not make a complete fool of myself.

I watched as a couple playfully dipped their collecting buckets into the creek and threw the contents gleefully at each other. Were these the serious, clipboard-toting geologists I thought I would encounter on my first field trip? No! Even better: they were a bunch of fun-loving rock collectors who enjoyed every minute of every day and didn't apologize for it.

Many months later, on another field trip with the group, an "old-timer" who later became my good friend,

Kim Cochran (who was the one who had collected rocks in Sope Creek), pointed to a rock and said "That's gneiss." I looked down on the rock he was referring to, and didn't see anything so nice about it. I thought the sun had taken its toll on Kim's brain, and just chalked it up to "each his own." It wasn't until several field trips later that I learned the difference between "gneiss" and "nice". I guess that's the initiation a newbie has to go through to win their rockhounding badge.

Here I am, more than twenty years later. I know what "gneiss" is. I know what a trilobite's pygidium is. I can tell the difference between chert and flint at 20 paces. I am an "old-timer". **Lesson 3:** Learn as much as you can.

My association with the Georgia Mineral Society has sparked an interest in all things rock, mineral and fossil related. I have even ventured to the "Dark Side" and started studying meteorites and tektites. I have learned more in 20 years than I could ever learn from school or a library full of science textbooks. I have made more friends than I thought possible. I have laughed more, shared more and become more than I would have ever believed. This once shy girl now gives talks all over the southeast on just about any rock-related subject you could come up with. I curate and house a vast collection of specimens in my home. I teach lapidary classes. I have my own in-home lapidary studio. **Lesson 4:** Inspire others. **Lesson 5:** Share your discoveries.

My life has been incredibly enriched by the people, places and rocks I have encountered

Lesson 6: Appreciate how lucky you are!

From The Georgia Mineral Society, Tips and Trips, Volume XXXVIII/December 2009

Upcoming Shows

March

05-06 ROBSTOWN, TX GULF COAST GEM & MINERAL 49TH ANNUAL SHOW JEWELRY-MINERALS-FOSSILS BEADS AND MORE! RICHARD M. BORCHARD REGIONAL FAIRGROUNDS 1213 TERRY SHAMSIE BLVD, ROBSTOWN TX Sat. 10-6** Sun 10-5 KIDS WHEEL-DOOR PRIZES-VENDORS DISPLAYS-SPEAKERS ADMISSION \$5.00 TWO DAY PASS Under 12 FREE WITH ADULT PURCHASE

5-6—BIG SPRING, TEXAS: 42nd annual show; Big Spring Prospectors Club; Howard County Fair Barn; Sat. 9-5, Sun. 10-5; free admission; gems, minerals, jewelry, dealers, demonstrations, displays, spinning wheel, hourly prizes, jewelry repair, stone setting; contact Jerald Wilson, 707 Tulane, Big Spring, TX 79720, (432) 263-4662, or Lola Lamb, (432) 263-3340

19-20—LIVE OAK (SAN ANTONIO), TEXAS: 50th annual show, "Fiesta of Gems"; San Antonio Gem & Mineral Society; Live Oak Civic Center, 8108 Pat Booker Rd.; Sat. 10-6, Sun. 10-4; adults \$5, seniors \$3, students \$2, children 50 cents; 25 dealers; minerals, fossils, jewelry, gemstones, crystals, club exhibits, silent auction, games, hourly door prizes, silent auction; contact Robert Bowie, 1324 Kings Point Dr., Canyon Lake, TX 78133; e-mail: krbotx@gvct.com; Web site: www.swgemandmineral.org

April

9-10—ABILENE, TEXAS: Show and sale; Central Texas Gem & Mineral Society; Abilene Civic Center, 1100 N. 6th; Sat. 10-6, Sun. 10-5; adults \$3, children \$1.50; geode cracking, fossils, minerals, gems, jewelry, lapidary demonstrations, findings, beads, tools, supplies, rough; contact Betty Scarborough, 422 CR 606, Tuscola, TX 79562, (325) 668-2374; e-mail: waltswife1029@yahoo.com; Web site: www.txol.net/rockclub

9-10—RICHARDSON, TEXAS: Wholesale and retail show; The Bead Market; Richardson Civic Center, 411 W. Arapaho; Sat. 10-5, Sun. 10-4; free admission; dealers, gemstones, pearls, glass, lampwork, PMC, findings, silver, tools, books; contact Rebekah Wills, (903) 240-7198; e-mail: rebekah@thebeadmarket.net; Web site: www.thebeadmarket.net

15-17—ALPINE, TEXAS: Show, "Alpine Agate Festival"; Chihuahuan Desert Gem & Mineral Club; Alpine Civic Center, Hwy. 90W and 13th St. N; Fri. 9-6, Sat. 9-6, Sun. 11-5; free admission; South Central Federation convention, grand prize, door prizes, silent auctions, field trips, kids' corner, demo dealers; contact Mary Brogan, P.O. Box 1111, Alpine, TX 79831, (432) 386-2340; e-mail: marybrogan@rocketmail.com; Web site: www.cdgm.org

16-17—WACO, TEXAS: Annual show; Waco Gem & Mineral Club; Texas State Technical College, Industrial Tech. Bldg., Crest Dr., off I-35, north of Waco; Sat. 10-6, Sun. 11-5; adults \$5 (both days); contact Karen Wood, 2315 Colcord, Waco, TX 76707, (254) 755-7274; e-mail: kwood@hot.rr.com; Web site: www.wacogemandmineral.org

30-1—LUBBOCK, TEXAS: 53rd annual gem and mineral show; Lubbock Gem & Mineral Society; Lubbock Memorial Civic Center, 1501 Mac Davis Ln.; Sat. 10-6, Sun. 10-5; adults (13+) \$4, seniors (65+) \$3, ages 6-12 \$2, under 6 free with adult; wire-wrapped stones, precious stones, jewelry, minerals, fossils, rough rock, dealers, demonstrators, exhibits, hourly door prizes, silent auction, grand prizes; contact Archie Scott, 2709 Belvedere Rd., Levelland, TX 79336, (806) 894-1584; e-mail: archie.scott73@yahoo.com

"Code of Ethics"

- I will respect both private and public property and will do no collecting on privately owned land without permission from the owner.
- I will keep informed on all laws, regulations or rules governing collecting on public lands and will observe them.
- I will, to the best of my ability, ascertain the boundary lines of property on which I plan to collect.
- I will use no firearms or blasting material in collecting areas.
- I will cause no willful damage to property of any kind such as fences, signs, buildings, etc.
- I will leave all gates as found.
- I will build fires only in designated or safe places and will be certain they are completely extinguished before leaving the area.
- I will discard no burning material - matches, cigarettes, etc.
- I will fill all excavation holes which may be dangerous to livestock.
- I will not contaminate wells, creeks, or other water supplies.
- I will cause no willful damage to collecting material and will take home only what I can reasonably use.
- I will practice conservation and undertake to utilize fully and well the materials I have collected and will recycle my surplus for the pleasure and benefit of others.
- I will support the rockhound project H.E.L.P. (Help Eliminate Litter Please) and will leave all collecting areas devoid of litter, regardless of how found.
- I will cooperate with field-trip leaders and those in designated authority in all collecting areas.
- I will report to my club or federation officers, Bureau of Land Management or other authorities, any deposit of petrified wood or other materials on public lands which should be protected for the enjoyment of future generations for public educational and scientific purposes.
- I will appreciate and protect our heritage of natural resources.
- I will observe the "Golden Rule", will use Good Outdoor Manners and will at all times conduct myself in a manner which will add to the stature and Public Image of Rockhounds everywhere.

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