



Member: South Central
Federation of Mineral
Societies



Affiliated: American
Federation of
Mineralogical Societies



February 2022
Vol. 56, Issue 2

1st Place, 2019 SCFMS Mini-Bulletin
1st Place, 2017 AFMS Mini-Bulletin

FLUORAPATITE

Have you ever seen fluorapatite (also spelled fluoroapatite)? Show us your pearly white teeth- the odds are that some of the enamel of the teeth is fluorapatite. The primary composition of tooth enamel is hydroxyapatite, but if you drink water that has been treated with fluoride, had a fluoride treatment by your dentist, or brushed your teeth with a toothpaste containing fluoride, then some of the hydroxyapatite has been changed to fluorapatite. The odds of encountering fluoride are quite high in the United States. A fluoride ion in the water treatment, dental treatment, or toothpaste can replace the hydroxide ions in hydroxyapatite. The resulting fluorapatite in the enamel makes the teeth slightly more resilient, more cavity resistant, and is bacteriostatic meaning it helps prevent cavities from growing. Oh my. that pearly white smile is nice!

Fluorapatite is a member of the Apatite group and has the chemical makeup of calcium fluorophosphate [$\text{Ca}_5(\text{PO}_4)_3\text{F}$]. It has a Mohs hardness of 5 and a white streak. It forms in both massive form and hexagonal crystals. The massive form is mined as an ore to make phosphoric acid with hydrofluoric acid as a by-product. It can also be used in the initial process to produce white phosphorus. Until the 1990s, synthetic fluorapatite was doped with magnesium and antimony for lining the inside of white fluorescent lights. In crystalline form, fluorapatite may be used as mineral specimens or cut gemstones.

So, we finally hit the highlight – it can be a mineral specimen or gemstone. If pure, fluorapatite is colorless, but if trace amounts of certain minerals are trapped in the crystalline matrix, it can be blue, sea-green, violet, purple, pink, yellow, or brown.

Fluorapatite can be found on every continent, including Antarctica. Several Texas locations are shown on Mindat.com. Of all the phosphorus minerals, fluorapatite is the most common



References:

- Fluorapatite, Hydroxyapatite, Wikipedia, <https://en.wikipedia.org/wiki/Fluorapatite>
- Fluorapatite, Mindat.com. <https://www.mindat.org/min-1572.html>

Picture: Fluorapatite, photo by Rob Lavinsky, iRocks.com – CC-BY-SA-3.0

Federation News

From the Desk of the AFMS President

Margaret Kolaczyk President
From the Dec 21-Jan 22 AFMS Newsletter



The holidays are upon us, and here is wishing everyone safe travels and a joyous time. First I would like to introduce the AFMS EXECUTIVE COMMITTEE FOR 2021/2022. These individuals are your representatives for your regional federations.

Contact information will be on the website amfed.org. Even though the AFMS Convention is not until October 2022, if you have something that you feel needs to be brought to the attention of the executive committee, please contact your representative.

President Margaret Kolaczyk CFMS
President-Elect Matt Charsky EFMSL
1st Regional Vice President Roger Burford SCFMS
2nd Regional Vice President David Rich MWF
3rd Regional Vice President Ronna Watkins NMFS
4th Regional Vice President Steven Henegar SFMS
5th Regional Vice President Liz Thomas RMFMS

As I mentioned in the November Newsletter, here are the new individuals who have stepped up to the challenge. Please give your support as they start on their new journey for AFMS.

Bulletin Editor's Advisory - Susan Burch SCFMS
Bulletin Editor's Hall of Fame - Frank Mullaney CFMS
Conservation & Legislation - Jerrold Simpson SCFMS
Junior Activities - Lora Hall NFMS
Long Range Planning Chair - Judy Beck RMFMS
Parliamentarian - Sandy Fuller MWF
Past President's Advisory - Judy Beck RMFMS
Program Competitions - Delaney Cox RMFMS
Publications - Lee Whitebay RMFMS

At present, there are two AdHoc committees started before I became president. One is the redesign of the AFMS Website and the other is the Junior Website. Both of these committees have been working hard and have done an outstanding job. At Big Piney, these committees did presentations on what had been accomplished to date. In future newsletters, more information will be made available.

I am adding an AdHoc committee to be headed by Lee Whitebay. The goal of this committee is to work on how to bring more interest in having more competitive displays at the regional shows, continue the philosophy that judges are teachers, review the Uniform Rules Manual, and have more individuals who can train judges.

Happy holidays and safe travels.

Chips and Chatter

Pleasant Oaks Gem and Mineral Club of Dallas, TX

SCFMS Elections Results

By Kimberly Brannon, SCFMS Executive Secretary
From the Jan – Feb 2022 SCFMS Newsletter



First, I'd like to thank you for your patience as we waited for mail-in ballots, tallied the votes, and had the results confirmed by Ron Carman, who kindly served as our neutral auditor.

Our candidates agreed, since there were three tickets, to acknowledge the ticket with the highest number of votes as the winner. Before I announce which ticket had the highest vote, I'd like to recognize the valuable contribution each of you has made to the Federation and I hope you'll continue to remain involved. We have open positions which will always need as many willing hands as we can gather. As one of the Club Presidents suggested, our Bylaws Committee could explore the possibility of having offices of VP1 and VP2, expanding the responsibilities of the VP office, and (in my opinion) bringing more stability to the core directors of our organization.

The race was impossible to call, right up to the moment the final mailed ballot was received. The winning ticket was only declared so by a margin of ONE VOTE. If any vote had been declared invalid, it could have resulted in a tie and a runoff. I did my best to ensure every unsigned or irregular vote included the email or text exchange to validate its authenticity. Ron confirmed our results. As of January 1, 2022, our new SCFMS Officers are Roger Burford, President, and Don Shurtz, SCFMS Vice President.

Our results were as follows:

Of 45 available votes, we received 32 total votes from SCFMS Officers and Directors, reaching quorum.

Ticket One: Jerrold Simpson and Don Shurtz, 12 votes

Ticket Two: Roger Burford and Don Shurtz, 13 votes

Ticket Three: Jerrold Simpson and Roger Burford, 7 votes

Congratulations to our new (or returning) officers!

Merry Christmas, everyone, and much health and happiness for 2022.

Kimberly Brannon, SCFMS Executive Secretary

Bench Tip from Brad Smith

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MAGNETIC TOOLBAR

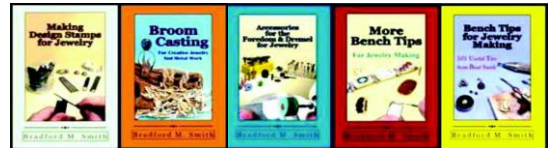


An easy way to keep all your files organized at the bench is to use a magnetic tool strip. They're not expensive and help keep a lot of small tools from cluttering the benchtop. I got a couple of

them from Harbor Freight for about \$5 each. See <http://www.harborfreight.com> and search on "magnetic-holder"

My only regret was putting some of my small drills on the magnets. The drills got a little magnetized and now stick together when I carry them in a bottle in my toolbox.

Work Smarter & Be More Productive With Brad's "How-To" Jewelry Books



Meeting Location – Next Meeting

As I am sure everyone knows, our meeting location at the Garland Activities Building is no longer an option. The City of Garland is converting it to office spaces for the library. It was nice to be in downtown Garland. So, the search is on. Our last meeting was held at Spring Creek Barbeque. We discussed both the Spring Creek Barbeque in Garland (Firewheel Shopping area) and Richardson. Unfortunately, not everyone read the January Chips and Chatter which mentioned Spring Creek Barbeque Richardson three times as the meeting place. Half of us went to Richardson and half to Firewheel – Oh Well! Thanks to the generosity of the Dallas Gem and Mineral Club, our next meeting will be in the training room at their shop at **10205 Plano Road, Dallas**. But,

finding the address is not as straightforward as one would like to believe.



If you are coming from south of 635, go north on Plano Road, or if you are on I-635, exit north on Plano Road. After you cross under I-635 you will cross under a Railroad bridge – Turn **LEFT** at the next opportunity. It looks like a road, but it is a driveway from Plano Road and all the businesses have Plano Road addresses. 600 feet down this driveway on the north side you will see a smaller building with a flagpole in front. This building houses an American Legion Post, Warner's Shop, and the **Dallas Gem and Mineral Society**. As you face the building, DGMS is the furthest door to the right.

If you are coming from north of I-635, go south on Plano Road. As you approach I-635, look for that last Right Turn before you reach the railroad bridge. Turn Right down that drive about 600 feet to find the building with the flagpole (see paragraph above). Also, look for the intersection pictured to the left. The big sign, at the top,

says INTERSTATE INDUSTRIAL PARK. If you can, use a GPS to guide you or use a Map Program to get a feel of how to get there. The bottom line is just North of I-635 down the drive about 600 feet. If you still have questions, call me and I will see if I can help more. I would also suggest that if it is your first time to the DGMS facility you

should drive it during the day to familiarize yourself with the route.



AN 8TH CONTINENT? Matthew Lybanon, Editor, MAGS Rockhound News 11-12/2021

About 3,500 feet under the South Pacific sits a piece of land adjacent to New Zealand, 2 million square miles in size—about half as big as Australia. But scientists can't agree on whether this submerged landmass—a collection of submerged chunks of crust called Zealandia (or the Māori name Te Riu-a-Māui) that broke off an ancient supercontinent called Gondwana about 85 million years ago is a continent or not. A team of geologists declared it one in 2017, but not all researchers are convinced.

Nick Mortimer, a geologist from New Zealand's GNS Science who led the 2017 group, explains that a continent should have clearly defined boundaries, occupy an area greater than 1 million square kilometers, be elevated above the surrounding ocean crust, and have a continental crust thicker than that oceanic crust. Zealandia meets all those stipulations. The problem, however, was that until recently, the oldest crust and rock ever sampled from Zealandia was just 500 million years old, whereas all the other continents contain crust that is 1 billion years old or more. But a recent study found that part of the submerged continent is twice as old as geologists previously thought, which could boost Mortimer's argument.

Tiny mineral grains taken from granite rocks have led to a potential breakthrough in ancient continental reconstructions. The geologists behind the recent research (published in *Geology*) looked at 169 chunks of Zealandia granite, which were found under New Zealand's South and Stewart Islands.

Granite forms when magma crystallizes deep within the Earth's crust. The granites were brought to the surface by an uplift of the Zealandia continent in response to earthquake activity along a plate boundary over millions of years. By extracting microscopic crystals from the granite, the team was able to determine both the age of the crystals themselves and of the crust in which they formed. The results showed that crust was once part of another supercontinent known as Rodinia, which formed between 1.3 billion and 900 million years ago—far earlier than 500 million years ago.

Dr. Rose Turnbull (also of GNS Science, and one of the authors of the *Geology* article) says that a key finding in this study was the unique isotopic signature measured in microscopic grains of zircon ($ZrSiO_4$), a mineral that is found in all granites. The isotopic composition of zircon is used in geology to understand deep time and can be used to reveal what the Earth's crust looked like both at and deep below the surface.

"To use a human analogy, all of today's eight continents have older ancestors such as Gondwana, Laurasia, and Pangea.

"The new study has enabled scientists to place Zealandia in the 'family tree' of continents descended from Rodinia."

With this new information, Zealandia may yet turn out to be a 'missing link' between South China, Australia, and North America—and this opens up the position of South China and Zealandia within Rodinia to new international scrutiny, Dr. Turnbull says.

References:

- Ringwood, M.F., et al., 2021, Phanerozoic record of mantle-dominated arc magmatic surges in the Zealandia Cordillera: *Geology*, v. 49, p. 1230–1234, <https://doi.org/10.1130/G48916.1>
- Mortimer, N., et al., 2017, Zealandia: Earth's Hidden Continent: *GSA TO-DAY*, v. 27(3), p. 27-35, <https://doi.org/10.1130/GSATG321A.1>

Article from 11-12 2021 MAGs newsletter via AFMS Newsletter Dec 2021/Jan 2022 and SCFMS Jan-Feb 2022 Newsletter
Photos: Above left, Google search on the Internet. Right, Waitaki Whitestone Geopark.



VISIT AN AREA CLUB

[Arlington Gem & Mineral Club](#), meets the 1st Tuesday of each month at 7:30 pm, 1408 Gibbins, Arlington, TX
[Cowtown Gem, Mineral, & Glass Club](#), meets the 2nd Tuesday at 7:00 pm, CERA 3300 Bryant Irvin Rd. Fort Worth
[Dallas Bead Society](#), meets 1st Saturday of each month at 10:00 am at The Point at CC Young, 4847 W. Lawther Dr., Dallas, TX
[Dallas Gem & Mineral Society](#) meets the 3rd Tuesday of each month at 7 pm, American Legion, 10205 Plano Rd, Dallas (next to their shop)
[Dallas Paleontological Society](#), meets 2nd Wed. of each month at 7:00 pm, Brookhaven College, Building H, 3939 Valley View Lane, 75244
[Fort Worth Gem & Mineral Club](#), meets 4th Tuesday of each month at 7:30 pm, 3545 Bryan Avenue, Ft. Worth
[Oak Cliff Gem & Min Soc.](#), meets the 4th Tuesday of each month at 7:30 pm, Unitarian Universalist Church, 3839 W. Keist Blvd, Dallas,
[Pleasant Oaks Gem & Mineral Club](#), meets the 1st Thur. of each month at 7:30 pm, Garland Women's Activities Bldg., 713 Austin, Garland
[Wild West Bead Society](#), meets 3rd Tuesday of each month at 6:30, Wild Beads, 2833 Galleria Dr., Arlington, TX

CLUB OFFICERS FOR 2022

President: Don Shurtz
1st VP, Programs: Carolyn Grady
2nd VP, Field Trips: Judy Wilson
Secretary: Amy Vulk
Treasurer: Ling Shurtz
Editor: Don Shurtz
Contact us by e-mail: don.shurtz@gmail.com or
L.SHURTZ@gmail.com

Minutes

There were no minutes from the January 2022 meeting. We met at Spring Creek Barbeque in Richardson, but due to a misunderstanding, about half the members were at Spring Creek Barbeque in Garland (Firewheel). After eating, we did have an informal discussion about where we could meet in the future. We did decide for the February meeting we would meet at the Dallas Gem and Mineral Societies' shop training room at 10205 Plano Road, Dallas, TX (see map below). Joe Vulk also agreed to look into costs for meeting at

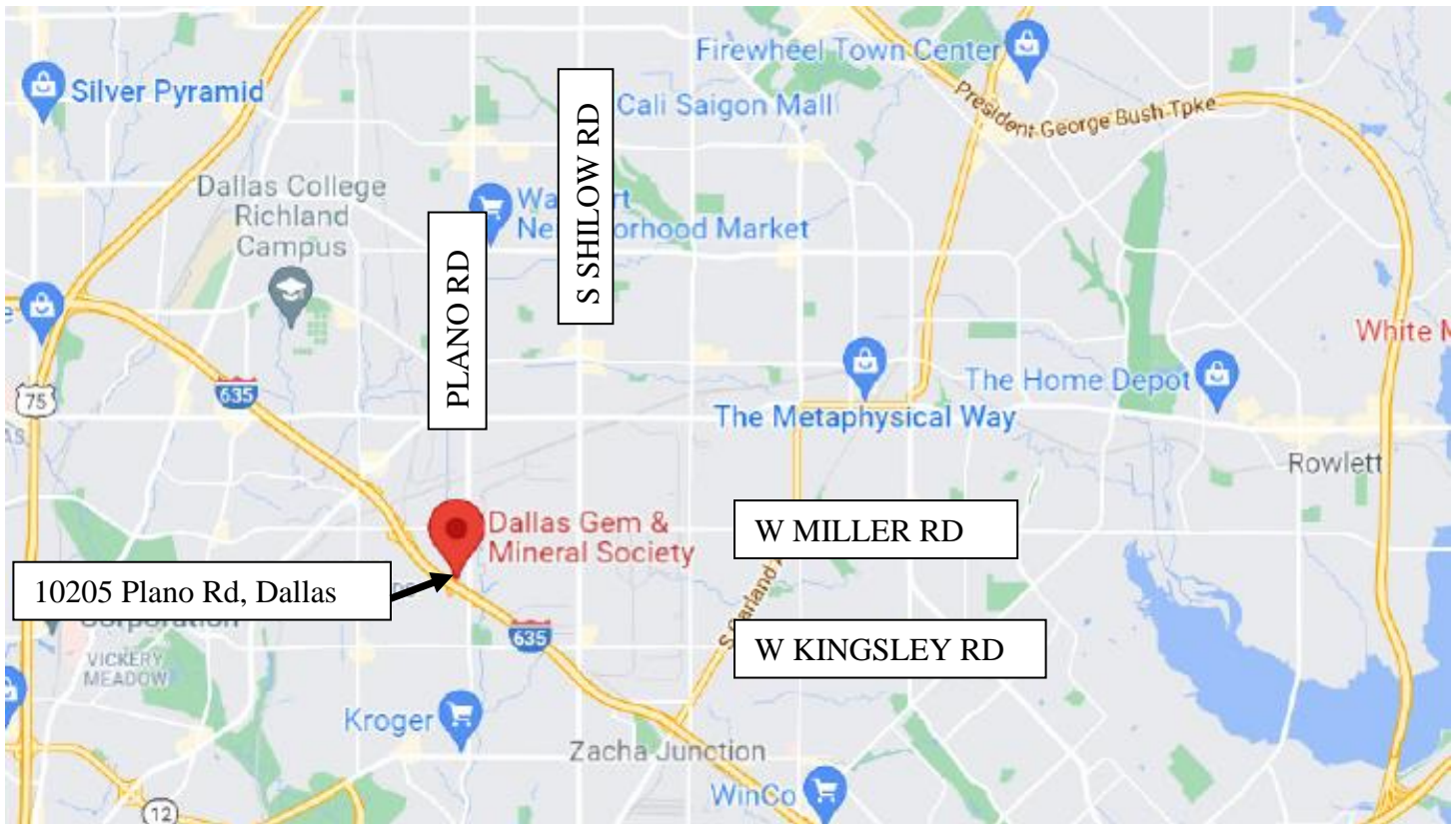
the Knights of Columbus building. The rest of us should be looking at other options for a meeting facility.

February 2022 Meeting

The next club meeting will be on February 3, 2022. We will start at 7:30 PM The meeting will be at The Dallas Gem and Mineral Society Shop Training Room, 10205 Plano Rd, Dallas, TX. For this meeting, we will skip any Presentations and continue the discussion of potential meeting places

VISITORS ARE ALWAYS WELCOME

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PLEASANT OAKS GEM and MINERAL CLUB of Dallas



Meetings
 First Thursday of each month, 7:30 PM
 ?????
 ?????

Membership
 Single Adult: \$16.50,
 Junior: \$5.00, Family: \$27.50
 (Plus badge fee for new members)

PURPOSE

The Pleasant Oaks Gem and Mineral Club of Dallas is organized for charitable and educational purposes to promote interest in the various earth sciences, particularly those hobbies dealing with the art of cutting and polishing gemstones, the science of gems, minerals and metal crafts, as well as their related fields. Pleasant Oaks Gem and Mineral Club of Dallas is a Section 501(c)(3) not-for-profit organization

CHIPS AND CHATTER

Pleasant Oaks Gem & Mineral Club
 PO Box 831934
 Richardson, TX 75083-1934

To

:

VISITORS ARE ALWAYS WELCOME

Meetings: First Thursday of each month, usually at 7:30 PM. Our next meeting will be on **February 3, 2022, starting at 7:30 PM. We will meet at the DGMS Shop Training Room, 10205 Plano Rd (see pages 3 & 5)**

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Chips and Chatter

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