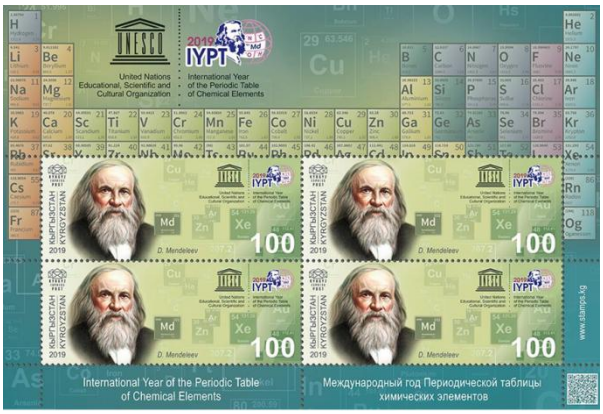
Wayne County Gem and Mineral Club News

May, 2019

Always Looking for Places to Dig!



2019 is the International Year of the Periodic Table on its 150th anniversary (see page 3)

http://www.wcgmc.org

FACEBOOK link

NRWHS visits WCGMC workshop (see page 4)

May Meeting

Friday May 10th, 7:00 PM

Park Presbyterian Church, Maple Court, Newark, NY

Program: Bring your favorite fossils to share and tell stories. Bragging about how you collected them is OK too!

We will also be doing some work getting ready for GemFest. We have postcards that require labeling, road signs to hand out, and more.

Bring your schedule for Friday-Sunday May 31-June 2 and sign up to help us set-up, run events, and take down. It is work, but it is also fun. For more about GemFest planning see Linda's column on page 2.

For those who pre-ordered the new club T-shirt, you will be able to pay for them and pick them up at the May meeting. Bring cash or check.

Upcoming WCGMC Workshop
May 11th

When: 10:00 AM until mid-afternoon
Where: The Weiler's Barn /Club Workshop
6676 E. Port Bay Rd, Wolcott, NY
Rules: Bring your own rocks.
Training on equipment is available.
Eye protection is required.
$5/adult to offset maintenance costs.

Wayne County Gem & Mineral Club

26th annual **Gem Fest 2019**

Sat. June 1 10-5
Sun. June 2 10-4

Greater Canandaigua Civic Center
250 N. Bloomfield Rd, Canandaigua, NY

$3 Admission, Kids 12 & under FREE

Soapstone Carving, Wire Wrapping, Sluice Vendors, Exhibits, Free Prizes, Scavenger Hunt Rock painting, Jerry's Dinosaur and much more

UV Bob's Fluorescent Mineral Show

Gems, Minerals, Fossils, Beads & Jewelry

visit http://www.wcgmc.org/ for details

President's Message

Linda Schmidtgall

Collecting season has finally begun. It was really great to see 27 WCGMC members swinging hammers and sifting through rubble at Ace of Diamonds on opening day. I hope everyone went home with a few new "diamonds" for their collection. Eight of us were at it again this past Saturday (April 20th) at Sterling Hills. We thank the UV Nomads and Ken St. John for inviting us to join them. There was new Sterling Hills material from the 1300 foot level of the North Ore Body and I found several pieces of prehnite in the "International Pile". Several of our members enjoyed the underground tour that was offered.

But soon it will be May and time to get serious about planning for GemFest. We'll spend time at the May meeting on some preparation work (handing out road signs, putting labels on postcards, etc.). In the meantime, the other way everyone can help is to spread the word: tell your friends, print some flyers from the webpage (or take some at the May meeting) and post them in your church or at the local store or hand them out at your kids' events. Word of mouth seems to be the best way to reach the most people. If you are on Facebook, share the Event we have created on the Group webpage or create your own. It all helps.

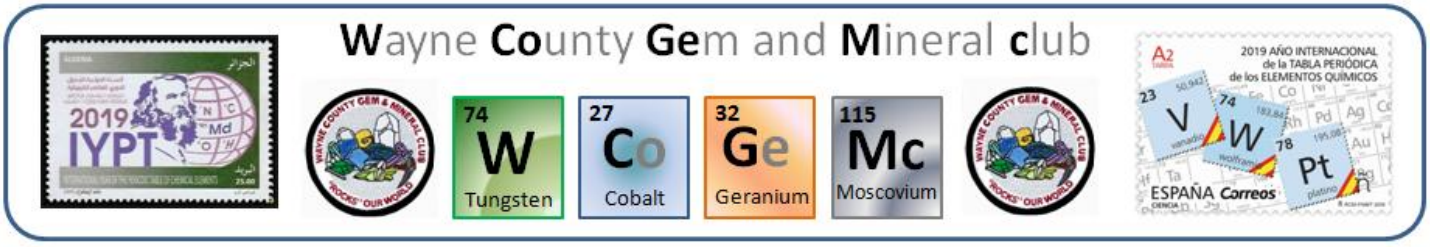
And soon enough May will pass and the show will be upon us. We will really need help on Friday May 31st for set-up and then Saturday-Sunday June 1-2 while the show is open.

On Friday, we will put together several hundred grab bags (6 rocks and labels/bag) and also several hundred sluice bags with sand and some goodies for folks to find when they operate the sluice. Some of the dealers may need help unloading and we'll have several tables with crafts to organize. We'll also be setting up the new display cases Glenn has built. If you think you want to show your finds or your creations this year let me know. Remember, there will be a $50 prize for the case selected by those attending the show as "Best in Show".

On Saturday and Sunday we will need folks at the front club table and at all of the activities. We have an idea who is stewarding each location, but they will sure need help. If you attend the meeting on May 10th you can sign up for a slot or if you just want to help where needed that is fine also. On Sunday afternoon, we try to break everything down in 2-3 hours starting at 4 PM and we will need all hands on deck late Sunday afternoon.

And while some of us were collecting in New Jersey on April 20th (see page 6), the club's workshop was open in Wolcott!. WGMC was multi-tasking!

Photos by Heidi Morgenstern



AN ELEMENTAL CELEBRATION

By Fred Haynes

Contrary to what you may have thought in high school, the Periodic Table of the Elements was not created to torture high school chemistry students. The idea was simple at first. Aristotle considered a four element table way back in 330 BCE. He identified earth, air, fire and water as the four elemental building blocks. But others since have not been satisfied with his simple approach, and the list grew and with that came complexity.

By the 1700's some 30 elements had been isolated and described and that grew to over 60 by the middle of the 19th century. And it was in the middle of the 19th century that several chemists and inventors working independently began to recognize patterns in those elements and began to organize them into lists and tables. A Russian chemist named Dmitri Mendeleev had the foresight to recognize that the known elements should be organized on their atomic weight and he also set the elements into a two-dimensional grid based on common properties. But it was his observations that the chart needed gaps for elements that had yet to be discovered that set him apart from others. For this insight Mendeleev is credited as the "father of the Periodic Table".

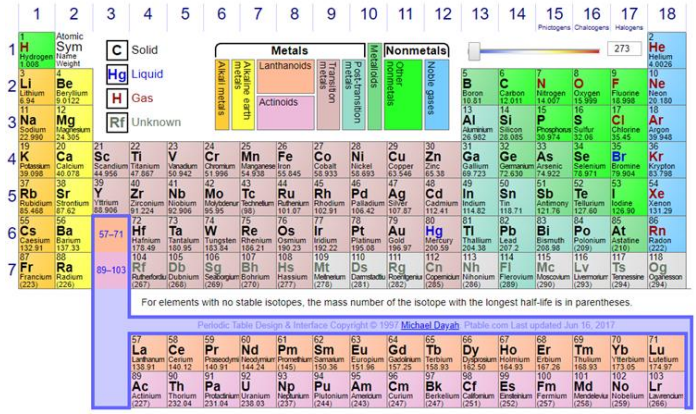
Mendeleev's Periodic Table

Series	Group I	Group II	Group III	Group IV	Group V	Group VI	Group VII	Group VIII
1	H=1							
2	Li=7	Be=9.1	B=11	C=12	N=14	O=16	F=19	
3	Na=23	Mg=24.4	Al=27	Si=28	P=31	S=32	Cl=35.5	Fe=56, Ni=58.5,
4	K=39.1	Ca=40	— =44	Ti=48.1	V=51.2	Cr=52.3	Mn=55	Co 59.1, Cu 63.3.
5	(Cu)=63.3	Zn=65.4	— =68	— =72	As=75	Se=79	Br=80	Rh=103, Ru=103.8,
6	Rb=85.4	Sr=87.5	Y=89	Zr=90.7	Nb=94.2	Mo=95.9	— =100	Pd=108, Ag=107.9.
7	(Ag)=107.9	Cd=112	In=113.7	Sn=118	Sb=120.3	Te=125.2	I=126.9	
8	Cs=132.9	Ba=137	La=138.5	Ce=141.5	Di=145	—	—	— — —
9	(—)	—	—	—	—	—	—	Ir=193.1, Pt=194.8,
10	—	—	Yb=173.2	—	Ta=182.8	W=184	—	Os=200, Au=196.7.
11	(Au)=196.7	Hg=200.4	Tl=204.1	Pb=206.9	Bi=208	—	—	
12	—	—	—	Th=233.4	—	U=239	—	— — —

Mendeleev's Second Periodic Table (1871): Elements are grouped in Series and Groups much as they are today.

In 1969, Russia marked the 100th anniversary of Mendeleev's Periodic Table with a postage stamp depicting him in deep thought over the missing elements. They highlighted two of these elements in red, gallium, which had not yet been discovered, and indium, which was known, but did not yet have a known atomic mass.

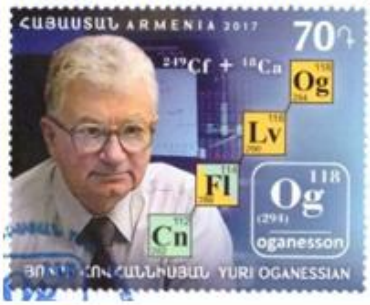
Now it is 2019, and the 150th anniversary of the Periodic Table. **To celebrate the Sesquicentennial of Mendeleev's remarkable achievement the United Nations has proclaimed 2019 as the International Year of the Periodic Table of the Elements. (IYPT 2019).** In their announcement the UN identifies this achievement as "one of the most significant achievements in science".



From his initial chart with 63 elements, the modern Periodic Table now contains 118 elements ranging from the lightest (hydrogen) to the element Oganesson (Og), first synthesized in 2015.

continued on next page

Some countries will celebrate IYPT 2019 by issuing postage stamps. Algeria (left side of title on previous page) and Spain (right side) already have. Kyrgystan's special souvenir sheet is shown on page 1. Other countries are waiting for later in the year.



Armenia jumped the gun, issuing this 2017 stamp honoring nuclear physicist Yuri Oganessian, for which the heaviest known element is named.

We don't collect minerals containing oganesson, but we do collect minerals with a significant number of elements. I wonder how many different elements are in the minerals in your collection. Some are simple native elements, perhaps you have some gold (Au). Most of us have some native copper (Cu). Some of us even hope to collect some in Michigan this summer. And of course some elements come in two different forms. Graphite is carbon (C) formed in the earth's crust at relatively low temperature and pressure and diamonds are a form of carbon formed within the earth's mantle at very high pressure.

Do you have any tourmaline? There might be ten different elements hiding in your tourmaline. Take a look at your collection. How many elements can you identify among your mineral specimens? Do you have any tungsten (W) minerals? Do you have any with phosphorus (P) or vanadium (V)? Which ones are they? It would be interesting to organize your minerals by their chemistry and then perhaps look for new ones to fill holes, much as Mendeleev had to do. And what better year to do that than during the Sesquicentennial celebration of the Periodic Table!

Did you know that manufacture of your cell phone requires over 30 different elements, many of which were not even known when Mendeleev created his initial Periodic Table? From the lightest metals [lithium (Li) and beryllium (Be)] to heavier rare-earth elements like lanthanum (La) and neodymium (Nd) the specific functionality in many of our common electronic devices is enabled by the varying properties of these elements. Currently nine of the metals required for cell phone technology are regarded as "critical metals" by the US Department of Defense. These are metals we cannot live without. Many currently have singular global sources. Another 13 of the elements are listed as specialty metals. These are used in the high-tech applications, but are not well known in the mineral world: elements like indium (In) and gallium (Ga), two that Mendeleev predicted, but could not identify or Tantalum (Ta) which can be collected in some pegmatite minerals. Do you have any minerals with these elements in your collection?

References:

Development of the Periodic Table, Royal Society of Chemistry Webpage

International Year of the Periodic Table (IYPT 2016) webpage

Turel, I., 2019, 150th anniversary of the periodic table of chemical elements, periodic table, Mendeelev and philately, webpage

Various Wikipedia webpages

INTERNATIONAL YEAR OF THE PERIODIC TABLE 2019

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In late March, the North Rose-Wolcott High School Science Club took a field trip to our workshop along with earth science teacher Nick Wojieck. Glenn Weiler set out his impressive display of minerals and rocks from which we extract metals. He showed them bauxite (for aluminum), sphalerite (for zinc), magnetite (for iron) and many others. Of course he also showed them his spherical creations and all the tools we use to slice, grind, and polish. Two geodes were cut and were raffled as door prizes to lucky students (see photo on page 1). Of course, they were able to study all kinds of minerals on the rock pile out back!

Glacial Erratics

By Fred Haynes

Almost anywhere we wander in New York, we are apt to encounter glacial erratics, rocks that were transported to their current locations by the great sheets of ice that covered the state as recently as 10,000 years ago. Typically we just step over, or walk around, these aberrant rocks. That is, unless we trip on them, in which case we curse their existence before we move on. Farmers detest them too, but will use them to build stone walls or cobblestone barns. Once in a while we might notice something interesting in them and stop to smack them with our hammers or mauls. Typically they resist such actions, providing us a reason to detest them even more.

But there are some really famous glacial erratic boulders in the world. Some are famous for their size, others for their location. Perhaps you have a favorite one? I've selected a few to highlight.

I think this is my favorite, although I've never visited it. Kummakivi ("*strange stone*") rests precariously in Ruokotahti, a small municipality in southeastern Finland. So far, teenagers have not managed to topple it. Photo from Atlas Obscura

Kummakivi is 7m long but due to the concave shape of a small part of its base it is able to sit almost miraculously on another rock. There is less than a square meter of contact between them. The lower boulder is an erratic itself with only a small portion exposed. You can imagine the ancient folklore that evolved to explain this formation. It involved giants and trolls who liked to throw rocks about and, on occasion, build large cairns and balance rocks.

There is one such well known glacial erratic within 200' of the top of Bald Mountain in the Adirondacks.
Photo from Sweeney, 2010

Has anyone climbed Bald Mountain and marveled at how a glacier could have dropped that off there while retreating? Bald Mountain is 2350' high and the hike to the summit is 1.9 mile long. In addition to this erratic and the granite gneiss outcrops, the climb terminates at one of the best known and most picturesque fire towers in the Adirondacks.

WCGMC visited this over-sized rock in Madison, New Hampshire on its 2016 collecting trip to New Hampshire and Maine. I posed in front (lower left with the yellow shirt) to highlight its enormity and my smallness!.
Photo by L. Schmidtgall

The Madison granite boulder is 83 feet long, 37 feet front to back, 23 feet tall, and is estimated to weigh 6000 tons. It is purported to be the largest glacial erratic in New England, although I am not certain that is an official title. Although clearly an erratic there is controversy about its source. Most trace the boulder to the Conway Granite of Mount Whitton about 4 miles northwest, but some maintain that the granitic composition better matches Mount Willard in Crawford Notch about 24 miles northwest. Regardless, the immense rock is now designated as a National Natural Landmark and is available for all to see, walk around, and climb in the Madison Boulder Nature Area.

This is perhaps the most photographed glacial boulder in the world. Perhaps you have even been to the National Park where it resides and have taken its picture. In 1998, this 500 ton glacial erratic was guarded by a number of lodgepole pine trees as it rests near a trailhead in the park. Do you know which park? (see page 7 for answer)

Aland is an archipelago consisting of some 6500 islands in the Baltic Sea between Finland and Sweden. As an autonomous province of Finland, they issue their own postage stamps and in 1995 they featured a large glacial erratic on one of their stamps. This artist's rendition of an unknown erratic on one of the islands is the only glacial erratic that I know of that has been immortalized on a postage stamp. If anyone knows of another, I would like to know.

Did you notice anything similiae among all these large rocks? Look carefully. They all show some development of lichen on their surfaces. Some show cracks. All were placed at their current resting places at the end of the last glacial period some 10,000 years ago. And weathering has started. The lichen, in combination with rain, freeze/thaw and probably some human action, is starting to break them down. Eventually each of them will be eroded to smaller and smaller rocks, then sand, and carried away. Geology is never stagnant. It can be slow, but it is relentless and continual. These rocks don't have a chance. Eventually, they will be part of someone's sand collection.

References:

Atlas Obscura webpage, Kummakivi Balancing Rock, Ruokolahti, Finland

Martin, C., et. al., 2004. NH Has Got Stones, New Hampshire Public Radio webpage

Sweeny, J., 2019, Wikipedia Commons

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A Visit to Sterling Hills, New Jersey

WCGMC thanks Ken St. John and the UV Nomads Fluorescent Mineral Club for including us in their annual spring trek to Sterling Hills on April 20th. This was one week before the "Super Digg" at Franklin, but eight of us prefer the collecting at the Sterling Hills Mine and Museum area. We were offered an excellent guided underground tour of the mine and museum. It tried to rain a couple times, but never dampened the spirits or the collecting.

Photos by Teresa Ferris

From left to right: James, Linda, Bob, and Fred on the "International Rock Pile" at Sterling Hills.

Teresa and the new Sterling Hills pile. Chaz is advertising in his new tan WCGMC T-shirt. Tarps are for black lights.

Wayne County Gem and Mineral Club 2019 Schedule *last update April 27*

We have scheduled two day trips in May and a workshop as we continue to plan for our annual show. There will be more as we sort out the summer months. **WCGMC is always looking for places to dig.**

May 4th – Saturday - Penfield Quarry Collecting Day for Mineral Club Members 7 AM for safety session, quarry will be open until 12:00 NOON.
Full safety gear required: hard hats (bike helmets OK for kids), boots, safety glasses and long pants
We'll be looking for fluorite, but calcite, dolomite, sphalerite, selenite, and fossils can be found also.

May 11th - Saturday Workshop (10:00 AM until mid-afternoon)

May 25th – Saturday Ilion Gorge (for travertine) with possible afternoon stop at Lord's Corner (for horn coral)
Details available at May meeting or contact **Linda Schmidtgall** (contact info on page 8)

JUNE 1 and JUNE 2: GEMFEST in Canandaigua
(Friday May 31 is set-up day and we will need help)

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TENTATIVE MULTI-DAY TRIPS THAT WE ARE WORKING ON FOR THIS COMING SEASON
(To receive further information when it becomes available we'll have sign-up sheets at the meeting or you can send an e-mail to Fred Haynes, fredmhaynes55@gmail.com)

June 21st to 24th - New England – VT for clay concretions of Friday, western MA sites on Saturday and Gilsum Rock Swap in Sunday, Monday options for those able to stay. Draft of trip plan is available.

July ?? - tentative 4-7 day trip to Maine – unsure of this trip right now

July 31st to August 10th – Upper Michigan. A number of us have registered for 4 days of collecting on digs organized by the Copper Country Rock and Mineral Club and we'll spend time around Marquette and its iron mines before that. We thank Jim Hird for helping us with logistics.

August 30th – Sept 3rd - central Kentucky with CVGMC. We may add sites en route and during our return.

September (middle of month) – a long weekend in the western lowlands of the Adirondacks

Day trips to Herkimer country and to local fossil sites will be added each month. If anyone would like to suggest a location or would like to plan/lead a trip let us know.

The glacial boulder on page 6 resides in Yellowstone National Park in Wyoming.

Wayne County Gem & Mineral Contacts

ELECTED OFFICERS (NEWLY ELECTED)

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Treasurer - Bill Lesniak
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Past President - Glenn Weiler gwexterior@gmail.com

Visit us on Facebook:
https://www.facebook.com/groups/1675855046010058/

APPOINTED POSITIONS

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Bill Lesniak – Website Coordinator
Glenn Weiler – Workshop Coordinator
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Linda Schmidtgall – Collection Curator
Eric Elias: GEMFEST Show Chair
thecrystalnetwork@hotmail.com
Fred Haynes – Facebook Administrator

Club meets 2nd Friday of each month starting in Sept.
Social meeting at 6:30 PM Regular meeting at 7:00 PM
Park Presbyterian Church, Maple Court, Newark, NY
Website – http://www.wcgmc.org/

Dues are only $15 individual or $20 family for a full season of fun. Renewal is in October. Send to:
WCGMC, P.O. Box 4, Newark, NY